Feasibility Study | TVET Programme

Phase 1 | TVET System Analysis and CoE Concept

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German Financial Cooperation with Georgia

Technical and Vocational Education Programme
Feasibility Study | Phase 1

presented by

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Abbreviations

Acronym	Explanation
BIBB	Federal Institute for Vocational Education and Training
BMBF	Federal Ministry for Education and Research
BoG	Bank of Georgia
CCI	Chamber of Commerce and Industry
CNC	Computerized Numerical Control
CoE	Centre of Excellence
EMIS	Education Management Information System
EQF	European Qualification Framework
ESIDA	Educational and Scientific Infrastructure Development Agency
EUVEGE	EU Technical Assistance to VET and Employment Reforms in Georgia
GEL	Georgian Lari
GeoStat	National Statistics Office in Georgia
GIZ	German International Cooperation
GoG	Government of Georgia
GTAI	German Trade and Invest
GTTC	Georgian Technology Training Centre
GTU	Georgian Technical University
HR	Human Resources
HWK	Handwerkskammer
ICT	Information and Communication Technology
IHK	Industrie- und Handelskammer
KFW	KFW Entwicklungsbank
LEPL	Legal Entity of Private Law
LWG	Bayerische Landesanstalt für Weinbau und Gartenbau
MCA	Millennium Challenge Account
MCC	Millennium Challenge Compact
MoES	Ministry of Education and Science
NCEQE	National Centre for Educational Quality Enhancement
PPP	Public-private partnership
SME	Small and Medium Sized Enterprise
TPDC	Teacher's Professional Development Centre
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Program
VET	Vocational Education and Training

Executive Summary

Recommendations for Concept of Centre of Excellence for Professional Training

The consultant team has identified a core set of objectives for *centres of excellence* to be established for technical and vocational training through a Georgian-German Financial Co-operation investment in infrastructure and equipment. Specifically, through this joint investment, the team recommends that centres of excellence shall:

- **Specialize in a cluster of skills serving priority economic sectors** demonstrating increasing labour demand.
- **Provide high quality training in existing and new professions and professional services** to students and industry in its sector.
- **Collaborate with private sector partners** for management, financing, and delivery of training.
- **Feature facilities and equipment of the latest technology designed for the function** of the educational programs and services provided.
- **Successfully develop a marketing and branding strategy** that attracts future students and builds the trust of the private sector as a leader in its field.
- Strengthen the broader education system by **providing opportunities for on-going professional development and instructor training**.
- **Serve as a business development, human resources, and knowledge hub for the sector.**

Public Private Partnership Model

Investments stemming from the Georgian-German Financial Cooperation are focused on creating the right learning environment, i.e. classrooms; lab facilities and equipment; IT equipment; learning materials; and supporting infrastructure, for the introduction and extension of high quality professional training programs. For this reason, it is critical that the initial institutional set-up and management of the *centre of excellence* is capable and resourced to ensure other key variables of quality training and education: instructor and curriculum quality; relevance of programs offered to the market needs; and close partnership with industry. The team recommends the establishment and management of a *centre of excellence* through a Public-Private Partnership model and provides initial guidance for partner selection, governance, and management considerations.

The specific institutional arrangements of a Public-Private-Partnership in a given sector will depend on the composition of the relevant industry, for example the number, size, and capacity of industry partners; the existence of strong lead partner or lead association; and the existence of an appropriate public partner such as existing college or university. The contributions of each party toward infrastructure, management, educational delivery (diploma and short courses), other services, and maintenance are subject to negotiation between the parties. With the Georgian-German Financial Cooperation providing funds for facilities and equipment, the scope for attracting an optimal partnership will focus on educational delivery, management, and other services.

Preliminary Investment Opportunities

The team has reviewed economic sectors and skills clusters for relevant labour market demand, level of industry engagement, preliminary viability of partnership structures, the ability of a *centre of excellence* to have positive spill-over affects into the broader training system, and potential impact on regional economic growth to assess a set of preliminary investment opportunities. Based on preliminary cost figures and project budget, the team has prioritized three investments within the Financial Cooperation Project, two in the regions and a third investment Tbilisi.

Hospitality and Tourism Training and Development Centre, Batumi

The team proposes the establishment of the Georgian Hospitality and Tourism Training and Development Centre in Batumi. The Hospitality and Tourism TDC will prepare personnel to international standard for Georgian and regional labour market needs as well as provide professional services to this growing sector of the Georgian economy. It is recommended that partnership opportunities be explored with associations of restaurants and hotels or large, individual players in the market building on current dual training initiatives. Batumi University may be candidate to participate in the management of the Hospitality and Tourism TDC, while offering services to nearby colleges. However, the interest and viability of other providers, including private sector or international providers on a concession basis will be considered. New facilities and equipment are recommended to be designed in collaboration with industry based on needs and capacities for work-based training.

Agriculture, Viticulture, and Agritourism Training and Promotion Centre, Kakheti

The team proposes the establishment of the ***Agriculture, Winemaking and Agritourism Training and Promotion Centre*** in Telavi. It is recommended that opportunities be explored with associations of winemakers, restaurants and hotels or large, individual players in these markets building on current dual training initiatives. The consultant proposes a blended professional skills cluster that retains the elements of specialization and branding potential, while serving a broader set of economic activities and therefore higher employment opportunities. International partners, either as partners or education/service providers should be prioritized for quality and recognition in a global market. Telavi University may be candidate to participate in management, while offering services to nearby colleges; however, the branding of the AVA Training and Promotion Centre should be distinct through the creation of special purpose entity. Renovation of existing facilities in Telavi may be feasible but costly, and the detailed investment planning should also consider the advisability of new facilities designed to purpose in collaboration with industry.

Construction Sector Investments, serving related markets in energy generation and distribution

The team proposes to invest in ***the extension and expansion of professional training programs serving the construction sector***, including the growing market for ***energy generation and distribution professionals.*** Domestic and international investors in real estate, energy development, and hospitality are driving growth in the demand for skilled professionals for the construction sector. Given the relatively high investments required in these areas and the need to make these investments count through a substantial number of students and users, our team recommends the focus on construction and energy in Tbilisi. We also recommend detailed consideration of investments in existing institutions that are already making progress toward implementing *centre of excellence* objectives. The team has identified several options that can be considered in more detail in the next phase. The partnership model will focus on both large companies servicing the market and smaller service providers in the construction value chain.

Financing and Sustainability

Sources of financing for the centres of excellence will include student fees and voucher funding; revenue-generating activities; and private sector contributions. The opportunities for the latter two vary according to economic sector and potential services have been identified in each investment concept. To inform the financial viability of a centre of excellence, the team has presented a preliminary analysis of voucher funding levels, which finds that voucher funding alone will not provide sustainable revenue flow for the operating expenses of a centre of excellence due, in part, to the need for increases in instructor salaries to achieve improved results, higher expenses from consumables, and higher costs resulting from forecasting replacements in current technologies.

Developing reliable estimates for income from revenue-generating activities and private sector contributions will be subject to more detailed analysis and stakeholder engagement and negotiation during investment planning. However, it should be noted that a financing gap, particularly in the early year of operations, is to be expected, as income from private sector contributions and revenue-generating activities will grow over time as the centre develops and expands its service offerings. The team has provided a preliminary indication of the scale of the financing gap to inform planning for additional resources to successfully launch the *centres of excellence*.

1 Introduction

1.1 Tasks of Phase I

The Terms of Reference for the consultant for the Feasibility Study for Technical and Vocational Education and Training (TVET) Program in Georgia consists of two phases. In the first phase of the assignment (May – August 2018), the consultant will present an overview of existing TVET infrastructure and, in cooperation with the Ministry of Education and Science (MoES), develop a detailed concept for new centres of excellence for TVET training in Georgia. In the second phase of the assignment, based on the outcome of phase one, the consultant shall develop a concrete investment proposal to implement a Georgian-German Financial Cooperation project investing in facilities and related infrastructure at 2-3 centres of excellence.

PLANCO convened a team workshop in Hamburg on May 16-17 to discuss the objectives of the assignment, methodology, and approach and develop assessment tools to be deployed during field work. The workshop comprised:

- Gunnar Specht, Design/FC requirements
- Jana Schlick, Construction planning
- Michael Stephany, Feasibility/FC requirements
- Clemens Aipperspach, Equipment Planning
- Ansgar Cordier, TVET Expert
- Jim McNicholas, Team Leader

A mission for phase one of the feasibility study was conducted in Georgia from June 10 – 23. The mission included site visits and interviews in Tbilisi, Senaki, Poti, Batumi, Kobuleti, Telavi, and Kachereti. The consultant team consisted of:

- Thea Siprashvili, Labour Market Expert
- Giorgi Jashi, TVET Infrastructure Expert
- Ansgar Cordier, TVET Expert
- Jim McNicholas, Team Leader

The tasks of the mission are described in the Terms of Reference, and additional guidance was given in briefing meetings with KFW and MoES. Based on earlier preparatory studies and discussions between KFW and MoES, the team was asked to focus on developing investment plans for least two centres of excellence in the regions of Georgia.

In the briefing meeting with MoES, the following considerations were highlighted to be included in investment options:

- Skills development should reflect labour market demand and key economic growth subsectors; key reference is the Ministry of Economy (and LMIS platform managed by the Ministry) and other labour data sources;
- Centres of excellence to consider new professions and trades not currently offered; adult learning; and instructor training;
- Innovative management structures to be considered; investments in existing public TVET colleges (Legal Entities of Public Law) not the only model for consideration;
- Centres of excellence should support the broader MoES policy priority to increase access to and enrolment in market relevant training programs, particularly in the regions of Georgia;

- The centre of excellence concept should be based on high technology learning environments.

1.2 Approach

The TVET sector has undergone extensive investment and reform over the past decade, which will be discussed in the next chapter. In many cases where reliable data exists, such as labour market analysis, economic sector analysis, and data from the Education Management Information System (EMIS), the team has drawn on existing studies and data available to inform its recommendations. The team has also drawn extensively on interviews with providers, industry partners, and other stakeholders over a period of two weeks to update its findings. A full list of interviews and site visits, including a selection of TVET college assessments, are attached as annexes. The purpose of site visits to training institutes has been to update the team's reporting on current infrastructure capacities and needs in the sector. For a general overview, the following stakeholders have been important sources of information and expertise:

Public Institutions: MoES, Education Management Information System (EMIS), Educational and Scientific Infrastructure Development Agency (ESIDA), Ministry of Economy, GeoStat. Millennium Challenge Account, Georgia.

Colleges and Universities: Senaki College, Phazisi College, Kobuleti New Wave College, Black Sea College, Icarosi College, Georgian Technical Training Centre (GTU – BP), Railway Transport College, AISI College, Telavi University, Georgian Technical University.

International Organizations: GIZ, UNDP, EUVEGE, Millennium Challenge Corporation.

Private Sector: Hilton, Adjara Group, Anaklia City, PEM Consulting, BP, Tegeta Motors, SEAF, Schuchmann Winery, Aguna Winery, LWG, Education and Training Institute, American Chamber of Commerce.

The mission team would like to express its thanks to all persons and institutions met for the open and friendly atmosphere of the discussions. **It is understood that statements made in this document represent the consultant's opinion.**

2 Overview of Labour Market and TVET System

2.1 Labour Demand for Qualified Workforce

Despite Georgia's steady economic growth during recent years (see Table 1 below), the expected job creation and expansion of labour market did not follow.

Table 1: Rate of GDP growth 2010-2017

	2010	2011	2012	2013	2014	2015	2016	2017*	2018*
GDP real growth %	6.2	7.2	6.4	3.4	4.6	2.9	2.8	5.0	5.3

Only 60,400 jobs were created between 2008-2012 and 46,000 in 2013-2017. The decrease of unemployment during this period is primarily a factor of shrinking workforce from negative demography trends and net migration. The total working age population is 3,012,000 with labour activity rate of 65.8% which is lower than that of the EU 28 (according to Eurostat 72.9% in 2017). The difference between the activity in labour market of females and males is large (41.8% of females are inactive as compared to 25.4 of men). Unemployment is at 13.9% (276,400 persons). The socio-economic demographics of employment and unemployment discussed here is summarized in more detail in annex 1.

Employment by economic sectors

When considering labour statistics in Georgia, it is important to highlight that 51.7% of all those categorized as employed are self-employed. Agriculture is still the major source for employment in Georgia, but when considering employment categorized as self-employed, 68% are self-employed in agriculture, including both paid and unpaid work.

Table 2: Distribution of employment by economic activities in 2017

	%	Thousand persons	% change since 2016	No. change since 2016
Agriculture, forestry and fishing	43.1	735.9	-7.2	-342
Industry	8.3	142	5.4	4683
Construction	4.9	82.8	0.9	707
Wholesale and retail trade; repair of motor vehicles and motorcycles	10.1	171.6	10.8	19130
Transportation and storage	4.0	68.8	3.7	2027
Accommodation and food service activities	2.2	37.3	44.0	15337
Information and communication	1.2	21.3	-3.2	-634
Financial and insurance activities	1.8	30.7	6.5	2435
Real estate activities	0.2	3	1	186
Professional, scientific and technical activities	1.3	21.6	0.9	176
Administrative and support service activities	1.1	18.2	9.3	2135
Public administration and defence; compulsory social security	5.2	88.3		
Education	9.2	156.4	3.0	713
Human health and social work activities	3.9	66.8	3.7	2390
Arts, entertainment and recreation	1.5	26.4		

Electricity, Gas, Steam and Air conditioning supply	1.2	20.7	200.7	27172
Water supply, sewage waste management and remediation activities			2.6	342
Other service activities			1.0	186
Activities of households as employers; Undifferentiated goods and services-producing activities of households for own use	0.8	14.2		
			2.3	180
Activities of extra-territorial organisations and bodies	0.0	0.5		
Not identified	0.0	0.2		
Total	100	1,706.60		

Source: Labour Force Survey (2017), MoESD report on Business Skills Demand Survey (2016)

Despite decreases during the past 10 years, 43.1% of the labour force is still employed in agriculture, forestry and fishing (down from 53.0% in 2011). The second largest employment generating activity are public and social services that account for over 19% of jobs in total. Out of more productive sectors, industry and trade and repair of vehicles are on the first place contributing with 8% and 10% of employment respectively; Construction, transportation and storage are the second biggest employers with 4.9% and 4% each, followed by hospitality sector with 2.2% Information and communication sector accounts for only 1.2% of jobs.

Employment Trends

However, looking at trends (change between 2016 and 2017) some sectors show more growth in employment than others. The last two columns of the table above show the change in employment between 2016- 2017 for the respective sectors. Substantial positive changes year-to-year can be observed in accommodation and food services related activities (+44%), as well as trade and assembly and operation of vehicles (+10.8%), industry (+5.4) and services (specifically Electricity, Gas, Steam and Air conditioning supply + 200%), employment in agriculture and information and communication sectors are on decrease (-7.2 and -3.2). The potential explanations for the growth and decrease can be seen in the increase in direct investments (as in manufacturing and electricity, gas, steam and air conditioning supply), or transfer of the people from subsistence agriculture to income-generating jobs, when they are available. In case of agriculture, the transfer is also seen from self-employment to employment in the same sector (source: Survey of Business Skills Demands, MoESD, 2017)

As survey of business skills demand done by the Ministry of Economy and Sustainable Development (2017), showed there is a high share of employment for people with vocational education in such sectors as trade (19.4%), manufacturing (15%), healthcare (14.6%), construction (14%), transport (11.4%) and accommodation and food service activity (8.4%).

The table below show how the skills matched with occupations as well as the numbers of professionals at different occupations for 2016 and 2017. The table reflects the employment scene in Georgia with devaluation of qualifications and structural misallocation of human resources (with high qualifications at low qualification jobs and vice versa).

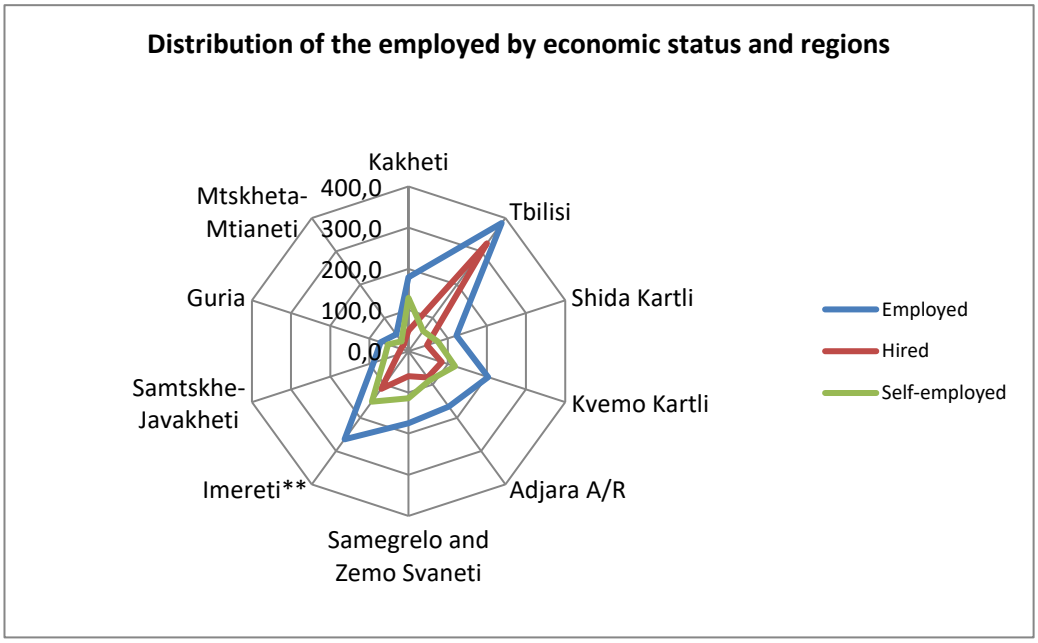
Table 3: Major groups and number employed by sex and education level in 2016 and 2017

ISCO Code	Major Groups ISCO 88	Number of employees, total by (01.09.2017	Women					Men				
			Employees by 01.09.2017	Achieved Level of Education by 01.09.2017			Employees by 01.09.2016	Employees by 01.09.2017	Achieved Level of Education by 01.09.2017			Employees by 01.09.2016
				Secondary	VET	High			Secondary	VET	High	
1	SENIOR OFFICIALS AND MANAGERS	159226	45379	7040	2764	35575	42764	113847	18574	4923	90350	109677
2	PROFESSIONALS	134468	76654	2427	7543	66683	76971	57814	2529	3197	52088	48661
3	TECHNICIANS AND ASSOCIATE PROFESSIONALS	106051	46195	9506	9003	27686	42505	59857	10997	9325	39535	45345
4	OFFICE CLERKS	81233	51874	6983	4032	40859	48380	29359	5220	2222	21918	27573
5	SERVICE WORKERS AND SHOP AND MARKET SALES WORKERS	81080	39433	15507	7311	16615	35673	41648	20742	6424	14482	36496
6	SKILLED AGRICULTURAL AND FISHERY WORKERS	4065	1465	1037	180	248	1337	2600	1947	295	358	1971
7	CRAFT AND RELATED TRADES WORKERS	75441	9627	5356	2012	2259	10285	65815	36461	17575	11778	60427
8	PLANT AND MACHINE OPERATORS AND ASSEMBLERS	55092	4115	1609	1558	947	3874	50977	29538	11832	9607	45727
9	ELEMENTARY OCCUPATIONS	93827	37607	29108	4007	4492	31595	56221	43034	6464	6723	50928

Source: Ministry of Economy and Sustainable Development, 2017

Last, but not least, the regional distribution of the employment shows that most of the jobs are concentrated in Tbilisi (73% of economy), where there is a higher competition as well, so the highest unemployment rate (22%).

Table 4: Geographical distribution of employment



Wages

One more parameter with employment to be analysed is wages. There are on average 13% increase in wages across all sectors and the similar trends of growth is observed looking at private sector separately. The sectors with highest gains in terms of salaries and respectively "better jobs" are accommodation and food services, construction and mining and quarrying which has seen higher than average increase in the nominal values of salaries. As a general rule, increasing wages would be seen in markets with scarcity of qualified labour.

Table 5: Average monthly nominal earnings of employees by economic activity 2014-2016 (all currencies in GEL)

	Business Sector				**All types**			
	2014	2015	2016	% increase 14-16	2014	2015	2016	% increase 14-16
Total	800.5	896.8	938.3	14.7	818.0	900.4	940.0	13.0
Agriculture, forestry and fishing	498.6	586.3	568.1	12.2	501.1	587.7	570.2	12.1
Mining and quarrying	902.8	1047.4	1154.1	21.8	902.8	1047.4	1154.1	21.8
Manufacturing	719.5	776.1	781.4	7.9	720.6	776.5	783.2	8.0
Electricity, gas, steam and air conditioning supply	1147.6	1257.5	1348.0	14.9	1147.6	1257.5	1348	14.9
Water supply, sewerage, waste management and remediation activities	752.0	754.3	819.8	8.3	653.6	679.7	711.5	8.1
Construction	948.3	1190.7	1272.9	25.5	943.7	1184.6	1265.9	25.5
Wholesale and retail trade; repair of motor vehicles and motorcycles	702.6	783.8	790.4	11.1	702.6	783.8	790.4	11.1
Transportation and storage	1048.4	1153.2	1156.0	9.3	1048.4	1152.8	1155.5	9.3
Accommodation and food service activities	477.8	563.9	626.6	23.7	477.5	563	625.6	23.7
Information and communication	1163.5	1344.1	1324.4	12.1	1171.4	1332.3	1339	12.5
Financial and insurance activities					1590.3	1691.4	1834.9	13.3
Real estate activities	904.3	967.8	1025.0	11.8	899.2	962.1	1016.6	11.5
Professional, scientific and technical activities	1210.3	1341.6	1575.2	23.2	1144.6	1276.8	1463.6	21.8
Administrative and support service activities	699.7	672.2	745.8	6.2	698.3	675.2	739.6	5.6

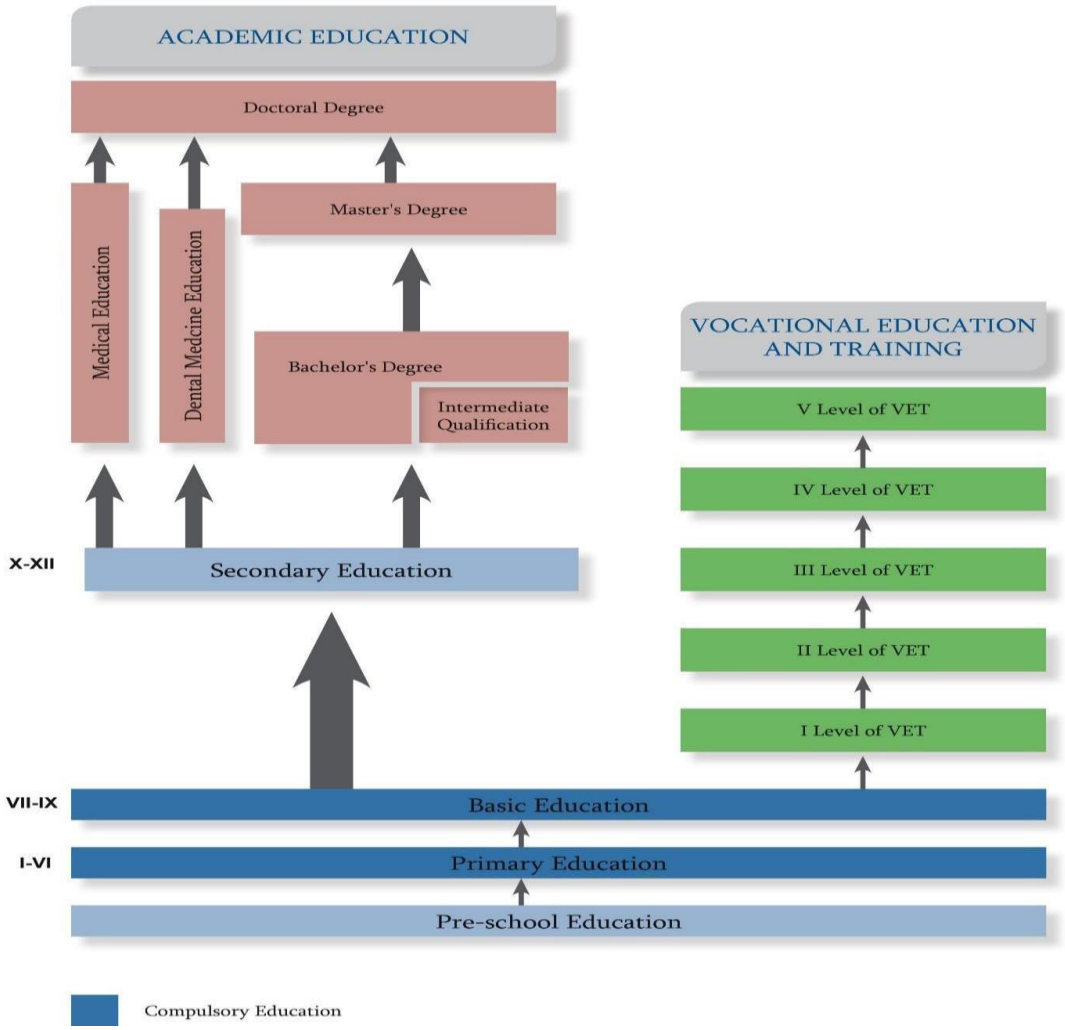
Education	488.2	525.5	618.2	21.0	455.3	482.2	534.2	14.8
Human health and social work activities	732.7	836.8	899.4	18.5	742	845.7	914.6	18.9
Arts, entertainment and recreation	948.3	1039.7	1198.5	20.9	681.8	750.8	833.7	18.2
Other service activities	418.1	374.5	321.6	-30.0	632.2	881.4	729.6	13.3

Labour Market Summary

- Unemployment is high at 13.9% and for youth aged 15-24 as high as 28.4%. Overall 56.7% of workforce is employed, with the self-employment share of 51.7% most of it in low productive agriculture.
- Unemployment level is lower (12.2%) for VET graduates (to compare, the same for HE is 15.5%). The labour market shows devaluation of qualifications and incidence of high-qualified staff occupying jobs requiring low qualifications is high.
- 43.1% of the labour force is employed in agriculture, forestry and fishing. The second largest broad sector is the public and social services that account for over 19% of jobs in total. Out of more production-oriented sectors, industry and trade and repair of vehicles are on the first place contributing with 8% and 10% of employment respectively; Construction, transportation and storage are the second biggest employers with 4.9% and 4% each, followed by hospitality sector with 2.2%.
- Positive growth trends in employment observed year-on-year 2016-207 are found in accommodation and food services related activities (44%), trade and assembly of vehicles (10.8%), industry (5.4) and services (specifically Electricity, Gas, Steam and Air conditioning supply - 200%), employment in agriculture and information and communication sectors are on decrease (-7.2 and -3.2). The trend in agriculture can be related to transfer of the people from subsistence agriculture to income-generating jobs.
- Wages have increased by 13% on average, but by 23.7% in accommodation and food services, by 25.5% construction and by 21.8% in mining and quarrying.

2.2 Current TVET Status and Recent Reforms

TVET remains a relatively small system in Georgia with only 4.5% of the age cohort (15-24) participating in TVET programs in 2017. Recent reforms have attempted to rationalize the role of TVET education within the broader system and clarify the transition points from basic and secondary education and to university education. With a relatively high number of university graduates (46.2% % of cohort in 2017) and high unemployment (15.5% for university graduates vs 12.2% for VET graduates and 13.9% in general), opportunities for improved TVET delivery and linkage with the labour market represent an opportunity to promote employment and economic growth.



2.2.1 TVET Enrolment Trends

The number of TVET students (both new enrolments and continuing students) has increased considerably since 2013. The increase of student population can be well accounted for by the policy reforms being implemented that is summarized below. Nevertheless, enrolment in TVET programs does not currently fill available places across the sector, while some programs are oversubscribed, and others undersubscribed.

Table 6: Capacity of TVET sector, trends in application and enrolments

Year	No. of Programs	No. of Available Places	Applications	Enrolments	Enrolment as % of places	Enrolment as % of applications
2013	416	11114	12873	8319	74.9	64.6
2014	568	13175	15334	9070	68.8	59.1
2015	589	12487	17547	10405	83.3	59.3
2016	620	12460	19623	11124	89.3	56.7
2017	657	13011	21965	10010	76.9	45.6

Source: EMIS, MoES 2017

Overall, participation in TVET programs by sex is balanced in 2017. However, it worth noting that private sector institutions attract a substantially higher percentage of females than males, whereas public institutions attract a higher male student body.

Table 7: Enrolment and participation of students in TVET, sex-disaggregated, 2017

	Private Institutions		Public Institutions		Total
	Male	Female	Male	Female	
Total Enrolment in 2017 cohort	1262	1819	4264	2665	10010
Total Enrolment	3940	6160	12785	9581	32466

Source: EMIS, MoES 2018

2.2.2 TVET Financing

All the governance and funding of VET is centralized under the MoES (and its agencies) though other relevant government bodies (among them that of Autonomous Republics of Abkhazia and Adjara and local self-governance) can establish and finance TVET in line with the rules set by the Government of Georgia. The ministries for labour and penitentiaries as well as some municipalities, particularly larger cities, also provide some funding for specific target groups (further education of adults/registered unemployed or prisoners and probationers) on contract basis with TVET schools. TVET can be also financed from legal entities of private law, and, by the 2007 legislation, TVET institutions are allowed to generate revenues from economic activities. However, in practice individual college directors do not have discretion over significant revenue generating activities, as complicated bureaucratic measures and unclear regulations create accounting challenges and ultimately a disincentive to develop fee-for service - offerings. As a result, the Ministry of Education and Science is the major source of funding for public TVET institutions.

Table 8: State funding for public TVET 2013-2016 (in thousands of GEL)

Code	Line Item	2013	2014	2015	2016 (planned)	2016 (actual)
3203	Vocational Education	13,300.00	23,200.00	36,900.00	36,200.00	33,700.00
32 03 01	Voucher	6,900.00	8,600.00	14,800.00	10,800.00	12,400.00
32 03 01	Program financing/ Targeted Program financing	2,400.00	6,200.00	6,900.00	8,200.00	9,400.00
32 06 02 02	Development of infrastructure	2,900.00	6,900.00	13,00.00	15,200.00	10,000.00
32 02 02	Teacher trainings	0,100.00	0,200.00	0,200.00	0,300.00	0,300.00
32 04 01	Vocational Testing	0,500.00	0,100.00	0,100.00	0,100.00	0,100.00
32 03 01	Vocational Qualification Development Support program	0,400.00	1,200.00	1,900.00	1,500.00	1,500.00

Source: MoES, 2017

Authorization at the institutional level is necessary for both public and private providers. Accreditation of programs offered is also required at the individual program level. Both institutional authorization and program accreditation is the responsibility of the National Center for Educational Quality Enhancement, under the MoES. Only VET providers founded or co-founded by the state are eligible for the public funding (Resolution of the GoG #244 of 19 September, 2013 on Approving Rule of TVET Financing), whereas private TVET institutions raise most of the budget from households (through tuition fees). Public VET providers receive per capita funding covering only tuition for each student (called “voucher”) as well as negotiated annual budget to cover administrative expenses (“program funding”) as well as targeted program funding for other needs (targeted program funding).

Vouchers are nominal per student per program monetary units that “follow” students to public TVET providers. The value of vouchers differs per program, per number of students at the program, and existence of special needs students. The nominal value of each voucher per program/module, as well as funding coefficients by the number of students per program (as well as on top additional amount for special needs groups) is calculated and approved by the GoG (Annexes 2 and 3 to the Resolution #244). The nominal value of the voucher varies between 400-2250 GEL for a student within a group of five (less and more students within the group receive vouchers multiplied by a respective coefficient). The table below provides the value of vouchers for various programs.

For modular programs, student receives a voucher amounting to the sum of the vouchers for modules within the program. For work-based learning programs the TVET institutions receive reduced vouchers in the ratio of learning credits achieved within school.

Table 9: Nominal value of the voucher

№	TVET Education Program/TVET Specialization	Voucher Transfer (GEL)
1	Car Diagnostics Specialist	400.00
2	Fruit Grower	
3	Crane Operator	650.00
4	Accountant	
5	Shop Assistant	

6	Elevator Technician	750.00
7	Plasterer	800.00
8	Mason	
9	Computer Graphics Designer	
10	VET Assistant	
11	Ventilation and conditioning systems installation specialist	950.00
12	Dental technician	
13	Tiler	
14	Oil and gas processing technician	1,000.00
15	Guide	1,150.00
16	Carpenter	
17	Bartender	
18	Welder	
19	Enamel master	1,300.00
20	Agro-machinery technician	1,400.00
21	Telecommunications systems and networks operator	
22	Dancer	1,700.00
23	Cook	
24	Advanced cook	1,900.00
25	Railway technician	2,250.00
26	Railway electrician	
27	Confectioner	
28	Wine maker	

Source: GoG Resolution #244, Annex 2

In meeting with directors at TVET colleges throughout Georgia (see annex for detailed site visit reporting) the consultant team received consistent feedback that voucher funding is sufficient to cover the operating costs (instructor salaries, consumables) for most training programs. However, low instructor salary was also reported consistently, with an expected impact on the ability to attract and retain quality instructors with the latest skills demanded in the marketplace.

Public VET providers often indicated that, in recent years with growing student numbers, financing from vouchers in some cases provided a surplus over operational expenses. However, few directors reported re-investing in non-operational budget lines, as noted above, perceived institutional barriers and lack of clarity on budgetary authority was reported as an obstacle to re-investment. As a result, under the current financial management context, high performance is not incentivized. There was an overall perception among managers that the format of a LEPL does not leave any space for independent decision making, and at the same time the existing funding model required troublesome micromanagement on the part of the MoES considered as inefficient by both parties.

2.2.3 TVET Provision and providers

Overall, 99 TVET institutions provide vocational programs. Below is the typology of TVET providers according to the type of institution and field of studies.

Table 10: Number and ownership of all authorized TVET institutions

Type of TVET Institutions	Public	Private	Total
VET College	9	5	14
Community College	12	40	52
HE Institution	13	12	25
GE Institution	1	7	8
	35	64	99

Source NCEQE, MoES updated 23rd April, 2018

Table 11: TVET provision by sector

	Field of study									
	Agricultural	Business and Administration	Education	Engineering	Sciences	Law	Social Sciences	Arts	Health	Interdisciplinary
# of Institutions providing in the field	27	56	14	58	2	11	9	29	50	33

While the institutions in Tbilisi can allow themselves to specialize in one of two major sectors, regional institutions tend to be much more multi-profile. This can guarantee better geographical coverage of all fields of study and thus the schools broad accessibility for students, however, the quality of the training suffers. In their struggle to fit all in one, the regional TVET institutions lack adequate space for all workshops, high standard maintenance and equipment, sufficient and adequately trained staff, capacity to reach to private partners equally and sufficiently for each sector and field of study.

2.2.4 Recent Reforms and Future Strategy

In 2013 a current TVET Reform Strategy for 2013-2020 has been approved and several priorities have since been developed and implemented:

- Introduction of market oriented Modular Vocational Programs and associated work-based learning programs
- Ensuring geographic access to vocational education
- Revision of occupational standards
- Revision of credit transfer and accumulation system
- Improvement of school infrastructure and construction of dormitories,

Recent initiatives to implement dual-training VET and the expansion of the VET network through partnerships with private sector have also been implemented in recent years. Education Strategy 2017-2021 approved in December 2017 sets the following new or additional priorities:

- **Strategic objective 1:** Compliance of the vocational education with the requirements of the labour market and internationalization of the system
  - Involvement of social partners
  - International recognition through the referral of Georgian qualifications framework to EQF
  - Key life skills, entrepreneurship and work-based/dual education
  - Modular programs and regular update of curricula
  - Teacher qualification development
- **Strategic objective 2**: Ensure access to vocational education based on the principle of lifelong learning
  - Removing educational dead-ends, application of LLL principles, credit accumulation, transfer and recognition possibilities
  - VET programs targeting various beneficiary (school pupils, youth, adults), training and retraining possibilities
  - Well-functioning system of RPL
  - Optimizing funding mechanisms
  - Optimizing the network of VET institutions, improving quality resources and environment, improving management
- **Strategic objective 3**: Popularization of professional education and increase of attractiveness
  - Awareness rising, popularization through success stories etc.
  - Well-functioning career guidance and professional orientation system
  - Branding and communication strategy

To reflect the current reforms in a number of policy areas, the Ministry of Education and Science plans to introduce a **New VET Law**, currently being discussed in the Parliament. The law should create a legal framework and favourable environment for the following initiatives:

Dual-Training VET: since 2016 GoG declared its commitment to transform Georgian VET system based on the dual education model in partnership with industry. Pilot programs have been introduced in wine-making, agriculture, tourism, and programs are currently being expanded to construction and potentially other fields. GIZ and UNDP are development partners supporting Ministry activities in this regard.

Training and retraining/ adult education: following concerns about high drop-out rates, the need for creating better funding system for adult learners, as well as improve partnerships with private sector and quality for short-term training, the Ministry plans to introduce training and retraining formal programs leading to qualifications at levels 1-5.

Professional Orientation of General education pupils: started as a pilot, professional orientation 2-month programs have been offered to many pupils of general education throughout Georgia. In some cases, such as cooking, these programs have been reported to attract and prepare students in the field.

Teacher professional qualifications: quality of trainings being dependent on teacher qualifications, several measures have been introduced to incentivize improved qualifications. These measures include: development of regulatory framework for qualification-based remuneration of teachers, induction and career development scheme (developed in 2015, not yet approved), work-based training for teachers (so far very low scale), and compulsory training of teachers in core modules of pedagogy (under way, but very small scale in terms of quantity).

2.3 Overview of TVET Infrastructure

Significant investments have been made into infrastructure and equipment in the education system in general, and TVET specifically, over the past few years.

Table 12: ESIDA infrastructure investments (in GEL)

	2014	2015	2016	2017
Buildings and Equipment	**9,341,816**	**11,164,133**	**9, 842,509**	**7,945,807**

The team conducted in depth site visits to the following institutions during the period June 10-22, 2018:

- Senaki College – branch of Zugididi University, Senaki
- Phasizi College, Poti
- Black Sea College, Batumi
- Batumi State Maritime Academy, Batumi
- New Wave College, Kobuleti
- Icarosi College, Tbilisi
- Georgian Technical Training Center at GTU,Tbilisi
- Georgian Railway College, Tbilisi
- Tlakob Gogebashvili University, Telavi
- Prestige College, Telavi
- AISI College, Kachereti

Annex III contains the site visit report for each institution with description of the institution, capacity of the classroom/laboratories, and challenges identified by the management. However, the following trends are worthy of highlighting:

- Nearly all the colleges have made infrastructure improvements in recent years, in some cases substantial investments into building renovations.
- Laboratory and equipment investments are generally more step-by-step investments made at the program level, often through the support of international organizations or private partners. As a result, there is an uneven service delivery at many institutions with some programs offering very little market relevant training, while other programs show signs of industry engagement and quality improvement.
- With increased experience with work-based learning, the ability of colleges to rely on private sector partners for some specialized equipment is growing. Management at colleges are beginning to consider facility and equipment specifications in collaboration with private partners.
- In some cases, infrastructure is not reported to be the constraining factor for quality TVET education; with instructor quality identified more often as the constraining factor.
- However, in certain cases, quality laboratory space, equipment, and knowledge of use of equipment is a limiting factor in terms of both quantity of students and quality of training. Some colleges reported constraints to reauthorize certain programs to be continued because there workshops did not meet the new quality requirements set by Infrastructure standards for modular programs by NCEQE. Need and unavailability of dormitories were also frequently stated. Facility and equipment limitations affecting quality and quantity of programs in hospitality, construction, agricultural testing, and automotive repairs were noted by the team at several facilities.

3 Centre of Excellence Concept

3.1 Review of International Experience

Before presenting an outline of a CoE aligned with the labour market and economic conditions in Georgia, it appears appropriate to shed some light on current developments and examples of CoEs realized abroad. The term Centre of Excellence is increasingly used to describe, rather vaguely in many cases, a VET training institute providing vocational education and training on high level. Therefore, a few recent developments in the context of CoE-led training delivery are provided below.

Since 2009, the German Federal Ministry of Education and Research (BMBF) financially supports the creation of CoEs in Germany. In this context, CoEs are owned by the private sector and attached directly to private sector institutions such as the Chamber of Commerce and Industry or Chambers of Skilled Craftsmen that both play a key role in organising and overseeing the practical components of VET. In accordance with the features of CoEs as outlined by the German Federal Institute for Vocational Education and Training (BIBB), CoEs shall serve to achieve the following objectives[1]:

- It shall serve as a regional "lighthouse" with a clear technical focus.
- It shall serve as a centre providing didactical guidance.
- It develops training concepts for generic practical training components to be delivered in the training centre and integrates these concepts into existing TVET curricula
- It employs teaching and instruction personnel with high level of qualification and invests constantly in the development of the competencies of these personnel.
- It liaises closely with companies, VET schools and practical training institutions and contributes to a better cooperation between the partners involved in VET learning.
- It scrutinises the on-going technical and technological developments in its sector/focus and uses data gathered through this constant analysis to assess the level and the quality of practical training provided in companies and in practical training centres. A CoE is, in this regard, a provider of technology transfer to small and medium sized enterprises.
- It facilitates the integration of best practices in the context of quality assurance, environmental standards, and marketing as well as health and safety issues in VET provision.
- It cooperates with the institutional layers of Chambers of Commerce and Industry or Chambers of Skilled Craftsmen providing advisory services to member companies. This cooperation shall lead to the identification of skills gaps, mismatches and labour market demands.

Centres of Excellence in Germany shall also address the decreasing enrolment trends exhibited in VET sector. Low enrolment figures affect predominantly German SMEs that demand a qualified workforce, predominantly in the sector of skilled crafts. Through CoEs, VET occupations embrace the on-going technological development in industries and guarantee an education that meets the high standards and is attractive for young people. In order to obtain funding from the Federal Government, providers of practical training such as training centres operated by Chambers of Skilled Craftsmen may submit their investment proposal to the German Federal Ministry of Science and Research (BMBF). Proposals will be selected by BMBF according to the quality of the proposal, the expected results and the envisaged sustainability of the investments.

[1] Federal Institute for Vocational Education and Training (BIBB), accessible online via: https://www.bibb.de/de/12333.php

Best practice example: Centre of Competencies for Design, Manufacturing and Communication of the Chamber of Skilled Craftsmen Koblenz (Germany)

The Centre of Competencies for Design, Manufacturing and Communication of the Chamber of Skilled Craftsmen Koblenz functions is attached to the Chamber of Skilled Craftsmen Koblenz.

In this “Centre of Competencies” – being a synonym for a CoE – a variety of services are provided for:

- Training for VET trainees and students as well as for trainers, instructors and practitioners from companies and industries
- Collaboration with VET training institutes in order to update existing and to develop new curricula for design-related occupations
- Advisory and assistance to companies in the context of product design and product marketing
- Provision of quality infrastructure (3D printers, CNC technology, laser technology etc.) and services to companies for producing prototypes and samples
- Networking with national and international institutions in the context of product design and communication
- Organisation of exhibitions and awards

The funding of the expenditures of the CoE are assured through its attachment to the Chamber of Skilled Craftsmen Koblenz. The Chamber is an entity of public law; every skilled craftsman in the area (Kammerbezirk) of the Chamber is by law obliged to affiliate because the Chamber carries out tasks and functions on behalf of the German State, e.g. accreditation and quality assurance of VET. Moreover, the CoE attracts sponsors and donors to ensure its financial sustainability.

This strong private sector ownership aspect of a CoE like in the German example cannot be simply transferred to other country contexts. Unlike in Germany, for instance, in most countries a compulsory affiliation with a private sector institution like a Chamber of Skilled Craftsmen does not exist, thus making a leading role of such an institution irrelevant. The CoE concepts in low- or middle-income countries, Georgia being among the latter, shall follow different organisational patterns. However, a strong linkage and interconnection between CoE and the private sector is a key prerequisite for a successfully operating CoE.

3.2 Review of Georgian Experience

The VET Development Strategy 2013-2020 highlights among others core requirements the development of "facilities of excellence" delivering:

- High quality of courses and teaching
- Modern infrastructure, i.e. material-technical base reflecting current and future technologies
- Access to working environments either
  - In the business community, i.e. at work place or
  - Through well-equipped workshops and labs at VET institutions

One of the attempts in these regards was "modularization" of all programs (as of 2019 all programs will be based on new occupational standards and modular competency based curricula).

As a means to improve the quality and share risks and costs with the private sector, the MoES has also been working towards identification and creation of Public-Private Partnership (PPP) projects. So far 4 such projects are in place: A PPP with the Construction Company M^2 and Georgian Technical University in Zestaponi; food processing company Agara; Mountain Guide's Association, and BP/Georgian Technical University's Georgian Technical Training Centre (GTTC). In May, 2018 the Parliament have adopted a new law on PPPs that will create legal framework for such partnerships in all sectors, among them education.

In order to facilitate a constant high level of practical work-place based learning, GIZ has introduced in Georgia the concept of "Dual Apprenticeships" where theoretical teaching – in a TVET institute – shall be combined with practical work place-based instruction and learning in company environments. This dual apprenticeship approach, being the predominant mode of TVET delivery in Germany, Austria and Switzerland, requires, though, a large industry base that is willing to provide – and to finance – physical and HR resources to guarantee and to realise practical training in companies. This huge number of industries and company environments is not yet there in Georgia, at least across all sectors, thus having directed GIZ to sectors with currently higher number of companies and with strategic potential for Georgia's economic environment, such as:

- Hospitality and tourism industry
- Construction sector
- Viticulture sector

The Technical Assistance to VET and Employment Reforms in Georgia (EUVEGE) endeavoured to systemize these approaches and strategies and drafted the Position Paper entitled "Centres of Excellence and Innovation in CET (CoE)" in October 2017. In this publication, EUVEGE outlines its conceptual approach, proposes a management model and draws a picture of key stakeholders in CoEs to be created. In this concept note, the functions of EUVEGE's CoE are the following:

- Provision of high quality technical and vocational education and training to TVET students and trainees
- Provision of capacity development to other TVET institutions to improve their quality of training
- Internationalisation of TVET delivery through involving state-of-the-art international practices into the Georgian TVET system
- Develop an active and vital collaboration with private enterprises and mobilise the private sector to become a key player in practical TVET provision
- Facilitate R&D on TVET developments
- Scrutinise and observe – ideally with other TVET providers in Georgia – the labour market in order to constantly develop proper training offers
- Promote SMEs and start-ups, e.g. through counselling, incubation etc.

Several recent programs have been designed to introduce the core features of a centre of excellence. The term has been used in the context of the "Program Improvement Competitive Funds" (PICG), undertaken under auspices of the Millennium Challenge Account, Georgia. Specifically, several MCA grants have partnered public intuitions with industry partners (based on a competitive selection process) for the delivery of new and improved professional training in specialized areas, which are in line with several of the key CoE objectives outlined above.

Upon review of both Georgian and international experience, a set of common functions in the context of collaboration between a CoE and enterprises can be identified:

- Development of occupational standards reflecting the workplace requirements for the respective occupation
- Development of demand-oriented cooperative TVET programmes (curricula, training materials, cooperative training plans assessment tools, each referring to the occupational standard)
- Development of workplace-relevant practical skills of TVET teachers through industrial attachment
- Development of pedagogical skills of the companies' senior technicians to become in-company trainers
- Joint implementation of training programme by making use of both learning venues (TVET institute for theoretical and workshop-based practical training, companies for practical training within the process of work)
- Close monitoring of both, institute-based training and workplace training at the enterprise
- Joint skills assessment (generally at mid-term and upon graduation)

We shall outline in the following section how these lessons drawn from the Georgian and international context may be applied appropriately in the case of a Georgian-German Financial Cooperation investment in CoEs.

3.3 Priority Objectives for CoE

Through the course of interviews and site visits during the mission, our team has received consistent feedback regarding current market needs and opportunities, labour market demand and constraints, provider quality constraints, and private sector interest to engage in training and skills development. The consultant team recommends that investments in

CoE's should aim to provide models of best practice and have identified a core set of objectives that we propose be the target of a KFW/MoES investment in TVET infrastructure.

Recommendations for Detailed Concept of Centre of Excellence:

- A Centre of Excellence in Georgia should ***specialize in a cluster of skills serving priority economic sectors*** demonstrating increasing labour demand.

In order for a training institution to build the trust of private sector stakeholders as a leader in its field, it will be necessary for a CoE to specialize in set of professions where it can focus its investment priorities, target its outreach initiatives to private sector partners, and develop a set of service offerings and staff that is well-respected in the market. The centre will provide high quality training in existing and new professions, instructor training, and professional services in its sector.

- Establishment of CoE on a ***business model that is based on concrete collaboration with private partners***.

Collaboration with the private sector in training delivery is increasingly common in Georgia, including practical training requirements in the modular curriculum, partnering with industry through MCA *Industry Led Workforce Development* Project and UNDP-supported company-based learning, and GIZ-assisted dual learning pilot programs. The CoE Public-Private Partnership (PPP) business model will vary in specific arrangement details depending on the needs of the sector; the number, size, and capacity of enterprises in the sector; and negotiations with individual companies for contributions. The CoE should pursue the following partnership opportunities:

Co-establishment – foundation of centre as a public-private partnership, specifically founded with GoG and one or more partners, creates an institution that is eligible for voucher funding that will be critical for financial sustainability;

Co-funding – private sector partners have consistently expressed a willingness to contribute financially within a shared vision.

Co-management – private sector partners are well placed to assume responsibility for management or contribute expertise to the management team;

Co-provision of training – Georgian businesses and education providers have increasing recognition of the need for and experience with a range of collaboration options (practicum requirement, work-based learning, dual training initiatives) for industry engagement that the centre will both build on and lead forward in the sector.

- Facilities and Equipment – The ***facilities required should be designed for the function*** and need of the educational and other services/programs. If existing facilities are improved, the facilities should be of the appropriate scale and design. Specifications for necessary equipment should be co-designed with relevant industry partners. Dormitories, work-based training facilities, and shared workspace should be considered.

- Branding – ***by specializing in its service delivery and infrastructure, the CoE will be able to successfully develop a marketing and branding strategy*** that both attracts future students and builds the trust of other colleges and the private sector. International accredited programs strengthen brand.

- Instructor training and re-training to meet current market needs – instructor readiness is cited as major constraint for providers. The CoE will ***lead the development of instructor training protocols for the skills cluster.***

MCA Georgia completed a survey in 2016 of VET teacher training needs. The need to improve ***subject-related competencies and professional foreign language*** rate the highest self-identified needs among the survey takers (80% indicating the need or partial need in these areas). While the Teacher's Professional Development Centre (TPDC) will continue to provide training for pedogeological skills, developing alternative pathways for teachers to upgrade their subject competencies and professional foreign language skills should become a core service offering of the CoE.

In total 830 respondents, with an average age of 50, from 29 educational institutions participated in the survey, including respondents from 19 public colleges and 10 higher educational institutions. Sixty-nine percent of the respondents were female.

Table 13: VET teacher competencies (self-identified needs assessment)

No	Topic	Need	Partial Need	No need/ no opinion	All
1	Introducing professional standard of VET Teacher	216 26%	391 47%	223 27%	830 100%
2	Introducing the Code of Ethics of	180 22%	361 43%	289 35%	830 100%
3	Developing and using plan of continuing professional development of VET teacher	263 32%	418 50%	149 18%	830 100%
4	Improving subject-related competencies	247 30%	411 50%	172 20%	830 100%
5	Improving professional foreign language	364 44%	297 36%	169 22%	830 100%
6	Improving skills for the management of conflict situations	182 22%	360 43%	288 35%	830 100%
7	Improving effective communication skills	170 20%	360 43%	300 37%	830 100%
8	Improving effective presentation skills	193 24%	401 48%	236 28%	830 100%
9	Improving intercultural competencies	190 23%	405 49%	235 28%	830 100%

Source: MCA, Georgia Training Needs Analysis of VET Teachers, 2016

- ***Serve as business development, human resources, and knowledge hub for the sector*** – The CoE will provide services to students, colleges, and businesses for job placement and ongoing analysis of emerging market needs and new professions. The CoE will identify and develop services demanded by the market that can be offered on a revenue-generating basis. The CoE will serve clearing house for student, faculty, staff study exchanges, a host for self-learning and distance learning for languages and ICT development; and a "go to" destination for networking and conferences for the sector it serves.

3.4 Public-Private Partnership Model

It is important to note that the investments stemming from the Georgian-German Financial Cooperation are focused on creating the right learning environment, i.e. classrooms; lab facilities and equipment; IT equipment; learning materials; and supporting infrastructure, for the introduction and extension of high quality professional training programs. While costly and necessary, in some cases infrastructure is not the binding constraint to TVET quality in Georgia. For this reason, it is critical that the initial institutional set-up and management of the CoE is capable and resourced to ensure other key variables of quality: instructor quality; relevance of programs offered to the market needs; and close partnership with private sector partners.

Three institutional arrangements for the creation of a centre of excellence have been considered. Ultimately, the intuitional arrangements will need to be determined based on the specific variables of a given economic sector and the interest of the relevant industry partners. However, this section summarizes the three alternatives considered and the general approach recommended for CoE structure.

The first option considered for the creation of a centre of excellence is investment into an existing institution with the objective of creating an institutional centre of excellence. This approach has several advantages, including: existing institution offers an on-going operations and management structure; existing institution brings a student body with (some) interest in programs offered; an infrastructure investment may be a less risky initiative in terms of long-term sustainability; and the public institution is eligible for GoG public voucher funding which is important for affordability and financial sustainability.

However, several key challenges emerge for the transformation of public institutions into CoEs, and infrastructure is only one of these challenges. First, public institutions, particularly in rural areas, have a mandate to offer programs across a wide range of skills and programs. This makes it very difficult for public institutions to specialize to serve industry demand, and few currently are viewed by industry as a market leader in a given field. The inability to specialize also impacts – negatively – the ability to establish a brand reputation for quality to attract students or serve industry, without which opportunities for the provision of services for fees become remote. Moreover, current public institutions management autonomy is limited, particularly regarding budgetary discretion, including, most importantly, salary constraints on instructors.

Another option considered by the team is the creation, by GoG, of new public institution established as a Centre of Excellence. In contrast to the advantages and challenges described above, the establishment of a new, independent institution endowed with new facility and equipment assets brings a number of new opportunities but all the sustainability risks associated with a new institution. If provided a different mandate and authority than current public institutions, a new centre, under a high-quality management, may be able to specialize and develop a top reputation and new service offerings over time; however, the start-up and operating costs of a new centre are prohibitive for a new public centre to bear alone based current funding options.

Ultimately, the approach recommended by the team is the establishment of a centre of excellence through a public-private partnership, possibly under the new Public-Private Partnership Law approved by the Georgian Parliament in June, 2018 or by agreement of the parties under the Georgian-German Financial Cooperation Agreement. This option may be able to achieve many of the advantages to both options above while addressing many of the challenges. The consultant team has found that in some specific industry sectors to be recommended, it is suitable to consider the design of PPP for VET delivery.

A recent concept note prepared for the MoES by MCA-Georgia explored the advantages of building social partnerships for VET delivery and defined the goals for PPP for VET in Georgia as:

- Upgrading of VET financing and service provision on a shared basis by both public and private sectors, but not at the special privileges of any party;
- Improvement of the efficiency, effectiveness, quality, impartiality and accountability of existing services through a sharing of resources and expertise between the public and private sectors[2].

[2] "The Concept of Public-Private Partnership in the Vocational Education and Training Sector of Georgia" MCA Georgia, 2015.

These findings are well-aligned with experience with PPP in the VET sector internationally. In the US, community colleges and universities build strong alliances with industry for the design, financing, and operation of training facilities at colleges and universities. In Germany, the dual-training system model is based on a long-established legislative framework that provides a formal governance structure for VET in which different actors have defined roles, including a co-funded financing mechanism.

The following recommendations in relation to institutional set up for CoE are provided for consideration in the next phase of detailed investment planning:

- Foundation: Importantly, the foundation of the centre as a public-private partnership, specifically founded with GoG (or a GoG owned entity) and one or more partners, creates an institution that is eligible for voucher funding that will be critical for financial sustainability (unless the New VET Law and related sublegal acts provide for a different approach to funding).
- University or College Partnership: One existing model for PPPs is the participation of an existing TVET college or university as party to the agreement as a founding partner. The team has considered viable partners for the sector proposals discussed in the next chapter. The team has concluded that university partners are in a better position to support the achievement of the objectives of CoE and recommends consideration of university partners where possible. However, team also received consistent feedback, that unless established as a semi-independent structural component of a university, the VET center at Universities will receive insufficient attention and funding (VET is considered as an inferior component to academia, considered as a source of additional jobs and income for university faculty not sufficiently loaded at academic programs, in the huge structure and functions of universities not all components receive adequate attention and management, unless structurally designed to do so and adequately staffed at the initial stage). Specifically, the team finds the following advantages to partnering with universities:
  - Universities have a more respected brand name in the education sector, are more attractive to students, and have a better opportunity to gain the trust of the private sector;
  - Universities have more management autonomy;
  - Universities have an ability to support a specialized training centre and extend services to several colleges achieving a great spill-over effect;
  - Universities should have a value added of their own from CoEs, for the model to be successful though and it should not be merely additional income or employment opportunities, but some integral elements for them as knowledge creators and servers of community and economy.
- PPP Law: a preliminary review of the PPP law finds that the law has adopted a number of international best practices with regard to designing and implementing PPPs. However, as the law came into effect only recently, a number of procedures and implementing norms have yet to be developed. The next phase of detailed investment preparation should analyse developments in this area.
- PPP Selection Process: It should be noted that the new PPP Law in Georgia and international best practice for awarding PPPs involving a concession or substantial contribution from the public sector, often involve a formal selection process for private partners. The selection process provides both for transparency in public expenditures and competitive format incentivizing optimal private contributions. The definition of such a process, if necessary, can be further elaborated in Phase II of this assignment.
- PPP Agreement: In this model, the PPP has the following parties, which together form the corporate governance body (Board) of the training centre:

  - MoES
  - University or College Partner
  - Private Sector Partner(s)

- Special purpose entity (professional training centre): notwithstanding a partnership with a university, it is important that the PPP model allow for a high degree of management autonomy. This often takes the form of a special purpose entity that is created by the parties in the PPP Agreement. Although further analysis is to be undertaken, a not-for-profit entity may be suitable.
- Board of Directors: A Board of Directors would be convened with representatives of the parties to the PPP. The Board of Directors will establish procedures for governance agreeable to each of the parties, which will normally include a selection process for the management team of the training centre and procedures for recruitment of international or national service providers. The Board would have discretion to invite other stakeholders, such as management or service providers, to scheduled board meetings.
- Management: The Board would select a Director for the CoE, allocate necessary staff, and provide guidance for the terms of employment of centre management.
- Education and Service providers: the professional training centre may have one or more educational or other service providers (firms), which would be selected by a process as agreed between the parties and under relevant guidelines. The training centre may also rely on instructors and staff from the parties to the PPP, in which case the terms of such employment would also be subject to guidance of management or the Board as determined.

The specific institutional arrangements of a PPP in a given sector will depend on the composition of the relevant industry, for example the number, size, and capacity of industry partners; the existence of strong lead partner or lead association; and the existence of an appropriate public partner such as existing college or university. Similarly, the contributions toward infrastructure, management, educational delivery (diploma and short courses), other services, and maintenance between the parties is also subject to needs and interests of the parties. In this case, with the Georgian-German Financial Cooperation providing funds for facilities and equipment, the scope for attracting an optimal partnership could focus on educational delivery, management, and other services at the CoE.

4 Preliminary Options for CoE Investments

Our team has reviewed economic sectors and skills clusters for relevant labour market demand, level of industry engagement, preliminary viability of PPP structures, the ability of a CoE to have positive spill-over affects into the VET system, and potential impact on regional economic growth to assess a set of preliminary opportunities for CoE investments. Our team started with a focus on two regional CoE investments. At this stage of project development, the costs parameters are understandably preliminary; however, cost data from a set of recent comparable facility improvements and new construction have been compiled by the team. Based on these figures, together with estimates of relevant equipment packages and the probability for private sector contributions to one or more CoEs, we have expanded our recommendations to include a consideration of a 3rd investment and included Tbilisi-based investments as an option. The preliminary cost assumptions are outlined in Chapter 6.

4.1 Hospitality and Tourism Training and Development Centre

4.1.1 At a glance

The team proposes the establishment of the Georgian Hospitality and Tourism Training and Development Centre in Batumi. The Hospitality and Tourism TDC will prepare personnel to international standard for Georgian and regional labour market needs as well as provide professional services to this growing sector of the Georgian economy. It is recommended that PPP opportunities be explored with associations of restaurants and hotels or large, individual players in the market building on current dual training initiatives. Batumi University might be candidate to participate in the management of the CoE, while offering services to nearby TVET colleges. However, other providers may be interested, too. New facilities and equipment are recommended to be designed in collaboration with industry based on needs and capacities for work-based training.

Table 14: CoE Hospitality and Tourism overview

Hospitality and Tourism Training and Development Centre		Comment
Skills/Professions	10101 Tour operator 10102 Guide 10107 Restaurant manager 10111 Specialist of hotel management 10112 Cook 10113 Baker	New Professions, Languages; Short Courses;
Facilities and Equipment	• New Academic Building (classrooms, learning environments; administrative) • New Kitchens and Equipment; • New Language Training Centre • New ICT Development Centre with working space • Hostel with restaurant and bar managed by students	To be co-designed with industry

Branding	CoE positions itself as a leading provider of technical training and skills development for the hotel industry Own branding independent from hotel operators or private provider branding International accreditation, e.g. THE-ICE and others	
Potential Public Partners	Batumi University Black Sea TVET College Kobuleti New Wave	PPP involving large hotels from private sector and GoG as co-founder
Potential Private Partners	Hotels and Restaurants, Association Participation, e.g. GTA, ATBA or other	Current industry engagement in Tbilisi and Batumi; can be extended to emerging markets, Borjomi, Kakheti; current engagement in dual training.
Potential Location	Batumi, Adjara	

4.1.2 Rational and Objectives

The hospitality and tourism sector is one of the fastest growing sectors in Georgia. According to the research undertaken by the Ministry of Economy, Georgia's tourism sector saw an estimated increase from 2016 to 2017 of about 36%. The demand for skilled workforce grew by 44%, i.e. more than 15,000 additional persons found employment in hospitality installations. Monthly wages in the sector have increased by 24 percent in the period 2014-2016. The opportunities include both hired and self-employment.

Table 15: Labour market indicators for hospitality/tourism sector

Overall economic impact (GDP share)	✓ 3.0%
Overall growth (Number of active companies)	✓ 6088
Employment (Share of)	✓ 37,300; 2.2% of labour force
Employment Trends	✓ Increase of 44% (2016-2017)
"Better Job" (increase in wages 2014-2016)	✓ Wage Increase 23.7% (2014-2016)

Public and private providers of TVET in Tbilisi or Batumi, let alone other, more remotely situated training centres, can so far not provide the level of skills required in the hospitality industry. Quantitatively, the ratio between the demanded and supplied workforce in hospitality sector is hugely disbalanced (approx.2000 graduates in 2013-2017). To a considerable extent, the workforce required in the hospitality industry is currently trained on the job.

Based on interviews in Tbilisi, Batumi, Kobuleti, and Kakheti with education providers and hotel managers, the labour market in hospitality and tourism is currently under dynamic growth and transition. Due to the specific high value of foreign languages in the hospitality market, most potential candidates for more skilled positions have self-selected into university programs. According to one international hotel HR Director, the hotel chain in Georgia hires from universities for communication and language skills (especially foreign language skills) with a bonus if the candidate has specific professional IT skills; the remainder is in-house training.

For a CoE in Hospitality and Tourism to serve industry as a partner, the CoE will need to improve the delivery of existing modular programs as well as develop new professional offering, short courses, and high-quality language training that is viewed as higher quality than in-house training. This may require private suppliers for specialized program delivery on a fee-basis.

Current Private Sector Engagement in TVET

The hospitality and tourism sector has seen one of the most robust industry engagement profiles for training needs identification and delivery. Hotels and restaurants in Tbilisi have participated in internship and apprentice programs with Icarosi and Mermisi TVET College for nearly a decade and similarly in Batumi with Black Sea College and in Kobuleti with New Wave. More recently, with the technical assistance of GIZ, dual training pilot initiatives have been introduced in Tbilisi, Batumi, and Kobuleti, with an expansion planned based on industry interest in Batumi. This experience creates a natural starting point for industry engagement regarding program design and facility and equipment requirements.

Facility and Equipment Investments

There are no current state-of-the-art facilities for hospitality and tourism training in western Georgia. Both New Wave and Black Sea Colleges offer existing accredited programs; however, facilities at both schools are either no longer sufficient for the requirements of the new modular courses or have been identified as constraining either student numbers or quality of training. This assessment includes cooks, bakers, and hotel management specialists. Language training has been described as inadequate by industry partners.

Although the final package of facility investments should be co-designed with industry, we have initially identified the following facility needs, which could be situated at one site:

- New Academic Building (classrooms, learning environments; administrative)
- New Kitchens and Equipment;
- New Language Training Centre
- New ICT Centre
- Hostel option (managed by students) to be considered

To attract students and achieve brand recognition among new hotels and restaurants, new facilities are recommended.

Batumi offers a range of advantages to host the CoE in Hospitality and Tourism Development:

- Batumi is itself the second largest tourist market in Georgia after Tbilisi;
- A number of hotel and restaurant operators have outlets in Tbilisi and elsewhere in Georgia allowing for training spill-over into the broader market;
- Batumi accommodates Batumi University and the Black Sea VET College two education institutions that could both, provided proper and inclusive management structure and appropriate setting and negotiation of objectives, benefit from the CoE. Additionally, New Wave College in Kobuleti could also be served.
- Batumi offers sufficient, and growing, touristic potential that would ideally allow the CoE - through its educational pathways and services offered – to pilot the envisaged occupation in the touristic field in cooperation with industries and SMEs

Our team has identified an existing plot of land currently an asset of Black Sea College (see Annex). This plot is downtown Batumi and currently has an old building which is likely in need of demolition rather than renovation, which is in-line with our recommendation for new

facilities. Further analysis of this site would be required. Preliminary cost estimates are compiled in the Draft Budget in Chapter 6.

Proposed Management Structure:

It is proposed that a PPP model, involving MoES, a university or college partner, and either hotel association or one or more large hotel operators be considered. As noted above, Batumi University is currently serving this market segment, and could be candidate for a public partner, although the consultant did not initiate discussions with Batumi University. Several large hotel operators are currently engaged in dual-training programs, which could serve a platform for a structured public-private dialogue into designing a PPP agreement along the lines discussed in the previous section, i.e. creating a special purpose vehicle with board governance and management structure.

The financial viability of recruiting private education providers for specific training programs, for example language training or IT training with international accreditation, or broader centre management should be considered during the detailed investment planning. If private providers are interested and the financing is considered viable, a private management concession for the centre could also be considered. However, given the financial gaps identified and discussed below, the team currently anticipates that private providers may play a more targeted role in the delivery of specific programs on a fee basis.

4.1.3 Financial Parameters

The Hospitality and Tourism Training and Development Centre shall, in conjunction with the private sector, provide a diverse set of services and products:

Table 16: CoE hospitality/tourism income and expenditure overview

Costs	Income sources
Operational costs: • Teachers and instructors salaries • Training consumables • Utility costs • Depreciation	• Voucher-based income; • In-kind and salary contributions from industry
• Instructor training	• Company payments • Course fees
Company-driven services • Language Training • Skills upgrade for employees working in the hospitality sector • HR services: filling vacancies in the industry through placement of graduates • Advisory to companies (marketing, cross-selling assistance, attraction of new customer groups, extension of value chain etc.)	• Service fees borne by employer

Professional Training Courses for Hotel Rating Inspectors	• Fees from associations
Conferences, networking events	• Registration fees; Service fees paid by beneficiary
Development of tools and methods to recognize prior learning of people working in the hospitality industry; Accreditation fees, e.g. for international accreditation	• Student fees

At this stage in investment planning, it is too early to be able to prepare reliable estimates for income for services not yet provided. During the detailed investment planning, a demand and willingness to pay analysis for the services identified (and others) will be conducted.

However, income generation from vouchers, the current primary form of TVET finance, compared to actual delivery costs can be estimated and provides an initial insight into the financial viability of a CoE. Based on research undertaken in 2010 in the context of calculating values for TVET vouchers[3], PLANCO identified detailed costing scenarios for 25 TVET professions by interviewing 15 TVET institutes under the MoES. The consultants used data researched in 2010 during the cost assessment mission among different TVET institutes providing VET for the hospitality sector. To the cost scheme of the best performer hospitality professions in 2010 we added an inflation adjustment of an average 5% per annum (p.a.).

Table 17: CoE hospitality/tourism expenditure estimation

	Costs 2010 among best performers in hospitality VET (GEL)	Accumulated inflation adjustment 2010-2018 (average inflation: 5% p.a.)	Estimated costs 2018 (GEL)
Salary teaching staff	125460	59902	185362
Training consumables	63187	30169	93356
Depreciation	40637	19403	60040
Administrative costs	291837	139339	431176
Total			**(769,934)**

In our governance structure, we propose a model that allows the CoE to be eligible for voucher funding. Therefore, we can at this stage calculate the income of the CoE based upon an assumed or estimated number of students and, consequently, the resulting voucher income. In our scenario, we assume that the CoE will offer TVET for the professions of confectioner, cook, advanced cook, guide and bartender (column A). For each profession we then identified the amount of the voucher per module (column B) and assumed the number of modules taught per year. In column D we assume a number of TVET students per profession and module. These variables lead then to the voucher-based income of the CoE (column E).

[3] Ref. Costing of VET in Georgia: Report based on Analysis of 15 TVET institutes, Planco Consulting, 2010.

Table 18: CoE hospitality/tourism TVET income estimation

A: TVET profession	B: Voucher value (GEL)	C: No of modules	D: Number of students/ voucher	E: Income from vouchers (GEL)
Confectioner	2250	2	40	180000
Cook	1700	2	50	170000
Advanced cook	1900	2	15	57000
Guide	1150	2	20	46000
Bartender	1150	1	30	34500
Total in				**453,000**

Matching these still envisaged incomes with the expected expenditure, we shall foresee the following profit and loss scenario:

Table 19: CoE hospitality/tourism TVET income-expenditure overview

Position in and out	GEL
Total in (voucher financing)	453,000
Total out hospitality occupations (cost of delivery)	769,934
Deficit annually	**-316,934**

Note: This is a preliminary exercise to identify the potential gap in operating cost financing for a CoE. This is based on delivery of existing TVET programs only and does not consider new programs or other income generation activities.

Only by generating income from voucher-based TVET, the CoE would provide high deficits that relate not only from a rather huge administrative expenditure bloc but also from rather high depreciation, i.e. substitution investments. With a costly equipment as envisaged to be invested in the context of the CoE, these depreciation expenditures might be even far higher. Moreover, as identified in chapter 3, current TVET instructor salaries are low, so this deficit would only grow with increases in instructor salaries.

Therefore, it will be of key importance in our CoE concept to reflect on alternative income schemes. On one hand, hotels and hospitality installations are keen to invest in building, for instance, the language competencies of their personnel. Innovations in cooking and confectionary are a similar knowledge topic where employers are willing to invest. A CoE with appropriate products shall be able to offer market-led services that will lead to further income. There are for both service types market structures in Georgia where a CoE shall tap into. However, developing a proper product that may compete with the already existing competitors in this field will take time. It is, therefore, recommended to co-fund VET in CoEs, e.g. through student loans (see chapter “Draft Budget Outline and Proposed Financing Approach” for further details).

4.1.4 Impact Assessment

Table 20: Assessment of potential impact of CoE hospitality/tourism impact

Criterion	Impact assessment	Comment
Economic sector's labour demand	High	Tourism sector grew by 36 % from 2016 to 2017 Demand on skilled workforce (+15,000 in 2016/17) cannot be satisfied by TVET system that only provided approx. 2,000 graduates Considerable investments in Georgia's hospitality infrastructure
Expected private sector engagement	High	Private sector trains workforce already on the job and is looking for innovations to improve the quality of TVET
Viability of PPP management structure	Medium	Private sector expressed his interest; concrete willingness to get involved in management structure yet to be negotiated
Impact of CoE services on other TVET centres	Medium	Best practices, e.g. in providing demand-driven modules, may be transferred to other TVET colleges
Regional development potential	Medium	CoE to be established Batumi will support Western Georgia tourism development

4.2 Agriculture, Viticulture, and Agritourism Training and Promotion Centre

4.2.1 At a glance

The team proposes the establishment of the ***Agriculture, Winemaking and Agritourism Training and Promotion Centre*** in Kahketi. It is recommended that PPP opportunities be explored with associations of winemakers, restaurants and hotels or large, individual players in these markets building on current dual training initiatives. The consultant proposes a blended professional skills cluster that retains the elements of specialization and branding potential, while serving a broader set of economic activities and therefore higher employment opportunities. International partners, either as partners or education / service providers should be prioritized for quality and recognition in a global market. Telavi University may be candidate to participate in the management of the CoE, while offering services to nearby TVET colleges; however other providers may be interested and the branding of the TPC should be distinct through the creation of special purpose entity. Renovation of existing facilities in Telavi may be feasible but costly, and the detailed investment planning should also consider the advisability of new facilities designed to purpose in collaboration with industry.

Table 21: CoE Agriculture, viticulture, agritourism overview

Agriculture, Winemaking and Agritourism Training and Promotion Centre		Comment
Skills/Professions	08101 Apiarist 08104 (Medicinal, aromatic) Plant processor	New Professions, e.g. winemaker and winegrower as developed with GIZ assistance;

	08105 Viticulture 08108 Fruit production (stone crops / seed crops / nut crops) 10101 Tour operator 10102 Guide 10107 Restaurant manager 10111 Specialist of hotel management 10112 Cook 10113 Baker	Languages; Short Courses
Facilities and Equipment to be invested in	• Laboratory and Quality Testing Centre co-designed with industry • Kitchen equipment for tourism-related occupations • Training Hostel with restaurant and bar managed by students	Dual use of laboratory for services to industry and producers (fee-based services)
Branding	The CoE positions itself as: • A promoter for Georgian wines and Georgian Qvevri wine making culture. • A leading provider of technical training and skills development for Kakheti Skills Cluster. • A hub for extension services to small farmer winemakers and in consulting on export	
Potential Public Partners	Telavi University Prestige College AISI College	PPP involving Kakheti industry partners and GoG as co-founder
Potential Private Partners	**Georgian Partners** • National Wine association • Winegrowers Association of Georgia • National Wine Agency • Winemakers • Fruit and Nut Producers • Restaurants • Hotels **International partners** • LWG (Bavarian Agency for Horticulture and Viticulture) Veitshöchheim (Germany) • Fondation pour la culture et les civilisations du vin, Bordeaux (France)	Current industry engagement in dual training programs;
Potential Location	Telavi, Kakheti	

4.2.2 Rational and Objectives

A focused investment in a CoE with a special focus on viticulture and agriculture makes sense for various reasons:

- Georgia's viticulture industry witnesses a consistent and rapid growth, with its export volumes rising from 15 million bottles (2010) to 61 million bottles (2016).
- Traditional Qvevri-winemaking in considered one of Georgia's trademarks, being in 2013 officially recognised by the UNESCO as "Intangible Cultural Heritage of Humanity" and thus to be expected for further boosting wine sales in Georgia and abroad. Natural wine branding is increasing in value on the global market.
- The viticulture sector adds considerable value to Georgia as a touristic destination; it contributes substantially to Georgia's branding of having a grown tradition in winemaking and hospitality; the viticulture sector exercises a considerable impact on tourists' decision to come and to spend their time in Georgia.
- The market for agricultural research and related products, e.g. soil analysis, cultivation of new plants and grapes, research on sustainable fertilizing techniques etc., is in Georgia still underexploited. The Telavi University, whilst being the responsible body for this kind of research, is at its current stage of equipment and financial resourcing not in a position to offer competitive services and products in this regard. A research function at the CoE will have valuable potential to fill this gap that many stakeholders in agriculture and viticulture deplore.

Table 22: Labour market indicators for hospitality/tourism sector

Overall growth (share of GDP)	✓ 8.2%
Overall growth (Number of active companies)	✓ 178,955 active companies
Employment (Number)	✓ 735, 900, 43% of labour force
Employment Trend	-7.2% transfer from subsistence to hired employment outside sector
"Better Job" (increase in wages 2014-2016)	✓ Wage increase 12.3% (2014-2016)
Comment	Potential to increase productivity as sector oriented on exports

Nevertheless, experts consider that Georgia's potential in winemaking is far from being fully exploited for the following reasons:

- **Competitiveness**: The current level of productivity and competitiveness of the Georgian viticulture is still too low and affects negatively prices and margins. Moreover, proper analysis of the competitive environment in Georgia's main export destinations is not done.
- **Brand recognition**: International awareness of the quality of Georgia's wines is still low, thus making it difficult for Georgian winemakers to tap into well-established marketing structures.
- **Market development**: Research of target market of producers and consumers abroad is not there, thus having negative consequences on Georgia's strategic positioning of its viticulture products.
- **Impact analysis**: Given the high rate of small-scaled wine producers, the impact of viticulture and winemaking on the national economic performance and the sector's relevance to its population needs to be further analysed.

Having a state-of-the-art equipped CoE with a proper governance structure organised in the viticulture hub would provide the Georgian winemaking sector as a whole with different opportunities to:

- Develop and increase quality,
- Cater for a better supply of fully qualified workforce,
- Market and to brand collectively Georgian wines
- Exploit more thoroughly its growth potential.

Given the relatively low labour intensity in the winemaking sector but at the same time the tangible and noticeable need of formal employment in rural areas, the consultants elaborated the combination of a pure viticulture CoE with other sectors and trades providing the opportunity to add value to the viticulture and agriculture focus. It should also be noted that Kakheti – as an easy-to-reach region in the vicinity of Tbilisi – also welcomes a huge number of tourists. Since touristic installations are limited in number in Kakheti, tourists arrive predominantly as day-visitors. Setting wine-tasting and wine selling aside, the entire value creation as a result from this tourist activity is realised in Tbilisi. Although, the Kakheti region has without any doubt touristic potential that remains so far unleveraged. With more qualified personnel, already existing touristic facilities (restaurants, hotels and hostels) are expected to exploit this potential better and to generate more income from this regional tourism in the Kakheti area itself. Besides classical tourism offers, so-far non-existing ways and innovations in Georgia's tourism product range, such as agritourism, farm stay, rural tourism and ecotourism can be developed and seem highly likely to attract new customer groups like, for instance, families, backpackers etc., i.e. customer groups not being targeted by Georgia's regions thus far.

As outlined above in the conceptual part of this report, a strong linkage with the private sector is a key prerequisite for success. In the viticulture and winemaking sector, though, this linkage shall be built on (a) winemaking champions in the Kakheti region and (b) an integration of appropriate associations and organizations representing the winemaking industry. Georgia's winemaking industry is dominated by small by very small production units, i.e. households which run a relatively small vineyards. This type of productive units adds up to 90% of all winemaking units in Georgia[4]. In 2014, one estimated that approximately 150 SME-based companies of this market segment have the potential to export[5].

Our concept for the CoE with the focus on agriculture, viticulture and agritourism is also expected to provide a wide range of spill-over effects. On the most tangible end of the range of effects is the opportunity to provide training for instructors. This training of instructor, predominantly in the area of winemaking, is required to improve the quality of in-company instruction and practical training. In addition to this instructor training, another essential spill-over can also be expected from the CoE in the context of advising existing companies, predominantly those operating as SMEs and smaller entities, in the context of (a) developing their winemaking capacities in order to increase quality and (b) strategizing and designing touristic products that shall attract visitors and help – as outlined above – commercially operating businesses to generate higher income from the value chain of the tourism industry. These objectives go hand-in-hand, as entering the European market as a producer of particular, high value wines, and a tourism destination will only be possible with a higher level of sophistication in the viticulture business.

In this regard, several approaches have been undertaken to support winemakers in Kakheti to improve quality and to enhance production capabilities. GIZ is currently implementing the German dual training approach with winemakers in Kakheti. Together with GIZ, the Bavarian Agency for Horticulture and Viticulture (LWG) supports winemakers in the Telavi area in

[4] World Academy of Science, Engineering and Technology International Journal of Economics and Management Engineering Vol:8, No:10, 2014, pp. 3267 ff.
[5] Ibid.

order to improve production procedures and to increase the product quality. Georgia's wine-making sector is well organised. It provides of its association, the Georgian Wine Association as well as the Winegrowers Association of Georgia. Moreover, public stakeholders invest in the National Wine Agency that shall help to promote Georgian wines. In this regard, the private sector appears to be prepared for taking a larger share of responsibility to increase the qualification level of the personnel working in the wine industries.

As for the physical location, Telavi offers a range of advantages:

- Telavi finds itself in the Kakheti region, i.e. in the centre of Georgia's viticulture industry
- Telavi accommodates with the Telavi University and the Prestige VET College two education institutions that could both, provided proper and inclusive management structure and appropriate setting and negotiation of objectives, benefit from the CoE
- Telavi as a town offers sufficient, although still unexploited, touristic potential that would ideally allow the CoE - through its educational pathways and services offered – to pilot the envisaged occupation in the touristic field in cooperation with industries and SMEs

Georgian stakeholders offered for consideration the former building of the Telavi Agricultural Institute as potential site for the CoE. This building offers a number of pros and cons in the context of building a fully-fledged CoE:

Table 23: SWOT analysis of premises selection in Telavi

Strength	Weaknesses
• Availability of land where CoE incl. adjacent facilities (dormitory etc.) may be erected • Premises' ownership appear cleared at this moment, i.e. no negative surprises like ownership claims shall be expected in later phases of project realisation • Building has still a legacy as an agricultural training centre, i.e. new CoE may build upon a certain brand recognition from the past	• Building is not in Telavi's centre, making it for students probable more difficult to reach the CoE • Large scale of the entire building, rendering renovation expensive and thus making it questionable whether even after rehabilitation a high quality and appropriate infrastructure may be obtained
Opportunities	**Threats**
• According to Georgian public stakeholders, a winemaking company shall establish in the very near future next to the premises, thus offering the potential for more practical training also during theoretical/CoE based phases of the curriculum • Large adjacent plot being currently under ownership of Telavi Municipality, that latter having declared to offer this plot to the future CoE	• Former legacy of Agricultural Centre from the era of collectivism and socialist economy may hamper perception of CoE as a provider of high quality TVET, services to winemakers and industries etc. • Unforeseeable damages in the existing building structure may appear during rehab phase and increase substantially the projected budget provided for rehabilitation

Although this SWOT analysis reflects the current assessment of this specific site alternative, it is foreseen to address this site selection during phase II when the concrete project proposal will be elaborated. Indicative costs based on our preliminary cost assessments are provided the Draft Budget in Chapter 6.

Considering the equipment investments for the CoE, we shall outline the range of different functions of the centre:

Table 24: Overview of premises and equipment required for CoE agri-/viticulture/agritourism

Function	Facilities required	Equipment required
Generic admin functions	Offices	Office equipment
TVET function: 10 occupations taught in different cohorts	10 class rooms	Class room equipment, IT equipment in at least two class rooms, network connections
	Training kitchen	Kitchen training equipment
	Wine cellar	Wine production equipment
	Garage/hall	Agricultural/viticulture training machinery, e.g. tractor used in agriculture etc.
Higher education/university function	5 class rooms required	Class room equipment, IT equipment in at least two class rooms, network connections
	Laboratories for required analyses	Laboratory equipment
	Offices	See above
Instructor training function	Class rooms	See above
	Garage/hall	See above
	Laboratory	See above
	Office(s)	See above
Accreditation function	Offices	See above
Training and information services for entrepreneurs function	Class rooms	See above
	Office(s)	See above
HR function for graduates and enterprises	Offices	See above

Proposed Management Structure:

It is proposed that a PPP model, involving MoES, a university or college partner, and initially a set of core partners in winemaking and later hotels association or large hotel operators be considered. As noted above, Telavi University could be candidate for a public partner, although the team recommends a strong branding approach be taken to ensure the CoE is understood to be a new and distinct training and promotion centre. The number of potential partners in the private sector is large but also poses a challenge to determining the structure

of the PPP and selecting most appropriate partners and governance mechanism. Several winemakers are currently engaged in dual-training programs, which could serve a platform for a structured public-private dialogue into designing a PPP serving the needs of winemaking industry.

It is recommended to focus initial PPP dialogue with winemaking partners and expand to other partners in agricultural production and agritourism as possible, in order not to dilute the currently existing brand and service line for the CoE (i.e. wine sector is a "low hanging fruit" from a work-based learning perspective).

The team recommends that a combination of Georgian and international partners is critical for the success of this CoE due to the focus on exports. For winemaking, it is likely that international partners will play an advisory role rather than directly providing educational programs. However, opportunities may exist for international providers of short term courses and other services, with language training and IT courses again a possibility, as well as new skills programs for agritourism. The financial viability of recruiting private education providers for specific training programs, therefore, should be considered during the detailed investment planning.

Table 25: Partner to be involved in CoE agriculture/viticulture/agritourism

Partner institution	Potential contribution and involvement
a) Georgian Partners	
Winemakers	• Provision of workplace-based learning opportunities • Collaboration in councils and/or work groups to oversee TVET and to harmonise practical training components • Spreading and sharing the information on the new TVET programmes among peers and entrepreneurs
Fruit and Nut Producers	• Provision of workplace-based learning opportunities • Collaboration in councils and/or work groups to oversee TVET and to harmonise practical training components • Spreading and sharing the information on the new TVET programmes among peers and entrepreneurs
Restaurants and hotels	• Provision of workplace-based learning opportunities • Collaboration in councils and/or work groups to oversee TVET and to harmonise practical training components • Spreading and sharing the information on the new TVET programmes among peers and entrepreneurs
National Wine association	• Collaboration in councils and/or work groups to oversee TVET and to harmonise practical training components • Spreading and sharing the information on the new TVET programmes among peers and entrepreneurs

Winegrowers Association of Georgia	• Collaboration in councils and/or work groups to oversee TVET and to harmonise practical training components • Spreading and sharing the information on the new TVET programmes among peers and entrepreneurs
National Wine Agency	• Spreading and sharing the information on the new TVET programmes among peers and entrepreneurs • Marketing support to winemakers
b) International partners	
LWG (Bavarian Agency for Horticulture and Viticulture) Veitshöchheim (Germany)	• Assistance in building and maintaining quality in educational programmes • Marketing assistance and advisory to winemakers, wine associations and cooperatives • Marketing assistance and advisory to touristic service providers • Support to lobby activities on national and international level
Fondation pour la culture et les civilisations du vin, Bordeaux (France)	• Assistance in building and maintaining quality in educational programmes • Marketing assistance and advisory to touristic service providers • Support to lobby activities on national and international level

This partner structure, though, requires a deeper analysis and negotiation to identify a partner and stakeholder structure able to combine, to complement and to synergise the different potential partner inputs.

4.2.3 Financial Parameters

Table 26: CoE agriculture/viticulture/agritourism income and expenditure overview

Costs	Income sources
Operational costs: • Teachers and instructors salaries • Training consumables • Utility costs • Depreciation	• Voucher-based income
• Instructor training	• Company payments • Course fees

Company-driven services • HR services: filling vacancies in the industry through prudent placement of graduates • Advisory to companies (marketing, cross-selling assistance, attraction of new customer groups, extension of value chain etc.)	• Service fees •
Laboratory analyses	• Service fees paid by beneficiary
Accreditation fees, e.g. for international accreditation	• Student fees

As we did above in the Hospitality and Tourism CoE, we have again undertaken an exercise to inform the viability of operating cost recovery for CoE based solely on voucher fees (see chapter 5.1.3 for explanation). Based upon the data gathered throughout an in-depth cost analysis of public TVET in Georgia in 2010, the consultants developed an income-expenditure scenario for the CoE with an agriculture, viticulture and agritourism focus. Again, the numbers researched in 2010 were subjected to an inflation adjustment of 5% p. a. (all figures in GEL):

Table 27: CoE agriculture/viticulture/agritourism expenditure estimation

	Costs 2010 among rehabilitated VET centres with construction focus	Accumulated inflation adjustment 2010-2018 (average inflation: 5% p.a.)	Estimated costs 2018
Salary teaching staff	75675	36131	111806
Training consumables	3985	1903	5888
Depreciation	35092	16755	51847
Administrative costs	189890	90664	280554
Total			**450,095**

In the table below, we matched the expenditures of GEL 450,095 with expected earnings. In our governance structure, we propose a model that allows the CoE to be eligible for voucher funding. Therefore, we can at this stage calculate the income of the CoE based upon an assumed or estimated number of students and, consequently, the resulting voucher income. In our scenario, we assume that the CoE will offer TVET for the professions of fruit grower, agro-machinery technician, (tourist) guide and wine maker. For each profession we then identified again the appropriate amount of the voucher per module (column B) and assumed the number of modules taught per year. In column D we assume a number of TVET students per profession and module. These variables lead then to the voucher-based income of the CoE (column E).

Table 28: CoE agriculture/viticulture/agritourism TVET income estimation

	Voucher value (GEL)	No of modules p.a.	Number of students/voucher	Income from voucher funding (GEL)
Fruit grower	400	2	15	12000
Agro-machinery technician	1400	2	25	70000
Guide	1150	2	20	46000
Wine maker	2250	2	30	135000
Total income				**263,000**

As in our case study for the CoE in the hospitality and tourism sector, the CoE for agriculture, viticulture and agritourism will not operate on a sustainable financial basis if financed exclusively through voucher income. The income and expenditure matching are displayed in the table below:

Table 29: CoE agriculture/viticulture/agritourism TVET income-expenditure overview

	Amount (GEL)
Total income	263000
Total expenditure	-304642
Deficit annually	**(41,642)**

On first review, the deficit in the operational costs forecast for the CoE viticulture/agriculture/agritourism is considerably lower than the deficit to be expected for the CoE with focus hospitality/tourism. However, as the quality improvement in these professions and new profession required in the CoE are developed further; the costs of delivery are expected to rise further. Salary costs of instructors is also expected to rise. The financing gap and possible income sources are discussed further in Chapter 6.

4.2.4 Impact Assessment

Table 30: Assessment of potential impact of CoE hospitality/tourism impact

Criterion	Impact assessment	Comment
Economic sector's labour demand	Medium	A blended skills cluster may be advisable to assure student scale and employment impact. However, certain markets of the agriculture sector contributions to economic growth and income is high; tourism labour demand in Kakheti is increasing
Expected private sector engagement	High	Both winemakers and hotels are currently engaged in dual training;

Viability of PPP management structure	Medium	Industry interest is high. It may be difficult to negotiate concrete PPP structure with multiple partners whereas one strong lead partner, e.g. a large winemakers or a well-established and properly funded association, may raise private interest and thus "capture" issues
CoE's spill-over effect on other TVET centres	Medium	Could partner with Kachreti college or others
Regional development potential	Medium-High	High for Kakheti region

4.3 Construction Sector Investments

4.3.1 At a glance

Based on the findings collected during desk work and field analysis, the team proposes as a third option to invest in the extension of a CoE for the construction sector. This sector cluster may also include an integration of energy-related training that, nevertheless, does not require the consideration of professions or occupations beyond construction-related professions. Given the assumed relatively high investments and the need to make these investments count through a substantial number of students and users, our team recommends the focus on construction and energy to be located in Tbilisi. We also recommend detailed consideration of investments in existing institutions that are already making progress toward implementing key aspects of the CoE definition. Our CoE concept has its foundation on a thorough interconnection with the private sector, i.e. construction companies and specific service providers in the construction value chain. A CoE in the Tbilisi area would, hence, have far better chances to provide students and trainees with fair chances to obtain opportunities for workplace-based learning.

Table 31: CoE construction sector overview

Construction, Transport, Logistics Training Centre		**Comment**
Skills/Professions	07102 Electrician 07209 Furniture design specialist 07301 Plasterboard structures fitter 07303 Sanitary engineer-fitter 07304 Tile-layer 07307 Brick-layer 07305 Painter 07306 Hydraulic engineer technician 07308 Plasterer 10401 Transport logistics operator 10402 Heavy construction machines operator Dry Construction Technician Carpenter Electric Welder	New professions Short Courses

Facilities and Equipment	Building upgrade Dormitory construction (GTTC) Equipment and simulation infrastructure	To be designed in co-operation with industries
Branding	CoE positions itself to improve training and the reputation of the construction sector in Georgia	
Potential Private Partners	Heidelberg Cement Caparol Knauff BP Georgia Industrial Group	Substantial industry involvement at BP GTTC through BP Current industry engagement in company-based training at Spektri
Potential Public Partners	GTTC Railway Training Centre (RTC) Spektri TVET Centre	All partners contributed substantially to the development of new professions in the construction sector, e.g. electrician, industrial mechanic etc.
Potential Location	Tbilisi	.

4.3.2 Rational and objectives

Georgia's construction sector plays a pivotal role in the context of the increasing national GDP. Gross investments expected for 2018 shall achieve the amounts as displayed in the table below:

Table 32: Estimated investments in infrastructure 2018

No	Sector	Estimated investment amount 2018 (Billion USD)
1	Construction	0,6
2	Investments in energy infrastructure	0,3 – 0,4
3	Hospitality infrastructure	0,3 – 0,4
4	Other real estate	0,3 – 0,4
Total estimate		**1,5 – 1,8**

Source: German Trade and Industry (GTAI), May 2018

In addition to investment flows, two other developments are driving demand for higher quality construction and energy installation professionals. First, international investors are playing a large role in construction and energy projects, requiring compliance with IFI performance standards. In line with this, Georgian legislation has also taken initial steps toward implementing new Health and Safety standards that will require international standards for trained personnel for operational health and safety.

Besides the sectors of investments in generic real estate and hospitality installations, the energy sector will remain a sector of national strategic importance. Particularly the hydroelectric sector shall become a sector with far higher capacity. The existing regulated hydropower generation capacity of 2,226 MW (2016) shall merely be doubled to achieve a genera-

tion capacity of 4,239 MW in 2027[6]. Therefore, expected investments to increase quality and quantity of Georgia's energy supply will remain high and are likely to have an impact on the labour market, predominantly in the context of occupations like electrician (both high and low voltage), brick-layer, hydraulic engineer technician, plasterer, welder as well as transport logistics operator and construction machines operator.

Labour Market Indicators

Table 33: Labour market indicators for construction sector

Overall growth (share of GDP)	✓ 9.3%
Overall growth (Number of active companies)	✓ 6973 2.5%
Employment (Number)	✓ 82,800 4.9% of labour force (6.1% with energy)
Employment Trends	✓ 0.9%
"Better Job" (increase in wages 2014-2016)	✓ Wage increases of 25.5% (2014-2016)
Comment	Large infrastructure investments and international financing supporting improved quality requirements. Skills cluster also serves energy and electricity markets.

Against this positive background that continues and supports an already positive overall development in Georgia's construction sector, diverse activities have been undertaken to ensure a higher integration of Georgian suppliers and Georgian companies in the construction value chain. At the end, this better involvement and integration of Georgian content in the construction sector shall lead to more and, even more important, to more formalised and decent employment. Among the activities to increase Georgian companies' stakes in the construction sector are, for instance:

- Rehabilitation of VET colleges in different regions of Georgia with the objective to improve quality and increase capacities of training provision
- Investments undertaken under auspices of the PICG program and funded by MCA for making TVET delivery more market-driven and tailored to industry needs incl. implementing national and international frameworks of quality assurance as well as development of new course schemes
- Technical assistance provided by GIZ with the objective to develop and to pilot new professions and occupations for the construction sector

As explained in chapter 3 in the context of demonstrating current labour market development, the consultants pointed out the importance of the construction sector which employed in 2017 roughly 11% of Georgia's overall workforce taking into all account relevant professions. In contrast to other sectors, the majority (57%) of the employees working in construction-related business find employment in medium or large enterprises. One year ago in 2016, this share equalled only to 49 %. This particular employment pattern stresses that construction companies in Georgia become bigger, attract contracts of higher volumes and will need to organise their work distribution more sophistically. This means not only that employees have to work with a tighter focus of skills but also that employees need to be able to perform different, more specialised task and to work without constant supervision but on own initiative. Therefore, an increased level of qualified and skilled workers is to be expected in the vibrant construction sector.

Moreover, it must be expected that with the further increased and intensified competition in Georgia's construction and housing market international building standards, incl. health and

[6] All figures extracted from the JSC Georgian State Electrosystem, Ten Year Development Plan for Georgia 2018-2028, p. 88f. Online resource accessible via: http://www.gse.com.ge/sw/static/file/TYNDP_GE-2018-2028_approved-ENG.pdf

safety standards, will become more vigorously applied. Therefore, a rather substantial need for training personnel working in construction companies will become more important. This does not relate only to larger companies but also to Georgian SMEs being active in the construction business. Overall, this further move towards standardised construction and building processes will generate a need for staff development. A CoE should respond to these training needs.

Currently, the range of the following professions addresses skills needs in the construction sector:

Table 34: Professions for construction sector

No	Profession
Construction focus	
07102	Electrician
07209	Furniture design specialist
07301	Plasterboard structures fitter
07303	Sanitary engineer-fitter
07304	Tile layer
07307	Brick layer
07305	Painter
07306	Hydraulic engineer technician
07308	Plasterer
Construction logistics focus	
10401	Transport logistics operator
10402	Heavy construction machines operator

In addition to these accredited TVET schemes, more professions for the dual TVET pathway have been created for providing a better match between TVET supply and labour market demand:

- Road Builder
- Carpenter
- Electric Welder
- Electrician - low and high voltage
- Tiler
- Dry Construction Technician
- Plasterer

Although at the time of writing still pending for accreditation, it can be assumed that these professions will be soon piloted in collaboration between four pilot TVET centres (Spektri College Tbilisi, GTU Tbilisi, Gantiadi College Gori, New Wave College Kobuleti). The design of the curricula as well as the preparation for obtaining accreditation was part of the GIZ-provided technical assistance for Georgia's TVET system.

Proposed Management Structure

Construction related professional training programs have both high investment costs associated with facility, equipment, and consumables and unique challenges and costs for private industry to engage in work-based learning initiatives. On the job training for a number of professions, particularly for businesses working to international standards of performance in terms of occupational health and safety and environmental performance, face high costs in accepting students into workplace learning scenarios. In order to mitigate these high costs, our team recommends that MoES and KFW consider targeted investments in existing training centers in Tbilisi to expand the quantity and quality of priority professions. This would involve investments in equipment to expand numbers of students in existing programs; equipment for new professional programs; and dormitories to expand access for new students. We would not foresee investments in buildings.

We propose a PPP structure be developed with key industrial partners to focus on priority professions that can be developed into company-based or dual learning programs in collaboration with one or more public institutions.

4.3.3 Financial Parameters

Like the other sectors, we have prepared an analysis of voucher-based funding for operational sustainability. Based on research undertaken in 2010 in the context of calculating values for TVET vouchers, PLANCO identified detailed costing scenarios for 25 TVET professions by interviewing 15 TVET institutes under the MoES. The table below may provide a cost horizon for a CoE. The consultants used data researched in 2010 during the cost assessment mission among different TVET institutes providing VET for the hospitality sector. To the cost scheme of the best performers in 2010 (Spektri VET Institute Tbilisi and Rustavi VET Institute) we added an inflation adjustment of an average 5% p.a.

Table 35: CoE construction sector expenditure estimation

	Costs 2010 among rehabilitated VET centres with construction focus	Accumulated inflation adjustment 2010-2018 (average inflation: 5% p.a.)	Estimated costs 2018 (GEL)
Salary teaching staff	140,141	66895	207036
Training consumables	45,000	21480	66480
Depreciation	14,000	6683	20683
Administrative costs	125,932	60112	186044
Total			**(480,243)**

The expenditures of GEL 480,243 are now in the table below matched with expected earnings. In our governance structure, we propose a model that allows the CoE to be eligible for voucher funding. Therefore, we can at this stage calculate the income of the CoE based upon an assumed or estimated number of students and, consequently, the resulting voucher income. In our scenario, we assume that the CoE will offer TVET for the professions of plasterer, mason, tiler, welder, carpenter and high voltage electrician (column A). For each profession we then identified again the appropriate amount of the voucher per module (column B) and assumed the number of modules taught per year. In column D we assume a number of TVET students per profession and module. These variables lead then to the voucher-based income of the CoE (column E) in GEL.

Table 36: CoE construction sector TVET income estimation

A: TVET profession	B: Voucher value	C: No of modules	D: Number of students/ voucher	E: Income from vou-chers
Plasterer	800	2	25	40000
Mason	800	2	25	40000
Tiler	950	2	25	47500
Welder	1150	2	20	46000
Carpenter	1150	2	25	57500
High voltage electrician	2250	2	15	67500
Total in				**298,500**

In order to achieve the income of GEL 298,500, the CoE shall then attract a total number of 135 TVET trainees. For instance, GTTC has a capacity of a total number of 96 students. In their first batch, they expect a number of 80 registered TVET students.

By applying the numbers gained through the income and expenditure forecast, we shall come the profit and loss calculation of the CoE for the construction sector:

Table 37: CoE construction sector TVET income-expenditure overview

Position in and out	GEL
Total income	298500
Total expenditure	480281
Deficit	**-181,781**

As said above, exclusively by generating income from voucher-based TVET, the CoE would provide high deficits, relate from a rather huge administrative expenditure bloc but also from higher instructor salaries and rather high costs for training consumables, e.g. for building material, welding substances etc. Given the need of the CoE for providing best quality TVET, it is very likely that the salary costs for instructors and teachers may rise further.

Therefore, it will be of high importance in our CoE concept to reflect on alternative income schemes. It is, therefore, recommended to co-fund VET in CoEs, e.g. through student loans (see chapter “Draft Budget Outline and Proposed Financing Approach” for further details).

4.3.4 Impact Assessment

Georgia’s economy is increasing. Experts forecast an annual increase between 4,5% (EBRD and ADP estimate) and 5,5% (Bank of Georgia estimate). In this context, construction sector expansion will drive a continued labour demand.

Table 38: Assessment of potential impact of CoE construction sector

Criterion	Impact assessment	Comment
Economic sector's labour demand	High	Construction sector employs 11.5% of Georgia's workforce Infrastructure projects demand for workforce with higher skills level in order to extend Georgia's construction value chain
Expected private sector engagement	Medium	Private sector demand for skilled workforce is high Given H&S concerns and regulations, opportunities for relevant workplace training are limited
Viability of PPP management structure	High	Concrete willingness of private sector to get involved in management structure already materialized, e.g. at BP GTTC and RTC
CoE's spill-over effect on other TVET centres	Medium	Best practices, e.g. in providing demand-driven modules, shall be transferred to other TVET colleges
Regional development potential	Low - Medium	CoEs to be supported in Tbilisi; therefore, little immediate impact on regional development to be expected

4.4 Other Investments Identified

Automotive Mechatronics

Another opportunity the team has identified serves a large economic activity sector of automotive trade and repair and the emerging higher technology requirements of the sector. The team believes there is a viable opportunity for investments in a CoE, which positions itself as a leading provider of technical training and skills development for auto and truck mechanics and, potentially, an emerging mechatronic skills cluster.

The team had productive meetings with Tegeta Motors and Tegeta Academy, which is in the early stages of deploying a dual training approach to training its workforce. The management at Tegeta Motors and Tegeta Academy are open to discussing models for PPP modalities and are expanding from their current, substantial training center in Tbilisi to a branch in Batumi.

Several of the economic and employment indicators the team used to identify opportunities are positive for this segment of the economy, and Tegeta is strong potential lead partner. In certain ways, negotiating with one strong partner for a PPP may be easier than negotiating with a wider number of sector stakeholders. However, with Tegeta Academy proceeding under private funding to develop their service offering for internal workforce development, the investment opportunity would require detailed consideration of the public return on investment, the ability of smaller automotive repair firms to benefit from the investment without access to relevant equipment at scale; and the ability of other public TVET providers to replicate the large scale of investments required to provide similar training. Given the limited funding available under the first phase of FC cooperation, the team recommends this may be an alternative investment to be considered at a later stage.

Logistics and Transport Skills Cluster Supporting Anaklia Port and Special Economic Zone

The team met with Anaklia City JSC and had productive discussions regarding the current training needs in western Georgia and potential labour demand that consultant teams are modelling based on the port of Anaklia and the Special Economic Zone (SEZ) planned developments. This economy transforming project creates the following labour demand forecasts:

- By 2024 SEZ and port will generate about 3,300 new jobs out of which approximately 2,850 will be jobs in: port, transportation services and logistics park
- By 2027 SEZ and port will generate jobs 5,900 jobs, out of which logistics park will employ 1,300 while remaining will be transport related and commercial/business jobs

The team confirmed relatively low capacity for professional training for these forecasted needs in the region – through visits to training centers in Senaki and Poti. Zugdidi may be a best option in the medium term for development of professional training before considering investments in Anaklia. However, the team believes these investments are more suited to potential second phase of Georgian-German FC collaboration due to the time schedule of the Anaklia port and SEZ plans.

5 Financing CoE Operating Costs

5.1 Financial Gap

As discussed throughout the report, sources of financing for the PPP will include: student fees and voucher funding for students; revenue-generating activities; and private sector contributions. The opportunities for the latter two vary according to economic sector and potential services have been identified in each investment concept. While the team has presented a preliminary analysis of voucher funding levels, it is too early to provide reliable estimates for income from revenue-generating activities by sector and private sector contributions. However, as a common challenge, it should be noted that a potential financing gap, a particularly in the early year of operations, is to be expected for the following reasons:

- Our preliminary review of voucher funding in the previous chapter has indicated that voucher funding alone will not provide sustainable revenue flow for the operating expenses of a CoE. This analysis identified a funding gap before considering the need for increases in instructor salaries to achieve improved results at CoEs, higher expenses from consumables, and higher depreciation resulting from forecasting replacements in the CoE equipment;
- As per experiences gained with other training institutes worldwide, the financial returns of revenue-generating activities are rather limited, particularly in the first years of service offerings;
- Engagement of enterprises is likely to grow with visible development of the CoEs and rising quality of their training; so private sector commitments should not be overestimated at the beginning.

As a result, the team suggests that an additional tuition support mechanism be considered from the earliest stages of the investment planning. This could take the form of GoG contribution for per-student or block funding to the CoEs in the first 3-5 years of operations or scholarship funding to be included in the FC investment. For illustrative purposes, we have included a Scholarship Fund in the indicative FC investment budget in Section 6.4. During the detailed planning phase, the operational procedures for the scholarships, including the potential to leverage co-funding commitments from private partners, can be designed.

5.2 Scholarship Fund

As an exercise to inform the scale of the financial gap for various programs, we have calculated the per-student budget operating cost deficit derived from voucher funding, noting the caveats above.

5.2.1 Income calculation for CoE Hospitality, Tourism:

Amount of the scholarship fund per student: **GEL 1,270**

Table 39: Scholarship fund volume calculation for CoE hospitality/tourism (in GEL)

	Voucher value	No of modules	Number of students	Scholarship fund per student	Scholarship fund total	Voucher income	All income
Confectioner	2250	2	40	1270	101600	180000	281600
Cook	1700	2	50	1270	127000	170000	297000
Advanced cook	1900	2	15	1270	38100	57000	95100
Guide	1150	2	20	1270	50800	46000	96800
Bartender	1150	1	30	1270	38100	34500	72600
Total income scholarship fund					*355600*		
Total voucher income						*487500*	
Total in							**770500**

The income and expenditure forecast will then look as displayed in the table below:

Total in (voucher and scholarship fund)	GEL 770500
Total out	GEL 769934
Balance	**GEL 566**

5.2.2 Income Calculation for CoE Agriculture, viticulture, agritourism

Amount of the scholarship fund per student: **GEL 240**

Table 40: Scholarship fund volume calculation for CoE agriculture/viticulture/agritourism (in GEL)

	Voucher value	No of modules	Number of students	Scholarship fund per student	Scholarship fund total	Voucher income	All income
Fruit grower	400	2	15	240	7200	12000	19200
Agro-machinery technician	1400	2	25	240	12000	70000	82000
Guide	1150	2	20	240	9600	46000	55600
Wine maker	2250	2	30	240	14400	135000	149400
Total income scholarship fund					*43200*		
Total voucher income						*263000*	
Total in							**306200**

The income and expenditure forecast will then look as displayed in the table below:

Total in (voucher and scholarship fund)	GEL 306,200
Total out	GEL 304,642
Balance	**GEL 1,558**

5.2.3 Income Calculation for CoE Construction

Amount of the scholarship fund per student: **GEL 675**

Table 41: Scholarship fund volume calculation for CoE construction (in GEL)

	Voucher value	No of modules	Number of students	Scholarship fund per student	Scholarship fund	Voucher income	All income
Plasterer	800	2	25	675	33750	40000	73750
Mason	800	2	25	675	33750	40000	73750
Tiler	950	2	25	675	33750	47500	81250
Welder	1150	2	20	675	27000	46000	73000
Carpenter	1150	2	25	675	33750	57500	91250
High voltage electrician	2250	2	15	675	20250	67500	87750
Total income scholarship fund					*182250*		
Total voucher income						*298500*	
Total in							**480750**

The income and expenditure forecast will then look as displayed in the table below:

Total in (voucher and scholarship fund)	GEL 480,750
Total out	GEL 480,281
Balance	**GEL 469**

5.2.4 Calculation of overall scholarship fund expenditures

Table 42: Total amount of scholarship fund for all CoEs

Calculation Scholarship Fund	p.a.	Duration	Total GEL	Total EUR
Scholarship fund hospitality/tourism	355600	5 years	1778000	
Scholarship fund agri-/viticulture	182250	5 years	911250	
Scholarship fund construction	43200	5 years	216000	
Scholarship fund total p.a.	**581050**		**2905250**	**1017209**

By applying the three different values for the scholarship fund, i.e.:

- GEL 1270 for those studying at the CoE Hospitality/tourism
- GEL 240 for those studying at the CoE Agriculture, viticulture, agritourism and
- GEL 675 for those studying at the CoE Construction

At this stage, we view these as minimum requirements. The Scholarship Funding would serve to reduce the gap between voucher-based financing and the operating costs of a fully-fledged CoE. Upon the detailed design of the programs offered, analysis of the scope of revenue-generating services, and understanding of commitments of partners within PPP agreements, the assumptions taken above will be revisited in depth with key stakeholders during phase II of the assignment.

6 Estimated Project Budget and Financing

6.1 Estimated Project Budget

Category	Hospitality and Tourism		Agriculture, Viticulture, & Agritourism		Construction		Total	
	Equipment	Buildings	Equipment	Buildings	Equipment	Buildings	Equipment	Buildings
Classrooms, Labs	€ 2.200.000	€ 2.000.000	€ 3.000.000	€ 2.500.000	€ 2.500.000	€ 500.000	€ 7.700.000	€ 5.000.000
Equip spare parts (5%)	€ 110.000		€ 150.000				€ 260.000	€ -
ICT Center	€ 500.000		€ 500.000				€ 1.000.000	€ -
Dormitories/Hostel		€ 650.000				€ 500.000	€ -	€ 1.150.000
Investment Measures	€ 2.810.000	€ 2.650.000	€ 3.650.000	€ 2.500.000	€ 2.500.000	€ 1.000.000	€ 8.960.000	€ 6.150.000
	€	5.460.000	€	6.150.000	€	3.500.000		€ 15.110.000
Contigencies	15%	15%	15%	15%	15%	15%		
	€ 421.500	€ 397.500	€ 547.500	€ 375.000	€ 375.000	€ 150.000	€ 1.344.000	€ 922.500
		€ 819.000		€ 922.500		€ 525.000		€ 2.266.500
Total Investment	€	6.279.000	€	7.072.500	€	4.025.000		€ 17.376.500
Scholarship Fund	€							1.000.000
Consultant Cost	€							1.600.000
FC Budget (Loan)	€							19.976.500
Accompanying Measures (Grant)	€							3.000.000
Total FC Investment	€							22.976.500

6.2 Accompanying Measures

Stakeholders shall foresee a substantial FC support not only for the infrastructure investment but also for the establishment of the training innovations at the three proposed CoEs. In order to successfully operate and to leverage the FC-funded investment on sustainable basis, both management and TVET teachers need to have the necessary capacities and competencies. During the field visits, the consultants interviewed principals and managers of TVET institutes as well as trainers and instructors. Although the management of TVET centres is competent and well aware of the complexity and challenging conditions in the TVET sector, focused support seem to be required to provide the management of a CoE with sufficient capabilities to fully exploit the potential of the FC investment and to implement the innovations connected with the CoE.

It is, therefore, envisioned that additional support that may be financed as an accompanying measure as follows:

- Long-term advisory support to the management of the three CoEs related to establishment of partnerships with private sector partners and the implementation of vocational training in collaboration with companies, monitoring training and implementation of skills assessments in connection with the private sector: assignment of 1 management advisor for all three CoEs over 3 years; hosted at MoES
- Long-term advisory support at workshop level ensuring continuous capacity development of the TVET teachers and instructors in terms of equipment utilisation for practice-oriented training including didactics and maintenance, coordination of practical implementation of training programmes with companies as well as the needed interaction with enterprises at working level: assignment of each 1 technical advisor for the 3 CoEs over 3 years, each hosted at one of the institutes
- Specific short-term further technical training for TVET teachers in the respective occupational areas
- Short-term advisory input related to the development and subsequent adjustment of teaching and learning materials and assessment tools

6.3 Financial Cooperation Financing

The FC Investment is expected to include project (loan) financing and government contributions:

- Construction of additional classrooms and workshop buildings – a combination of FC and government contribution;
- Construction of dormitories;
- Supply of training equipment and tools;
- Supply of educational and training materials;
- Establishment of a scholarship fund – to be determined as FC or government contribution;
- FC consultant services related to project implementation; including detailed planning; procurement and installation;
- Accompanying measures - as agreed between MoES and KFW.

7 Next Steps - Phase II Terms of Reference

Phase II of the Terms of Reference, to be conducted upon approval of Phase I, is to be conducted in August – September, 2018 and will develop a concrete investment proposal and implementation concept for 2-3 CoEs, including:

Pre-selection of project sites for such centres. Both options - construction of centres or expansion/ upgrade of the existing ones shall be considered.

i. Utilization concept with short project brief per site
ii. Site/ masterplan per unit, scale factor 1:500
iii. Draft design per exemplary building/ unit, scale factor 1:200

A detailed investment plan for the establishment of 2-3 upgraded / greenfield excellence centres. Cost estimates should always give sources, method, underlying assumptions. Each item of the total costs should be split up in foreign currency costs and local costs. A financing plan should clearly show which cost item, in local or foreign currency, will be financed from which source, and include:

- Rough investment cost estimation
- Consultant costs: The budget shall include an estimate about expected cost for FC consulting-services regarding construction, procurement, maintenance as well as qualitative support, e.g. qualification demand analysis and training requirements for teachers of participating institutions taking into account the planned trainings of GIZ
- Equipment-costs: Defining investment costs, technical specifications and the composition of equipment in relation to the centres of excellences as well as the implementation of work based learning curricula in other centres in cooperation with GIZ and other donors
- Follow up costs to the investment: Estimation of the expected additional running costs.

Phase II includes a logical framework outlining the overall program goal; detailed stakeholder analysis, time schedule, and project and environmental and social risk analyses.

Annexes

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Annex 1: Socio-demographic Characteristics of Employment and Unemployment, 2017

Table 43: Socio-demographic characteristics of employment and unemployment 2017

	Employed				Unemployed		Active population/Labour force		Inactive population/outside labur force		Total	
	Hired	Selfem-ployed	Total									
Gender			**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Male	426.0	462.4	889.3	63.4	356.5	15.0	1046.3	74.6	356.5	25.4	1402.9	100
Female	398.2	419.2	936.7	50.8	119.3	12.7	936.7	58.2	672.7	41.8	1609.4	100
Both sexes	824.2	881.6	1706.6	56.7	276.4	13.9	1983.1	65.8	1029.2	33.6	3012.3	100
Educational level												
Low				**36.1**		**10.5**						
Medium				**57.9**		**13.5**						
High				**62.4**		**15.5**						
Vocational Education				**60.3**		**12.2**						
Age group												
15-19	9.7	27.8	37.8	**17.9**	14.0	**27.1**	51.8	**24.6**	159.2	75.4	211.0	100
20-24	59.0	36.5	95.6	**45.3**	40.1	**29.6**	135.7	**64.3**	75.3	35.7	211.0	100
25-29	113.2	54.0	167.3	**60.1**	43.9	**20.8**	211.2	**75.8**	67.3	24.2	278.5	100
30-34	96.7	64.4	161.2	**63.8**	31.6	**16.4**	192.8	**76.3**	59.7	23.7	252.5	100
35-39	94.0	66.7	160.7	**66.7**	32.0	**16.6**	192.7	**80.0**	48.1	20.0	240.8	100
40-44	91.0	80.9	172.0	**71.8**	26.9	**13.5**	198.8	**83.0**	40.7	17.0	239.5	100
45-49	84.3	81.2	165.7	**72.0**	22.4	**11.9**	188.2	**81.8**	41.9	18.2	230.0	100
50-54	92.4	96.9	189.2	**72.1**	25.5	**11.9**	214.7	**81.8**	47.8	18.2	262.6	100
55-59	81.9	109.0	190.9	**69.5**	20.0	**9.5**	210.9	**76.8**	63.8	23.2	274.6	100
60-64	55.5	88.2	143.8	**63.5**	11.5	**7.4**	155.3	**68.6**	71.1	31.4	226.4	100
65+	46.5	176.0	222.5	**38.0**	8.4	**3.6**	230.9	**39.4**	354.5	60.6	585.4	100
Total	824.2	881.6	1706.6	**56.7**	276.4	**13.9**	1983.1	**65.8**	1029.2	34.2	3012.3	100

Annex 2: List of persons met during the mission

Name (a-z)	First name	Institution	Position	Date
Burduli	Giorgi	Adjara Group	HR Development Manager	05-Jul-18
Aslamazashvili	Malkhaz	AISI Community College	Director	15-Jun-18
Bakuradze	Nino	Vocational College "Phasizi" Poti	Director	13-Jun-18
Baramia	Viktor	Georgian Technical Training Center	General Manager	18-Jun-18
Bochorishvili	Keti	Anaklia City	CEO	13-Jun-18
Böhnke	Judith	KFW Entwicklungsbank	Project Manager	11-Jun-18
Buishvili	Gaga	Ltd Aguna	Wine Technologist	15-Jun-18
Burdiashvili	Roland	Schuchmann Wines Georgia Ltd.	Managing Director	15-Jun-18
Castejon	Jean Marc	EU-VE.GE/ibf	VET Policy Expert/Dep. TL	12-Jun-18
Chanturia	Manana	Shota Meskhia State Teaching University of Zugdidi, Senaki	Director	13-Jun-18
Chekheria	Valeri	Adjara Group	CEO	05-Jul-18
Chibarashvili	Aleksi	TEGETA Academy	Deputy Director	19-Jun-18
Cowgill	Michael	Georgian American Universi-ty/Amcham	President/Chairman	20-Jun-18
Dolidze	Konstantine	Vocational College "Prestige" Telavi	Director	15-Jun-18
Dzeneladze	Teona	Batumi State Maritime Academy	ISO Specialist	14-Jun-18
Eades	John	Education and Training Interna-tional	Chairman	05-Jul-18
Emborg	Esben	SEAF Caucasus Growth Fund	Managing Partner	18-Jun-18
Gogoberidze	Lali	Agricultural University of Geor-gia	ISWD Project Manager	12-Jun-18
Handley	David	ISWD / PEM Consult	Team Leader	18-Jun-18
Iashvili	Tsotne	ISWD / PEM Consult	Grant Scheme Manager	12-Jun-18
Kakhidze	Abdul	Batumi State Maritime Academy	Deputy Director	14-Jun-18
Kammerer	Katja	GIZ	Program Director	21-Jun-18
Kipiani	Beka	Adjara Group	Sales Executive	20-Jun-18
Kitiashvili	Tamar	UNDP	Advisor	12-Jun-18
Kobakhidze	Konstantine	UNDP	Project Manager	12-Jun-18
Kolesch	Hermann	Bayer. Landesanstalt für Wein-bau und Gartenbau LWG	President	02-Jul-18
Kurshubadze	Nino	Batumi State Maritime Academy	Head of ISO Standard As-surance	14-Jun-18
Kutateladze	Marina	Millennium Challenge Corpora-tion	Profram Specialist	21-Jun-18
Magradze	Magda	MCA Georgia	CEO	12-Jun-18
Maisuradze	Lela	EU-VE.GE/ibf	VET Policy Expert	12-Jun-18
Malver	Olaf	Daniele Winery	Owner	21-Jun-18
Mesablishvili	Nino	Hilton Hotel and Resorts	Director for HR	14-Jun-18
Mitev	Vaentin	ISWD / PEM Consult	Grant Management Officer	18-Jun-18
Mshvildadze	Giorgi	TEGETA Motors	Deputy General Director	19-Jun-18
Özkan-Lührs	Didem	FESTO Didactic	Sales Executive	29-Jun-18
Rieck	Hans	KFW Entwicklungsbank	Director Sector Coordination	22-Jun-18
Shahrigian	Sonia	Millennium Challenge Corpora-tion	Deputy Director	21-Jun-18
Shanidze	Nino	KFW Entwicklungsbank	Senior Project Co-ordinator	11-Jun-18
Sharabidze	Irakli	Batumi State Maritime Academy	Rector	14-Jun-18

Shiolashvili	David	Anaklia City	Head of Business Intelligence	13-Jun-18
Shioshvili	Irma	Telavi State University	Rector	15-Jun-18
Strittmatter	Johannes	GIZ	Deputy Program Director	21-Jun-18
Surguladze	Nodar	MCA Georgia	Tertiary Education Project Director	12-Jun-18
Tserodze	Irina	MoES	Head of TVET Dpt	11-Jun-18
Tsiramura	Zaza	GTU	Head of Computer Network Mgmt Center	12-Jun-18
Veigel	Klaus	KFW Entwicklungsbank	Director South Caucasus RO	11-Jun-18
Welton	George	American Chamber of Commerce	Executive Director	20-Jun-18
Zakareishvili	Marika	MoES	Head of Social Partnership Unit	22-Jun-18

Annex 3 Site Visit Assessments (Forthcoming)