

Ministry of Education and Science
Macedonia
SKILLS DEVELOPMENT AND INNOVATION SUPPORT PROJECT (SDISP)

TERMS OF REFERENCE
for

**CONSULTING SERVICES FOR DEVELOPMENT AND DESIGN OF THE CONCEPT
FOR SECONDARY TVET**

1. Background of the Project

The Skills Development and Innovation Support Project (SDISP) project's development objective (PDO) is to improve transparency of resource allocation and promote accountability in higher education, enhance the relevance of secondary technical vocational education, and support innovation capacity in Macedonia. The overall project will support the Government of the Republic of Macedonia's (MOES) initiatives geared to:

- increase graduates' competitiveness on a regional and international level;
- increase labor market relevance of graduates' skills;
- make innovation a source of productivity improvement, competitiveness, increased exportability of goods, and sustained economic growth; and
- increase universities and private enterprises engagement in, and their benefit from, R&D efforts and technology adoption opportunities.

The Project will support interventions which foster education and skills relevant to the job market, and enhance the innovation capacity and activity of firms in Macedonia. It will also address key missing elements of the Macedonian innovation system and ailing aspects of the research sector that are likely to be vital for improving the competitiveness of the enterprise sector and Macedonia's longer term economic growth prospects. It will also help improve absorption of EU funds earmarked for innovation activities.

The Project's direct beneficiaries include students, teaching and management staff from technical vocational education and training institutions who would receive a new curriculum and practical training facilities, as well as training on management, planning, and process improvement capacity ; students and staff of universities, research institutions and enterprises will benefit from: (i) the implementation of quality assurance mechanisms and financing reform in higher education (HE); (ii) grants promoting R&D and innovation; and (iii) technology commercialization, global know-how absorption, and industry- university collaboration fostered by the National Technology Transfer Office (NTTO).

1.1 Specific information/background regarding the assignment

The need for a comprehensive reform/modernization of the Macedonian vocational education and training system comes from the fact that in addition to economic and political globalization, technological innovations brought about fast changes in the types of jobs and content of work in the national economy. Permanent changes in the demand for qualifications and new skills; the open market caused expansion of the opportunities for successful transition to work both on a national and on an international level, and the complexity of the demand for new skills at the labor market strongly determine the structure, organization and content of vocational education and training. New profiles and skills for continuation of education and/or successful transition to the labour market and euro-integration processes highlight the need for modernization of the country's vocational education and training (VET).

The basic platform on which the country's VET system is built is secondary vocational education of 4-year duration (TVET) and 3-year duration (3-year VET), whereas 2-year VET is being currently developed following the new VET Concept. Secondary education is carried out in 99 public (10 state schools, 21 schools of the City of Skopje, and 68 municipal schools) and 13 private schools. According to the type of secondary education and curricula delivered in the public schools, 16 are general education schools and 40 vocational schools, whereas 34 schools offer both general and vocational education; 4 are vocational schools for students with special education needs and 5 are art schools. The low educational attainment of part of the country's population and the large number of students leaving or not continuing their education after the compulsory primary education were the reason for the Government of Macedonia to extend in 2009 the duration of compulsory education into secondary education.

Despite the vocational variety, the secondary TVET system in Macedonia is currently facing challenges in terms of being unattractive to youth and adults and having absence or poor collaboration between education institutions and the business sector. These issues are well understood by the Government and have been built into the formulation of the "Strategy for vocational education and training in a lifelong learning context 2013 - 2020" and Action Plan. The strategy and action plan for vocational education and training in the context of lifelong learning (2013-2020) provide a comprehensive basis for further reforms in key areas: curriculum, infrastructure, capacity of teachers and trainers, management teams, collaboration with higher education, development of social partnership, competitiveness, entrepreneurship and innovation, as factors for development.

The consultant needs to get familiar with the activities in the related IPA projects (reform of the 3 year VET, lifelong learning- LLL and adult education) including the project for improvement of the national qualifications framework (twinning contract)

2. Objective of the assignment

The overall objective of this assignment is to provide technical assistance to the Government of Macedonia and the Ministry of Education and Science (MOES) to reform the 4 year Secondary Technical and Vocational Education and Training (TVET) system and incorporate

mechanisms for a quick response to the labor market demands adapting to changes in the market and in the demographic situation.

More specifically the aim of this assignment is to provide technical assistance in the process of modernization of the 4 year secondary TVET by advising **and working together** with the relevant national agencies and stakeholders on the development of a concept and modernization of the secondary VET including inter alia :

- Concept for modernization of the Secondary Technical and Vocational Education and Training
- methodology for the development of occupational standards and provision of technical assistance for the development of the occupational standards,
- methodology for the development of standards of qualification and provision of technical assistance for the development of the standards of qualifications,
- methodology for the development of educational profiles and plans and provision of technical assistance for the development of the educational profiles and plans ,
- methodology for the development of competency –based curriculums and pertinent modules and provision of technical assistance for the development of the competency – based curriculums and pertinent modules.
- Preparation of adequate questionnaires, cooperation with data collectors appointed by the Client, analysis of relevant data and preparation of a report outlining the VET school network rationalization plan
- Organization of regional training workshops for teachers and school managers focused on the new system and curricula (preparation of training materials, full logistics of training for around 2000 participants from 37 cities ...)
- Preparation of a detailed technical specification for every TVET school for the equipment required for adequate ‘in school’ practical training, based on the requirements of the new curricula

The secondary TVET system needs to be based on a sustainable concept to produce graduates with professional competencies needed in the labor market such as strong basic skills and specific higher-level cognitive and behavioral skills sought by employers, such as problem solving, initiative, and ability to organize one’s work independently, which are foundation skills needed for further diversification and lifelong learning demanded by modern economies.

Development and design of such concept will be a foundation of a modern and efficient secondary TVET system that is characterized by delayed tracking of students into vocational pathway, increased relevance of the standards and curriculum for the labor market and improved mechanisms for school-industry collaboration. The concept is expected to lead to the transformation of the secondary TVET from the narrow occupational to a more general and broader technical education and eventually to result in greater labor market relevance and transferability of skills, and increased flexibility in secondary TVET provision.

3. Scope of work

The consultant should perform the following activities:

- Preparatory activities - the Consultant is to review all documentation related to the assignment, including the Vocational Education and Training Strategy (2013), Enhancing Lifelong Learning through modernizing the Vocational Education and Training and Adult Education Systems, related reports delivered through EU/IPA¹ and British Council activities
- Carry out a comprehensive structural and functional needs analysis of the VET system at the systemic, institutional, national and regional levels, and assess its interaction with the secondary schools and higher education systems. Analysis of the existing educational profiles, divided into 14 vocations, i.e. redefine the existing and define new educational profiles. On the basis of the results of the analysis the consultant should prepare recommendations for options for structural reforms to the VET sector, including the possible reorganization of the management arrangements of the VET system, the rationalization of provision, the use of the physical infrastructure, human resources etc.
- Propose an Implementation Plan with schedule of work, milestones and key performance indicators following the outline of tasks and activities that are part of this TOR, after the options for structural reforms have been presented to the stakeholders and consensus has been built,
- Prepare a new Concept for Modernization of the Secondary TVET. As mentioned before, the main principle of the new concept should be a shift from the narrow occupational training to a more general and broader technical education and promotion of flexible paths between vocational training, general education and higher education. The tracking of the students will be delayed until after the second year of secondary education to ensure that students attain general and academic basic skills before being tracked into vocational education. These general and academic skills will allow them to be more adaptive to changing economic environment, and increase internal and external mobility of the graduates in the labor market. In addition the concept should provide a proposal for consolidation of the existing occupations based on the national priorities for economic development and labor market needs. It should also include a

¹ When preparing the Implementation Plan, the Consultant shall take into account other related measures or projects:

-Operational Programme for Human Resources Development 2007 – 2013, including the:

oPriority Axis 1 "Employment"

oPriority Axis 3 "Social Inclusion"

oPriority Axis 2 "Education and Training":

-Measure 2.1: Support to the Modernisation of the Educational and Training System (Twinning contract)

-Measure 2.1: Purchase and update of the teaching equipment for vocational training for implementation of the reformed curricula (Supply contract)

-Measure 2.3: Developing adult education and lifelong learning - Support for capacity building of the Centre for Adult Education and development of program for adult education and program for literacy and fulfillment of elementary education for excluded persons (Twinning contract)

-Strategy for Vocational Education and Training in the context of Lifelong Learning 2013-2020 (ETF 2013)

-Draft Entrepreneurial Learning Strategy 2014-2020,

-Youth Employability Skills (YES) Network Activities (USAID 2010-2015)

-Mutual Learning project on Quality and Quality Assurance in Vocational Education Training, Adult Learning and Post-secondary Vocational Education Training (ETF 2009-2012)

-Education modernization project (World Bank 2003-2011)

-Skills Demand Analysis (World Bank, 2010)

-Technical Assistance to the Ministry of Education and Science on Lifelong-Learning (CARDS 2008-2010)

-Skills at Work (British Council 2008-2010)

-Human and Institutional Development Programme (USAID 2005-2009)

-VET I; VET II; VET III; VET IV (PHARE 1997-2006)

proposal for enhanced social partnership between educators, employers and relevant government agencies. The concept should guide institutions in designing all other strategic documents for secondary TVET.

- Develop the Methodology for Development of Standards for Vocational Qualification including revision of the “National Methodology for Development of Occupational Standards” (2009). This activity should also provide technical assistance and guidance to the developers of qualification standards in and assure that defining the content of each vocational qualification (knowledge, skills and competences) is done in partnership with representatives of the industries, professional associations, and government agencies.
- Develop the Methodology for Development of Educational Profiles and Plans. This activity should also provide technical assistance and guidance to the developers of educational profiles and plans during the whole duration of the process until final products are produced.
- In coordination with the relevant stakeholders and institutions, to define the appropriate ratio between technical and general subjects that are to be part of the curricula, having in mind both the requirements of the Concept of the state matura and the external testing of high school students.
- Develop the Methodology for the Development of Competency-Based Curriculums. This activity should also provide technical assistance to the relevant educational institutions in designing new secondary 4 year TVET core curriculums and programs (both technical and general subjects) for the whole duration of the process until the new curriculums are developed. The new programs are expected to have a modular structure and to define the competences students need to acquire in respective vocational areas, as well as related expected learning outcomes, and suggest appropriate assessment techniques. The focus thus should be shifted from educational inputs – what is being taught and how – to educational outcomes – what a student will know and will be able to do.
- Assessment of the VET school network that includes preparation of adequate questionnaires, work in close cooperation and provide guidance to data collectors appointed by the Client, analysis of relevant data and preparation of a report outlining the VET school network rationalization plan, i.e. propose steps for optimization of the supply, quality and cost. The activity should contribute to aligning of the network to the new model for modernization of the secondary TVET and the needs of the economy, by meeting the needs for cost effectiveness, the needs of learners, the local businesses and the local government. The assessment of the network of VET schools must examine the capacity of each secondary VET school to provide programs with regard to availability of qualified teaching staff, equipment, possibility for practical training of students in the firms as well as regarding the economic, demographic and cultural environment in which each school operates. The assessment should be accompanied by an appropriate cost-benefit analysis and should provide a proposal for restructuring the network i.e. re-branding the schools and an operational plan for gradual implementation of the proposal.
- Develop the training materials and manuals for school managers and teachers
- Full logistics of the training workshops (management and organization, covering all related cost for rental of premises, transport, accommodation etc. for around 2000 participants, teachers and school management officials from 37 cities.) in order to ensure high quality delivery of the training focused on the delivery of the revised curricula.

- Perform assessment of the equipment that is currently available to the VET schools, in terms of its compatibility with the changes in the curricula and/or profiles, perform needs analysis and produce detailed technical specification on additional equipment to be procured for the needs of the new curriculum and/or profile, for every VET school
- All other activities necessary to execute the development and design of the concept for secondary TVET.

4. Reporting obligations and deliverables

	Report/deliverable	Timeline
1	Inception report outlining the findings of the documentation and contextual review	M3
2	Structural and functional needs analysis of the VET system and recommendations for a structural reform to the VET system	M6
3	Presentation of the options for structural reforms to relevant stakeholders	M8
4	Implementation Plan with schedule of work, milestones and key performance indicators upon acceptance of the structural reform plan	M8
5	Methodology for Development of Occupational Standards including revision of the “National Methodology for Development of Occupational Standards” (2009)	M10
6	Report on technical assistance provided to developers of occupational standards including a list of occupational standards developed	M10
7	Methodology for Development of Standards for Vocational Qualification	M12
8	Report on technical assistance provided to developers of standards for vocational qualification including a list of vocational qualifications developed	M12
9	Methodology for Development of Educational Profiles and Plans	M14

10	Report on technical assistance provided to developers of educational profiles and plans	M14
11	Methodology for the Development of Competency-Based Curriculum for the new secondary 4 year TVET programs	M16
12	Report on technical assistance provided to developers of the competency-based curriculum upon completion of new reformed curricula including a list of reformed curricula	M26
13	Questionnaires and pertinent report on assessment of the secondary TVET school network, cost-benefit analysis and an operational plan for gradual implementation of the proposal.	M28
14	Training plan, program and materials	M30
15	Report outlining assessment of current VET school equipment, needs analysis and detailed technical specification for new equipment per occupation, per school, including steps for optimization of the supply , quality and cost	M32
16	Final report	M 36

All deliverables shall be prepared in English and Macedonian and will be reviewed and approved by the SDIS Project Director.

5. Required staff and qualifications

The consultant firm shall possess the following relevant qualification and present documents confirming the qualifications:

GENERAL COMPANY QUALIFICATIONS

- At least one project in the field of VET, including development of the Concept for modern TVET and development of occupational standards and Competency-Based Curriculum similar by scope and size in the last 5 years.

- Experience in assessment of the VET schools network.
- Experience in organizing and executing large scale trainings for public servants, government officials etc.
- Previous experience in the countries of former Yugoslavia will be considered as an advantage.

EXPERTS' QUALIFICATIONS

Team Leader/Key Expert 1 in the field of Vocational Educational and Training

(approximately 500 working days spread over a period of 36 months)

- University degree in the field of social sciences, or equivalent general professional experience of five (5) years above the minimum general professional experience requested below.
- Minimum of 10 years of professional experience in the field of vocational education and training
- Experience in at least two (2) projects as an expert in the field of vocational education and training
- Experience as a Team Leader in at least two (2) education related projects;
- Experience in the area of vocational education and training in Macedonia would be considered as an advantage.

The Team Leader/Key Expert 1 shall have overall responsibility for the sound management and timely implementation of the project as well as the efficient use of project funds. He/she shall be responsible for planning and supervising all project activities, and carrying out/taking part in the implementation of the activities of the project.

The Team Leader shall be responsible for the field management of the team of experts. The Team Leader should have the possibility, in consultation with the Consultant's Project Director (to be covered under backstopping), to mobilize backstopping expertise to address unforeseen problems and technical issues.

In addition to his management tasks, the Key Expert 1 shall be responsible for the implementation of the project activities.

VET Experts (3 persons approximately 150 days each)

- University degree in the field of education, TVET or closely related areas;
- At least 10 (ten) years of experience in TVET curriculum development, VET teaching/learning materials development, design, monitoring and evaluation as well as training VET curriculum experts;
- At least 5 (five) years of experience in international development projects, especially in developing and evaluating VET curricula, teaching/learning materials for VET as well as training curriculum for educational personnel in the domain of VET, funded by EU or WB ;
- Knowledge and experience of TVET developments and trends in the European Union and OECD countries;
- Experience in training of curriculum developers;
- Advanced level of English;
- Knowledge and experience of education (and vocational education) systems in the Western Balkans would be an advantage.

Education economist (1 person, approximately 50 working days)

- University degree in the field of educational economy, TVET or closely related areas;
- At least 5 (five) years of experience in the designing or implementation of monitoring and evaluation systems at TVET schools;
- At least 5 (five) years of experience in international development projects, especially in the assessment of the adequacy of school networks;
- Knowledge and experience of TVET developments and trends in the European Union and OECD countries;
- Ability to combine and assess data, knowledge of statistical and data analysis software;
- Advanced level of English;
- Knowledge and experience of education (and vocational education) systems in the Western Balkans would be an advantage.

Capacity Building and Training Expert (4 persons, approximately 50 working days each)

- University degree in the field of social sciences, or equivalent general professional experience of five (5) years above the minimum general professional experience requested below.
- Knowledge of the Macedonian language will be an advantage
- Minimum of 5 years of general professional experience in the field of capacity building to Public Administration.
- Experience as an expert in one project in the field of labour relations and/or Life Long Learning and/or curricula development
- Experience in at least (2) projects as an expert in preparation and/or delivery of training and teaching materials in the field of VET or related (e.g. LLL, Career Guidance etc.)

5. Contract arrangements

- The duration of contract is estimated to 36 months. Expected commencement of services is June 2015
- It is expected that the consultancy will require 1200 staff-days in total for the duration of contract
- The contract will be lump sum. Payments will be based on deliverables/reports.