The European Union's Tacis TRACECA programme for Armenia, Azerbaijan, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Romania, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan

### EUROPEAID/126298/C/SER/MULTI

# Strengthening Transport Training Capacities in NIS Countries

Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

Final Progress Report July 31 2008 – December 31, 2010



This project is funded by the European Union



A project implemented by NEA and its partners STC, TRADEMCO and Wagener & Herbst Management Consultants





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### 1 Introduction

The aim of this discussion note is to present the results of an appraisal study for the establishment of regional connections for advanced transport training in the TRACECA region. This discussion note is one of the outputs of the EuropeAid/126298/C/SER/Multi project "Strengthening Training Capacities in NIS TRACECA Countries".

The main rationale was that the establishment of a regional platform or regional training measures could enhance the regional coherence and co-operation in the field of transport training. Such regional connections could strengthen the ties among the TRACECA transport community and could reduce costs for mutual exchange and dissemination of latest know-how within the "transport sector teaching community". The regional network could also be the backbone for development and promotion of the use of distance learning/e-learning as a new educational tool. Finally the regional network could host and develop post-graduate studies with adequate course design in a regional environment without long-ranging legal procedures.

For the TRACECA community the establishment of such a regional network would be an important step forward as it would facilitate the *sustainability of all training measures* of the TRACECA programme by providing a *platform for dissemination, exchange and discussion* of the results and outputs of these training measures.

This study was carried out as a permanent activity during all stages of the implementation of the project. The main inputs, however, came through the following activities:

- Visits to the transport training institutions and face to face meetings with responsible chairs, deans and lecturers (see various project reports).
- Seminars and workshops.

During the regional seminar held in Chisinau between October 26-29, 2009, where almost all relevant institutions took part, the idea of establishing a regional network had been introduced and intensively discussed. The participants expressed their common wish to establish such a network and to actively participate in this. The first ideas about objectives and function of such a network were discussed and it was agreed to develop this idea further during the national dissemination seminars.

- Desk research on existing training programmes, training curricula and higher education institutions in the TRACECA region.
- · Questionnaire-survey and analysis of results.

A questionnaire (Annex 2) was sent to 23 institutions to gather the opinions of the representatives of universities and other institutions on the establishment of a TRACECA regional platform and network for transport training and research, which would enhance the regional coherence and cooperation in the field of transport training. In total 103 questionnaires had been sent to these institutions. The feedback was positive: 15 out of the 23 institutions completed the questionnaires. The detailed results of this questionnaire can be found in Annex 1.

The main recommendations in this discussion note are based on the comments and ideas brought forward by the responsible persons of the participating training institutions in the TRACECA region. Assessment of Higher Transport Training Education

The project has started with contacting a list of about 30 higher education institutes in the TRACECA countries, which already had been identified by a former study carried out as preparation for this



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project to discuss their willingness to participate in the project. Most of them did show interest and during the implementation of the project some new institutes joined the project.

### 1.1 Assessment of existing training curricula

A first assessment was carried out of existing training curricula related with:

- transport planning techniques and tools;
- investment appraisal;
- o pedagogical skills, teaching methods and curricula development methods;
- o standardised curricula on multimodal transport and interoperability.

The results of this assessment have been integrated in the report "*Curricula Appraisal Report*", which made part of Interim Report 3. This report gives an overview of the development stage of the beneficiary institutions in the application of the Bologna Process<sup>1</sup> and in the integration of training programmes and curricula in the field of "Transport Planning" (TP), "Investment Appraisal" (IA) and "Multi Modal Transport" (MMT) modules into the existing educational processes.

The assessment reached the following conclusions:

- 1. Almost all higher education institutes and universities involved in the project activities are participants of the Bologna Process or, at least, deal with the Bologna Process problems during the higher education reform process. The Bologna Declaration requires the countries (universities) to adapt national curricula to the structure of the European System of Higher Education by 2010. During the transition period most training curricula provide a combination of old and new systems. Although in theory this process is now completed in most higher education institutes (introduction of the Bachelor-Master and the credit point system), the implementation still faces challenges, in particular concerning adaption of existing and introduction of new training programmes and training curricula.
- 2. In the majority of the universities the reform process relates primarily to "Gosstandard" (the State Standard for Higher Education) which allows introduction of Bachelor's and Master's Study Courses. "Gosstandard" determines the number of specializations as well as the course duration and currently allows free choice of higher education subjects (approx. 30% of total course hours). It also applies the credit point system, which corresponds to the international standards. Therefore, despite the fact that curriculum accreditation is regulated solely by state authority the possibility to implement the new subjects within the optional part of specialization exists.

Some universities have introduced essential changes and reforms regarding the subjects complying with the international standards. Reforms regarding the subjects resulted in the following:

- the training curricula "Transport Planning", "Investment Appraisal", "Organisation of Multimodal Transport" have only been partly covered in the training materials and only for some specializations;
- some universities consider the introduction of the proposed new curricula to satisfy new demands arising from the emerging market;

Based on the information available the modules "Transport Planning" (TP), "Investment Appraisal" (IA) and "Multi Modal Transport" (MMT) are not covered in the lecture materials at most of the universities. There is great interest among almost all universities to introduce a

<sup>&</sup>lt;sup>1</sup> The purpose of the **Bologna Process** (or **Bologna Accords**) is to create the <u>European higher education area</u> by making <u>academic degree</u> standards and quality assurance standards more comparable and compatible throughout <u>Europe</u>, in particular under the <u>Lisbon Recognition</u> <u>Convention</u>. The Bologna Process currently has 46 participating countries, whereas there are only 27 Member States of the EU. While the <u>European Commission</u> is an important contributor to the Bologna Process, the <u>Lisbon Recognition Convention</u> was actually prepared by the <u>Council of Europe</u> and members of the Europe Region of <u>UNESCO</u>.





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new training curriculum on "Logistics", but only few have started this process. Main reason is lack of practical experiences, lack of qualified lecturers and lack of adequate learning materials.

- Basic attention has to be given to the following aspects regarding the improvement of professional skills:
  - Multimodal transport networks, transport policy, logistics framework, basically, by way of organisational interaction, physical/technical interaction within one mode of transport, between different modes of transport and at multimodal transshipment points.
  - Development of faculties on multimodal transport.
  - o Modern methods of planning, modeling and forecasting of transportation demand.
  - Acquaintance of lecturing and teaching staff and students with the newest methods and tools of transport planning.
  - Investment appraisal techniques, including the analysis of financial and economic profitability; environmental impact assessment; risk management; social and economic impact assessment; policy impact assessment.
  - Introduce teaching staff and students in the newest methods and tools for investment appraisal.
  - Pedagogical professionalism and modern teaching techniques (case studies, project work, interactive training).
  - Improvement of pedagogical skills, methods of training, including distance/e-learning, and methods curriculum development.
  - Exchange within and between universities (e.g. between economic and technical faculties; between modally oriented universities).

#### 1.2 Existing co-operation structures

In principal, the higher education institutions do already have co-operation activities with other scientific and training institutions in TRACECA region, Europe and in other regions and countries. However, it should be noted that some of the universities only have few co-operation partners (e.g. Georgian Technical University, Kyrgyz-Russian Slavic University) while others do have a quite extensive number of partners all across the globe (e.g. Kyrgyz State Technical University, Azerbaijan National Aviation Academy).

The co-operation is mainly on occasional and contact basis, e.g. mutual participation in conferences and visits to other higher education institutes. The exchange of training materials, lecturers and students is still more exception than rule.

Few universities are member of scientific, training and research platforms. For example, the Technical University of Moldova is member of the TransNEW.eu – Research-network and the Tajik State Technical University and the Tashkent Automobile and Road Construction Institute work together with the Moscow State Automobile and Road Transport Institute MADI.

There are few joined international university programmes. From our contacted institutions, only the Kyrgyz State University of Construction, Transport and Architecture named after N. Isanov participates in a Tempus IV project.







### 2 Building a regional network for higher transport education institutes in TRACECA

### 2.1 Establishment of a regional network

During the implementation of the project the project partners were always looking for measures to facilitate mutual exchange and dissemination of the latest know-how within the "transport sector teaching community" and to strengthen the ties among the TRACECA countries. The creation of a regional network in transport training and research would have an enormous effect on the sustainability and further development of transport training within the TRACECA countries. The higher education institutes and universities almost unanimously welcomed the idea to participate in the establishment of such a regional network. The establishment of a TRACECA training network would facilitate the access to training materials and the strengthening of co-operation by creating new opportunities for the higher education institutes to enhance training of transport specialists. Good co-operation between some institutes themselves would ease and speed up the process of the network implementation. The network would enable the education institutes and universities to participate in a scientific and educational platform on transport training.

It must, however, be recognized that the formation of such a network is an ambitious task due to the complexity of the situation and the different development stages of the countries in TRACECA. Past experience has shown that the success of regional networks depends on the ability of the networks to clearly articulate the needs of its members and to secure the necessary resources to respond to those needs. Both in turn are to a great extent determined by the strength of members' commitment to the operation of the network. Success also depends on keeping overhead costs of running such networks to a minimum and on developing modalities which allow members to interact with each other with relative ease.

Successful regional networks are often characterized by strong leadership, which clearly articulates policies and programmes and an efficient secretariat, which not only facilitates communication with members, but also implements the programmes and policies articulated by the leadership.

The regional network should enable continuous exchange of different experiences and best practices as well as training curricula, course materials, case studies, etc. The network should provide faster access to good practices and examples in other countries and new and fresh ideas from outsiders, which may be adapted to specific needs. It may result also in overall higher standards in education and research. It also provides a platform for establishing regional working groups for joint projects in education and research.

### 2.2 Objectives of a regional network

The mission of the regional network is to raise the quality of higher education in TRACECA region in the field of transport planning, investment appraisal and multimodal transportation and interoperability and to strengthen its contribution to the development of the TRACECA countries by fostering collaboration among its member institutions; by providing support to their core functions of teaching, learning, research and community engagement; and by facilitating critical reflection on, and consensus-building around, issues affecting higher education and the socio-economic development of TRACECA countries.







The objectives of the TRACECA regional network are the following:

- o Promote co-operation among higher education institutions in TRACECA region.
- Collect, classify and disseminate information on higher education and research, particularly in TRACECA region.
- o Facilitate co-operation between its members and the international academic world.
- Study, publish and address the educational and related needs of TRACECA higher education institutions.
- Facilitate the exchange of information and experiences among members of the academic community and promote best practices.
- Harmonisation of transport education and training qualification profiles and competences of transport specialists in the TRACECA countries.
- Integration of education and training programmes with current practices and policies of leading EU universities.
- Improvement of higher education, i.e. by encouraging academic and support staff and students to share good practices and to generate ideas and models for innovation in learning and teaching.
- o To facilitate information exchange and to provide access to education resources.
- To strengthen co-operation between the higher education institutes and universities and leading EU universities.
- To promote exchange programmes for both academic staff and students; the Bologna process means interchangeability of academic staff and students, also between training institutions in TRACECA countries.

### 2.3 Results from the survey

The following tables show the main results from the survey carried out by the project. The full details can be found in Annex 2.

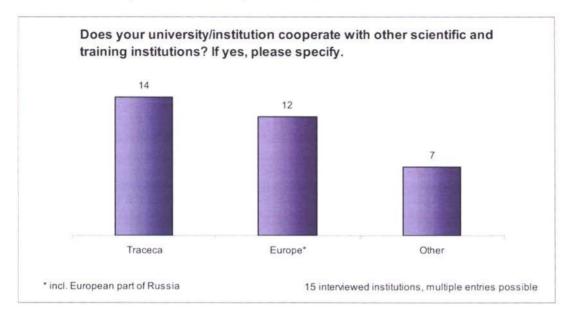
Most higher education institutes and universities have established contacts and co-operate with other similar institutes. Table 3.1 shows the 14 from the 15 interviewed institutions have some kind of co-operation with other higher education institutes in the TRACECA region and 13 from the 14 with higher institutions in Europe.







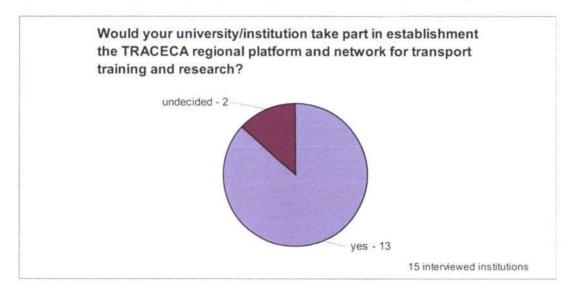
by the European Union



### Table 3.1 Co-operation between higher education institutes

Most respondent institutions would like to take part in the establishment of a regional platform and network for transport training and research, as Figure 3.1 shows:

Figure 3.1 Willingness to participate in regional network for transport training and research



Only two respondents indicated that they are not really interested in taking part of the proposed regional network.

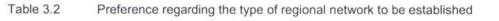
Table 3,2 shows that 80% of the respondent institutes would like to establish a formalized network and a registered association.

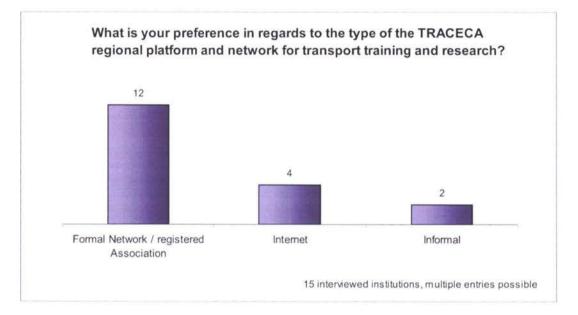


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The most important proposed activities for such a regional network can be found in Table 3.3. Priority was given for establishing a database of teaching materials and an electronic library by 14 from the 15 respondent institutions. Exchange of scientific research was mentioned as priority by 13 from the 15 higher education institutions.







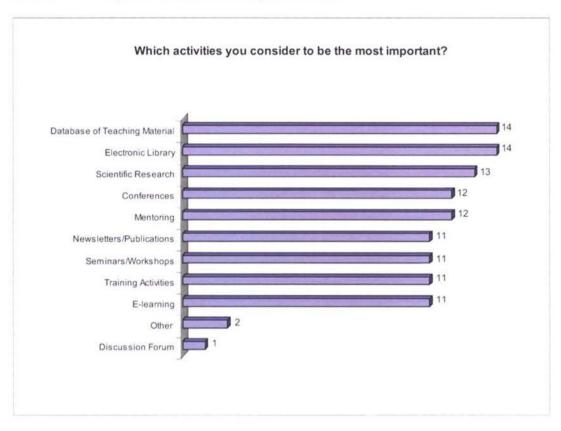


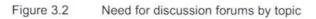
 Table 3.3
 Proposed activities for the regional network

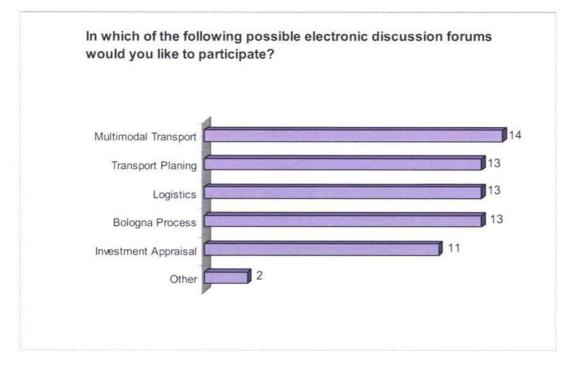
The overwhelming majority gives priority to establishing discussion forums on multimodal transport (94%). Also transport planning, logistics and the Bologna Process score high with 87%. The interest for establishing a regional forum for investment appraisal is 74% of the responding institutes.











### 2.4 Activities of the regional network

The main proposed activities are as follows:

- Conferences
- News/publications
- Seminars/workshops
- Mentoring
- Scientific research
- o Training activities
- Database of teaching material
- E-learning/distance learning
- Discussion forums
- E-library

During the implementation of the project, the project team also frequently asked for the possible contribution of the interested universities and persons to the development of the regional network. At the workshops and meetings, and as a result of the survey, the project team has received a very positive response to this issue. Key professors and deans are ready to chair or moderate different forums.

Possible *contribution* includes but is not limited to:

- Assistance in relation to the organisational issues.
- Participation in activities such as scientific research, improvement of curricula, development of the educational resources, organisation and conduction of seminars, conferences, etc.



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The questionnaire also entailed questions concerning the participation in electronic discussion forums and in the EU funded Erasmus Mundus programmes. Forums could be a platform to exchange information and views on cross-cutting issues like curricula development, training materials, Bologna process or other specific scientific transport related subjects. The Erasmus Mundus programme offers scholarships and co-operation programmes between Europe and other countries. For more details see <a href="http://ec.europa.eu/education/external-relation-programmes/doc72">http://ec.europa.eu/education/external-relation-programmes/doc72</a> en.htm. Most of the higher education institutes stated that although Erasmus Mundus programmes are offered at the universities, there is still no programme for transport and logistics. This is a very interesting result indeed. It is important that the training institutions inform themselves about present and upcoming EU programmes and how to apply for Erasmus scholarships and/or projects. This also could be a special forum or information link on a website that the regional platform could create.

### 2.5 Structure of a regional network

Details of possible legal structures for such a regional network as well appropriate organisational structures are discussed in Annex 3. The TRACECA regional network should, in principle be self-financing by its members in order to be sustainable and not be dependent of subsidies. However, there is a variety of funding sources and resources, that could be applied for to support its activities:

- o Annual subscriptions from active and associate members.
- Public subsidies (international organisations, central government, regional and local authorities).
- o Contributions-in-kind (human and technical resources).
- Services (e.g. research projects, sales of publications, seminar fees).
- o All other resources permitted by law.

In particular, once they have legal personality, established associations can easily receive public subsidies (international organisations, central government, regional and local authorities, etc.).







### 3 Role of TRACECA PS and TRACECA National Secretaries

The TRACECA Permanent Secretariat and the TRACECA National Secretaries should play an important role in fostering this regional co-operation in the field of advanced training in transport planning, investment appraisal of transport infrastructure projects and multimodal transportation and interoperability among higher education institutes in the TRACECA region and between these institutes and universities and higher education institutes in the EU.

The TRACECA Permanent Secretariat should create capacity to host this regional network until it can be operated by its members without any support from outside and becomes self sustainable. The first step would be to create and manage a dedicated website for this purpose, similar to the website created by the project, <u>www.tracecatraining.org</u>. This dedicated website should be directly linked to the general TRACECA website, <u>www.traceca-programme-eu</u>, or become part of it. Important is that the TRACECA Permanent Secretary should create this capacity. This website should become one of the important instruments for TRACECA to disseminate relevant informative materials on transport planning and transport and trade facilitation. It will stimulate individual institutions in the TRACECA member states to share knowledge and practices and promote exchange of experiences,

The TRACECA Permanent Secretariat could also take the lead in the organisation of conferences, where representatives from the higher education institutes in the TRACECA region meet and discuss topics of mutual interest relating with curriculum development, elaboration of training materials, practical case studies and, last but not least, harmonisation of profile qualifications, competences and training curricula to facilitate exchange of students among different higher education institutes in the TRACECA region. Another task of the TRACECA Permanent Secretariat would be to integrate and include the training components and deliverables of all TRACECA projects in the new website.

The TRACECA National Secretaries should also contribute to this activity by linking higher education institutes for advanced training in transport to the respective Ministries of Transport in the TRACECA countries to promote co-operation. It is important that Ministries of Transport have the opportunity to benefit from the new curricula and training materials. As it would be very useful that the higher education institutes organize master-classes in transport planning, investment appraisal and multimodal transportation and interoperability for transport planners and transport policy makers, the TRACECA National Secretaries can play an important role to make this happen. The TRACECA National Secretaries also may stimulate the establishment of bilateral cooperation between the two entities in various fields: inflow of young graduates without any professional experience into the Ministry; offering of short-term probationer programmes for students at the Ministry of Transport; jointly organizing lectures, seminars, workshops, conferences, etc.

### Recommendations:

- o The TRACECA Permanent Secretariat should create capacity to host the regional network.
- The TRACECA Permanent Secretariat should create and manage a dedicated website dedicated to this network.
- The TRACECA Permanent Secretariat should promote the organizion of regular conferences and seminars for higher education institutes in the TRACECA region.
- The TRACECA Permanent Secretariat should put the results of training components and training activities of the different TRACECA projects on this dedicated website.
- The TRACECA National Secretaries should stimulate co-operation between higher education institutes and respective Ministries of Transport.
- The TRACECA National Secretaries should promote the organisation of master-classes for transport policy makers involving higher education institutes.
- The TRACECA Permanent Secretariat and the TRACECA National Secretaries should promote lifelong adult learning for professional staff in the transport sector in TRACECA.



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# 4 Role of European Commission

The role of the EU is rather limited in the creation of a regional network of higher education institutes in the TRACECA region. It already has financed the projects which have resulted in the establishment of the regional network. The regional network should be self sustainable. However, the European Commission does have relevant materials on curricula development and teaching materials and may assist in connecting higher education institutes in the region with EU universities and training institutes through different programmes.

The European Commission, however, offers some facilities to promote co-operation between higher education institutes through the *Tempus* and the *Erasmus Mundus programme*.

*Tempus* supports the modernisation of higher education and creates an area of co-operation in countries surrounding the EU. Established in 1990, the scheme now covers 27 countries in the Western Balkans, Eastern Europe and Central Asia, North Africa and the Middle East.

Tempus funds two types of actions:

- Joint Projects: partnerships between higher education institutions in the EU and partner countries. They can develop, modernise and disseminate new curricula, teaching methods or materials, as well as boosting quality assurance and management of higher education institutions.
- Structural Measures: to develop and reform higher education institutions and systems in partner countries; to enhance their quality and relevance, and to increase convergence with EU developments.

Partnerships are made up of consortia of organisations including higher education institutions, businesses, ministries, NGOs, and other organisations working in higher education, in both EU and partner countries.

The latest phase of the programme, Tempus IV, started in 2008 with an annual budget of around 50 million euro. Individual projects receive funding of between 0.5 and 1.5 million euro. All conditions and criteria to apply for Tempus funds are detailed in the annual <u>call for proposals</u> (available in English, French and German).

The Education, Audiovisual and Culture Executive Agency (EACEA) is responsible for the management of all Tempus actions, under the supervision of the European Commission. Read more about <u>Tempus on the EACEA website</u>.

The *Erasmus Mundus* is a complementary programme that funds higher education student and staff exchanges and visits between European universities and universities from other countries. This programme provides possible funding for the following topics:

- European joint Masters and Doctorates (including scholarships).
- <u>Partnerships</u> with non-European higher education institutions and scholarships for students and academics.
- o <u>Projects</u> to promote European higher education worldwide.

The Erasmus Mundus Programme 2009-2013 is open to higher education institutions and to any organisation active in the field of higher education and research as well as to students, doctoral candidates, teachers, researchers and university staff (academic and/or administrative) from any part of the world. The funding opportunities are the following:



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- o Higher education institutions organised into consortia/partnerships
  - Higher education institutions can participate in:
  - Consortia to develop and implement joint masters/doctoral programmes.
  - Partnerships.
  - Consortia to develop and implement promotion projects.
- o Other bodies:

Other bodies active in the field of higher education and research

- Other public or private bodies active in the field of education and research can participate in:
  - Consortia to develop and implement joint masters/doctoral programmes.
  - Consortia to develop and implement promotion projects.
- Enterprises and other employers can participate in:
   Consortia to develop and implement joint doctoral programmes.
- Erasmus Mundus National Structures can participate in:
   Consortia to develop and implement promotion projects.

Other bodies which could be particularly relevant for the objectives and activities of the programme

- Associates partners from the eligible countries can be involved in the Partnerships. They play an active role in the action but they are not beneficiaries and may not receive funding from the grant.
- Students and academics
  - o Students in higher education can receive scholarships for:
    - Undergraduate studies.
    - Masters studies.
  - o Doctoral candidates can receive fellowships for:
    - Doctoral studies.
    - Post-doctoral studies.
  - Teachers and researchers can receive fellowships for:
     Teaching and research periods.
  - o Other academic staff can receive scholarships / fellowships.







## 5 The way forward

The mission of the TRACECA regional network is to raise the quality of higher education in TRACECA region and to strengthen its contribution to TRACECA countries development by fostering collaboration among its member institutions; by providing support to their core functions of teaching, learning, research and community engagement; and by facilitating critical reflection on, and consensus-building around, issues affecting higher education and the development of TRACECA countries.

The TRACECA Permanent Secretariat and the TRACECA National Secretaries should play an important role in fostering this regional co-operation in the field of advanced training in transport planning and investment appraisal of transport infrastructure projects among higher education institutes in the TRACECA region and between these institutes and universities and higher education institutes in the EU. The TRACECA National Secretaries may also contribute to linking higher education institutes for advanced training in transport to the respective Ministries of Transport in the TRACECA countries to promote co-operation.

A dedicated website, as a continuation and follow-up on the website created by the project – <u>www.tracecatraining.org</u> – would be an important central axis of this regional network. This website should be linked with the TRACECA website <u>www.traceca-programme.eu</u>. The management of this website could in the first stage be carried out by the TRACECA Permanent Secretariat.

In order to bring the idea for establishing this regional network forward the project team recommends the following practical steps:

- Information to all participating institutions on the outcomes of the survey and recommendation concerning the way forward, asking for feedback.
- Establishing a core team consisting of deans from universities, e.g. from Tajikistan, Azerbaijan, Ukraine, Moldova.
- Clarification of open questions.
  - Open questions would be:
  - objectives of the network;
  - legal structure (academy, association, other);
  - location head office;
  - main articles of statute;
  - membership;
  - financing arrangements.
- Organisation of a special seminar on network foundation (see Annex 4 for a possible agenda).
- o Drafting a Memorandum of Understanding on establishing an academy / association.
- o Drafting a Statute.
- o Drafting an Association Foundation Agreement.
- Circulation of all documents to all parties also asking for proposals for the Executive Council and for the Advisory Council.
- Foundation meeting of the association.
- Establishing the working framework for the association, i.e. secretary, website, membership administration, working plan, assistance in the forums on specific issues.







### Annex 1 Results of questionnaires

Table 1 Existing co-operation of the beneficiary universities with other scientific and training institutions and participation in a scientific or educational platform/network on transport training

University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishment of the TRACECA network for transport training and research/Contact person
State Engineering University of Armenia	<ol> <li>TRACECA region         <ul> <li>Tajik Technical University</li> </ul> </li> <li>Europe         <ul> <li>Dresden Technical University, Germany</li> <li>The Moscow State Automobile and Road Technical University</li> </ul> </li> </ol>	<ul> <li>Ministry of Transport and Communications</li> <li>South Caucasus Railway</li> </ul>	<ul> <li>Undecided</li> </ul>
Azerbaijan Technical University	<ol> <li>TRACECA region</li> <li>Georgian Technical University</li> <li>Tajik Technical University</li> <li>Technical University of Moldova</li> <li>Kazakh National Technical University</li> <li>Istanbul Technical University</li> <li>Izmir University Dokuz Eylul</li> <li>Other regions/countries</li> <li>Moscow State Automobile and Road Technical University</li> </ol>	Yes/ training programmes in the field of automobile and railway transport (Bachelor and Master)	Yes/Contact person: Mr. Gozalov S., Professor, Faculty of Transport
Azerbaijan National Aviation Academy	<ol> <li>TRACECA region</li> <li>Azerbaijan:         <ul> <li>Azerbaijan Maritime Academy</li> <li>Azerbaijan Technical University</li> <li>Azerbaijan University of Languages</li> <li>Baku State University</li> <li>Azerbaijan State Oil Academy</li> <li>State Architecture and Engineering Institute</li> <li>Kafkaz University</li> <li>Khazar University</li> </ul> </li> </ol>	<ul> <li>European Materials Research Society, Alsace, France</li> <li>World University Service – Austrian Committee, Graz, Austria</li> <li>National Association of Logistics and Supply Chain Management, Moscow, RF</li> <li>Courses: Aviation English and Environmental Protection</li> </ul>	Yes/Contact person: Mr. Sadyhov R., Professor, Pro- Rector International Relations



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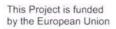
University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishmen of the TRACECA network for transport training and research/Contact person
	Turkey:		
	<ul> <li>Izmir Technical Institute</li> </ul>		
	<ul> <li>Istanbul Technical University</li> </ul>		
	<ul> <li>Selcuk University,</li> </ul>		
	Georgia:		
	Georgian Aviation University		
	<ul> <li>Georgian Technical University, Tbilisi</li> </ul>		
	<ul> <li>Shota Rustaveli State University, Batumi</li> </ul>		
	<ul> <li>Ukraine:</li> <li>National Aviation University, Kiev</li> </ul>		
	<ul> <li>The Mykolayiv V.O. Sukhomlynsky State University</li> </ul>		
	<ul> <li>Vinnitsa National Technical University</li> </ul>		
	<ul> <li>National Aerospace University, Kharkov</li> </ul>		
	Uzbekistan:		
	Physical-Technical Institute «Physics- Sun», Tashkent		
	Kazakhstan:		
	Academy of Civil Aviation, Almaty		
	2. Europe		
	<ul> <li>Institut Aeronautique et Spatial, France</li> </ul>		
	<ul> <li>French Civil Aviation University</li> </ul>		
	<ul> <li>Institut National Polytechnique de Grenoble, France</li> </ul>		
	<ul> <li>University Paul Sabatier, France</li> </ul>		
	<ul> <li>International Network of Study and Education, Germany</li> </ul>		
	<ul> <li>Dresden University of Technology, Germany</li> </ul>		
	<ul> <li>Warsaw University of Technology, Poland</li> </ul>		
	<ul> <li>Transport and Telecommunication Institute, Latvia</li> </ul>		
	<ul> <li>Vilnius Gediminas Technical University, Lithuania</li> </ul>		
	University of Graz, Austria		
	<ul> <li>European Academy of Sciences and Arts, Austria</li> </ul>		
	University of Bologna, Italy		



STRENGTHENING TRANSPORT TRAINING CAPACITIES – Regional network December 2010

비금 사람 성격 비난 영습 방습 것 같



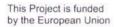




University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishment of the TRACECA network for transport training and research/Contact person
	<ul> <li>Linnaeus University, Sweden</li> <li>Athlone Institute of Technology, Ireland</li> <li>Taganrog State University of Radio Engineering</li> <li>Baumann Moscow State Technical University, RF</li> <li>St. Petersburg Academy of Civil Aviation, RF</li> <li>Dubna International University of Nature, Society and Man, RF</li> <li>Dorodnicyn Computing Centre of the Russian Academy of Sciences (CCRAS), RF</li> <li>Other regions/countries</li> <li>FAA, USA</li> <li>Syracuse University, USA</li> <li>University of Oklahoma, USA</li> <li>Université Ibn Tofail, Morocco</li> <li>Abdelmalek Essadi University, Morocco</li> <li>University Hassan II- Mohammedia, Morocco</li> <li>Palestine Technical University, Palestine</li> <li>Al Quds University/ JERUSALEM</li> </ul>		
Georgian Technical University	<ol> <li>TRACECA region         <ul> <li>Azerbaijan Technical University</li> <li>Donetsk National Technical University</li> </ul> </li> <li>Europe         <ul> <li>The Moscow State Automobile and Road Technical University</li> </ul> </li> </ol>	Yes	Yes/Contact person: Mr. Gelashviliv O.G., Professor, Doctor of Technical Sciences, Dean of the Faculty of Transport and Machine- Building
Georgian Aviation University	<ol> <li>TRACECA region         <ul> <li>Azerbaijan National Aviation Academy</li> <li>Ukrainian National Aviation University</li> <li>Kharkov Aviation Institute, Ukraine</li> <li>State Flight Academy of Ukraine</li> <li>Academy of Civil Aviation, Kazakhstan</li> </ul> </li> </ol>	<ul> <li>Boeing, department of Science and Education</li> <li>JSC Tbilaviamsheni</li> </ul>	Yes/Contact person: Mr. Suhitashvili, Professor, Faculty of Business and Management Air Transport









University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishment of the TRACECA network for transport training and research/Contact person
	<ul> <li>2. Europe</li> <li>Clausthal University of Technology, Germany</li> <li>Moscow State Technical University of Civil Aviation</li> <li>Saint-Petersburg State University for Civil Aviation</li> </ul>		
Kazakh Academy of Transport and Communication n.a. M.Tynyshbaev	1. TRACECA region     Cooperate with universities and other HEIs     2. Europe     SNCF International, France     Polytechnic University of Warsaw     DITI, Ukraine     HGUSTA, Kyrgyzstan	No	Yes/Contact person: Miss Mustapaeva, Head of the Department of Analysis and Collaboration
L.N. Gumilyov Eurasian National University, Kazakhstan	Yes	Yes	Yes/Contact person: Mr. Sarsembaev B.K., Faculty of Engineering and Building
Kyrgyz State University of Construction, Transport and Architecture named after N. Isanov	<ol> <li>TRACECA region         <ul> <li>Azerbaijan Architecture and Construction University</li> <li>University of Architecture, Construction and Geodesy, Bulgaria</li> <li>Middle East Technical University, Turkey</li> <li>Dnepropetrovsk Institute of Engineers of Railway Transportations, Ukraine</li> <li>Taraz State University named after D. Serikbaeva;</li> <li>Kazakh Academy of Transportation and Communication n.a. M. Tynyshbaeva;</li> <li>Almaty Institute of Railway Engineers, Kazakhstan</li> <li>East-Kazakhstan State Technical University</li> <li>Kazakh Leading Academy of Architecture and Civil</li> </ul> </li> </ol>	KSUCTA participates in Tempus IV Project (educational program) and the academic staff of Railway department is involved in the development of curriculum for the Master Program in Railway Transportation. Student and academic staff exchange programs are planned within the framework of this project and within the framework of the upcoming projects on the railway	Yes/Contact person: Mr. Akjol Djenaliev, Centre of International Relations



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University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishmen of the TRACECA network for transport training and research/Contact person
	<ul> <li>Engineering</li> <li>Tashkent Architecture and Construction Institute</li> <li>Tashkent Automobile and Road Institute</li> <li>Tashkent Institute of Railway Transport Engineers</li> <li>Urgench State University, Uzbekistan</li> <li>Tajik Technical University named after M.S.Osimi</li> <li>Europe</li> <li>Royal Institute of Technology, Sweden</li> <li>Tallinn University of Technology, Estonia</li> <li>West Saxon University of Applied Sciences of Zwickau, Germany</li> <li>Technical University Bergakademie Freiberg, Germany</li> <li>Clausthal University of Technology, Germany</li> <li>University of Applied Sciences Stuttgart, Germany</li> <li>University of Salzburg, Austria</li> <li>University of Natural Resources and Applied Life Sciences, Vienna, Austria</li> <li>Eurasia-Pacific UNINET, Austria</li> <li>Nice Sophia Antipolis University, France</li> <li>Czech Technical University of Civil Engineering</li> <li>Moscow State University of Civil Engineering</li> <li>Moscow State University of Economics, Statistics and Informatics</li> <li>Novosibirsk State University for Architecture and Building Industry</li> <li>Tomsk State University of Architecture and Building</li> <li>Siberian State Academy of Geodesy</li> </ul>	network planning.	



STRENGTHENING TRANSPORT TRAINING CAPACITIES – Regional network





University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishment of the TRACECA network for transport training and research/Contact person
	<ul> <li>Vellore University, India</li> <li>Seoul National University, Korea</li> <li>Sangmeng University, Korea</li> <li>Asian Institute of Technology, Thailand</li> <li>Saitama University, Japan</li> <li>Cairo University, Egypt</li> </ul>		
Kyrgyz State Technical University named after I. Razzakov	<ol> <li>TRACECA region         <ul> <li>Tajik Technical University, Tajikistan</li> <li>Tashkent Automobile and Road Institute, Uzbekistan</li> <li>Kazakh National Technical University named after K. I.Satpaev</li> <li>East Kazakhstan State Technical University</li> <li>Almaty Technological University, Kazakhstan</li> </ul> </li> <li>Europe         <ul> <li>Berlin University of Technology, Germany</li> <li>Cologna University of Applied Science, Germany</li> <li>Clausthal University of Technology, Germany</li> <li>University of Nice Sophia-Antipolis, France</li> <li>University of Genoa, Italy</li> <li>Slovak University of Technology, Slovakia</li> </ul> </li> <li>Other regions/countries         <ul> <li>Baumann Moscow State Technical University, Russia</li> <li>Moscow Energy Institute, Russia</li> <li>Moscow State University of Printing Arts, Russia</li> <li>The Moscow State Technical University, Russia</li> <li>Tomsk Polytechnic University, Russia</li> </ul> </li> </ol>	<ul> <li>Carries out scientific research for the Ministry of Education and Science in the field of automobile transport;</li> <li>Participates in the development of standards on the use of automobile transport;</li> <li>Participation in the development of material on planning and strategies for the Ministry of Transport and Communications;</li> <li>Further professional education and training</li> </ul>	Yes/Contact person: Mr. Torobekov B.T., Dean of the Faculty of Transport Management, 1 <sup>st</sup> Pro-Rector on Educational work; Mr. Beketaev O.B., Professor, Candidate of Technical Sciences; Mr. Abakirov S.A., Docent, Faculty of Automobile Transport; Mr. Akunov B.U., Docent, Faculty of Automobile Transport; Mr. Dresvyannikov S.U. , Head Lecturer, Faculty of Automobile Transport
Kyrgyz-Russian Slavic	Ministry of Transport and Communications		Yes/Contact person:



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University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishment of the TRACECA network for transport training and research/Contact person
University	<ul> <li>Association of International Freight Forwarders of Ukraine</li> <li>Moscow State Automobile and Road Technical University</li> </ul>		Mr. Sovetbekov B., Head of Chair "Transportation: Organisation and Safety"
Technical University of Moldova	1. TRACECA region Cooperate with the universities in Rumania and in the Ukraine	TransNEW.eu. PTD PROJECT FP7-TPT-2008.8-RTD-1	Yes/Contact person: Mr. Cheban V.F., Doctor of Technical Sciences, Head of Chair "Transport engineering and economics"
Tajik State Technical University nε ed after M.S. Osimi	<ol> <li>TRACECA region         <ul> <li>Tashkent Automobile and Road Construction Institute, Uzbekistan</li> <li>Co-operation with more than 13 universities in TRACECA region</li> </ul> </li> <li>Europe         <ul> <li>Moscow State Automobile and Road Technical University</li> <li>Voronezh State Academy of Forestry and Technologies</li> <li>Co-operation agreements with other 5 universities in Europe</li> </ul> </li> <li>Other regions/countries</li> <li>Co-operation with more then 22 universities</li> </ol>	<ul> <li>Moscow State Automobile and Road Technical University</li> </ul>	Yes/Contact person: Mr. Toshev D.Sh., Faculty of Transport Mr. Berdiev A.L., Faculty of Transport Mr. Tursunov A.A., Professor, Doctor of Technical Sciences, Pro-Rector.
National Aviation University, Ukraine	<ol> <li>TRACECA region         <ul> <li>Anadolu University, Turkey</li> </ul> </li> <li>Europe         <ul> <li>Technological Educational Institute of Piraues, Greece</li> <li>Dresden University of Technology, Germany</li> </ul> </li> <li>Other regions/countries         <ul> <li>University Wanly, China</li> <li>Nanchang University of Aeronautics, China</li> </ul> </li> </ol>	Yes	Undecided







University	Co-operation with other scientific and training institutions in TRACECA region, Europe and in other regions/countries	Participation in a scientific or educational platform or network on transport training	Participation in establishment of the TRACECA network for transport training and research/Contact person
	<ul> <li>Hankuk Aviation University, Korea</li> </ul>		
National Transport University(NTU), Ukraine	Yes	Yes	Yes/Contact person: Mr. N. Dmitrychenko, Rector; Mr. Tokin A.P., Pro-Rector on Educational and Methodological Work
Tashkent Automobile and Road Construction Institute, Uzbekistan	<ol> <li>TRACECA region         <ul> <li>Tajik Technical University</li> <li>Kyrgyz State University of Construction, Transport and Architecture named after N. Isanov</li> <li>Kharkov National Automobile and Highway University, Ukraine</li> </ul> </li> <li>Europe         <ul> <li>The Royal Institute of Technology, Sweden</li> <li>Turin Polytechnic University, Italy</li> <li>Other regions/countries</li> <li>Moscow State Automobile and Road Technical University</li> </ul> </li> </ol>	<ul> <li>Moscow State Automobile and Road Technical University</li> </ul>	Yes/Contact person: Mr. Ikramov M.A:, Rector Mr. Abdurahmanov A.A., Pro- Rector on Educational work Mr. Topalidi V.A.







### Table 2 Desirable objectives and activities of and universities contribution to the TRACECA network

University	Desirable objectives	Desirable activities	Possible contribution
State Engineering University of Armenia	<ul> <li>Optimum path for cargo in multimodal transportation networks in Armenia</li> <li>Transport Planning in Armenia</li> <li>Uniform criteria in transport education</li> <li>Realisation of scientific and technical projects of mutual interest</li> </ul>	<ul> <li>Conferences</li> <li>Seminars</li> <li>Scientific research</li> <li>Training</li> <li>News and Publications</li> <li>Mentoring</li> <li>Database of Teaching Material</li> <li>E-learning</li> <li>Electronic Library</li> </ul>	<ul> <li>Active participation in conferences and seminars</li> <li>Development of objectives for Armenia within TRACECA projects</li> <li>Implementation of recommendations from TRACECA Commission</li> </ul>
Azerbaijan Technical University	<ul> <li>Enhancement of educational process in relation to the training of academic staff and participation in problem-solving process in relation to the development of TRACECA transport corridor.</li> </ul>	<ul> <li>Conferences</li> <li>News/Publications</li> <li>Seminars</li> <li>Mentoring</li> <li>Scientific research</li> <li>Training Activities</li> <li>Database of Teaching Material</li> <li>E-learning/distance learning</li> <li>E-library</li> </ul>	<ul> <li>To provide support in the development of uniform curricula and methodical material</li> <li>To provide support in the organisation and conduction of seminars</li> <li>Participation in publishing activities of magazines for the network and establishment of e-library</li> <li>In relation to the research in the field of transport our university may participate in the following activities:         <ul> <li>analysis of prerequisites for the efficient and economic use of the international transport corridors network in Azerbaijan;</li> </ul> </li> </ul>









University	Desirable objectives	Desirable activities	Possible contribution
			<ul> <li>analysis of transportation and forwarding activities and logistics, analysis of interaction between different transportation modes;</li> <li>development and implementation of policies as to the development of the integrated system that would provide technological, customs (information and logistics), maintenance and insurance support during the cargo transportation process across international TRACECA transport corridors.</li> </ul>
Azerbaijan National Aviation Academy	<ul> <li>Establishment of National Logistics Centre in Azerbaijan</li> <li>Implementation of EU 3-level certification of logistics specialists</li> <li>Development of regional scientific projects "Logistics and Supply Chain Management";</li> <li>Development of logistics infrastructure in Azerbaijan.</li> </ul>	<ul> <li>Seminars</li> <li>Scientific research</li> <li>Training</li> <li>Database of Teaching Material</li> <li>E-learning</li> <li>News and Publications</li> <li>Electronic Library</li> <li>Language courses (English).</li> </ul>	<ul> <li>Training of highly qualified specialists in logistics and supply chain management</li> <li>Further professional education and training,</li> <li>Qualification and certification of logistics specialists, organisation of assessment process, certification of company personnel;</li> <li>Establishment of regional centre of civil aviation safety, of aviation safety and centre of environmental protection.</li> </ul>







University	Desirable objectives	Desirable activities	Possible contribution
Georgian Technical University	<ul> <li>Development of uniform training programmes and of methodical approach to the training of transport specialists</li> <li>Establishment of scientific platform in order to plan and carry out research "Transport and Logistics Services in TRACECA countries"</li> <li>Preparation and publication of learning material for the institutions of all educational levels in TRACECA countries</li> </ul>	<ul> <li>News and Publications</li> <li>Mentoring</li> <li>Database of Teaching Material</li> <li>Conferences</li> <li>Seminars</li> </ul>	<ul> <li>Provision of premises;</li> <li>Qualified personnel;</li> <li>Assistance in the establishment of partnership between leading transport centres;</li> <li>Provision of premises for conferences, seminars, training and scientific research.</li> </ul>
Georgian Aviation University		<ul> <li>Conferences</li> <li>Seminars</li> <li>Scientific research</li> <li>Training</li> <li>News and Publications</li> <li>Mentoring</li> <li>Database of Teaching Material</li> <li>Electronic Library</li> </ul>	<ul> <li>Scientific research and development of curriculum for degree program in air transportation</li> </ul>
Kazakh Academy of Transport and Communication n.a. M.Tynyshbaev	<ul> <li>Training of transport specialists according to the international standards</li> <li>Development of international collaboration with other scientific organisations across the world</li> <li>Distance learning</li> </ul>	<ul> <li>Database of Teaching Material</li> <li>E-learning</li> <li>Distance learning</li> <li>Electronic library</li> </ul>	<ul> <li>Ready to contribute</li> </ul>
L.N. Gumilyov Eurasian National University, Kazakhstan	<ul> <li>Experience exchange</li> <li>Scholastic information</li> <li>Enhancement of the research and pedagogical skills in training of transport specialists (Bachelor and Master)</li> </ul>	<ul> <li>Scientific research</li> <li>Database of Teaching Material</li> <li>Electronic library</li> <li>E-learning</li> <li>Mentoring</li> <li>Training</li> </ul>	<ul> <li>Provision of premises, classrooms, computer and multimedia classrooms;</li> <li>Educational courses and training;</li> <li>Library recourses.</li> </ul>



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University	Desirable objectives	Desirable activities	Possible contribution
Kyrgyz State University of Construction, Transport and Architecture named after N.Isanov	<ul> <li>Direct access to TRACECA regional platform and e-libraries;</li> <li>Research on transport planning in mountain areas;</li> <li>Use of satellite images and remote sensing analysis for transport planning;</li> <li>Application of GIS and GPS Technologies in transport;</li> <li>Analysis of hazard impacts for TRACECA corridor.</li> </ul>	<ul> <li>Seminars/Workshops</li> <li>Training Activities</li> <li>Database of Teaching Material</li> <li>E-learning</li> <li>Electronic library</li> <li>Conferences</li> <li>Newsletters/Publications</li> <li>Scientific research</li> <li>Discussion forums</li> </ul>	<ul> <li>Today the KSUCTA is the only Higher Education Institution in Kyrgyzstan that provides education and training of specialists in transport planning, construction and transportation and organises retraining and further professional education and training programmes for the academic staff and staff members from transport organisations. All campuses of the university are equipped with advanced scientific and technical facilities that could be used for the TRACECA training courses.</li> <li>The university administration fully supports the establishment of TRACECA Training Centre on the basis of KSUCTA.</li> </ul>
Kyrgyz State Technical University named after I. Razzakov	Automotive Transport Science and Technology Education Centre which is university-based has been authorised to carry out professional training of specialists and to provide various consulting services. The centre offers wide range of materials and technology, methodical and human resources. Within TRACECA framework the centre will broaden its activities which will enable the centre to organise further education, training and qualification enhancement courses, to carry out research in relation to the current issues in transport systems, to promote integration of educational and scientific work into EU procedures and technologies.	learning E-library Training activities Conferences Seminars	<ul> <li>Could provide</li> <li>classrooms;</li> <li>developed learning programmes and documentation,</li> <li>human resources,</li> <li>systems of control and accountability.</li> <li>Development and configuration of methodology on optimisation of</li> </ul>









University	Desirable objectives	Desirable activities	Possible contribution
	<ul> <li>Optimisation and effectiveness increase of transportation processes along with the evaluation of the negative impact on the environment;</li> <li>Study and development of methods and mechanisms in order to reduce negative impact of transport on the environment.</li> </ul>		transportation processes and methodology for environmental education in transport sector.
Kyrgyz-Russian Slavic University	<ul> <li>To learn and teach;</li> <li>Participate in research and studies.</li> </ul>	<ul> <li>Scientific research;</li> <li>E-learning, distance-learning</li> <li>E-library</li> <li>Mentoring</li> <li>Conferences</li> </ul>	To assist in carrying out the research or studies and in the development of curriculum.
Technical University of Moldova	<ul> <li>To establish contact with the Chairs "Automotive Transport" at other universities in other countries. To establish and build up scientific and research platform for the training of young professionals (Master and PhD).</li> </ul>	<ul> <li>Conferences</li> <li>Mentoring</li> <li>Scientific research</li> <li>Database of Teaching Material</li> <li>E-library</li> </ul>	<ul> <li>Participation in the research projects;</li> <li>Curriculum Enhancement;</li> <li>Organisation of conferences and seminars.</li> </ul>
Tajik State Technical University named after M.S. Osimi	<ul> <li>To organise training courses (short-duration courses) for the young professionals (academic staff) on the current problems in transport sector;</li> <li>Harmonisation of transport education and training curriculum in TRACECA countries in accordance with the modern practices of the leading universities in other countries;</li> <li>To ensure mutual recognition of diplomas among institutions in TRACECA countries;</li> <li>To facilitate quality enhancement in transport training by applying new education approach and techniques;</li> <li>E-learning/distance learning.</li> </ul>	<ul> <li>Seminars</li> <li>Database of Teaching Material</li> <li>Training activities</li> <li>Scientific research</li> <li>Mentoring</li> <li>News/Publications</li> <li>E-library</li> <li>Conferences</li> </ul>	<ul> <li>Assistance in organisation of seminars and courses.</li> </ul>
Ukraine National Aviation University	<ul> <li>To gain new knowledge and skills</li> </ul>	<ul> <li>Conferences</li> <li>Seminars</li> <li>Scientific research</li> </ul>	Organisational issues







University	Desirable objectives	Desirable activities	Possible contribution
		<ul> <li>Training activities</li> <li>News/Publications</li> <li>Mentoring</li> <li>Database of Teaching Material</li> <li>E-learning</li> <li>Electronic library</li> </ul>	
National Transport University(NTU), Ukraine	<ul> <li>Implementation of best practices on the training of young professionals in the field of transport; mobility and exchange programmes for specialists, academic staff and aspirants.</li> </ul>	<ul> <li>Conferences</li> <li>News/Publications</li> <li>Seminars</li> <li>Mentoring</li> <li>Scientific research</li> <li>Training activities</li> <li>Database of Teaching Material</li> <li>E-learning, distance learning</li> <li>Electronic library</li> </ul>	<ul> <li>To carry out research</li> <li>Development of the recommendations</li> <li>Participation in the development of standards in the field of transport</li> </ul>
Tashkent Automobile and Road Construction Institute, Uzbekistan	<ul> <li>Establishment of international education association "Logistics and Transport" in the TRACECA countries</li> <li>Harmonisation of educational programmes (Bachelor and Master) in the following fields:         <ul> <li>Logistics and Transport</li> <li>Freight forwarding and multimodal transport</li> <li>International freight forward and passenger transportation</li> </ul> </li> <li>Training programmes in the field of Logistics and Transport for aspirants from the TRACECA countries at the leading EU universities</li> <li>Training programmes in the field of Logistics and Transport for the academic staff from the TRACECA countries at the leading EU universities</li> </ul>	<ul> <li>Conferences</li> <li>News/Publications</li> <li>Seminars</li> <li>Mentoring</li> <li>Scientific research</li> <li>Training activities</li> <li>Database of Teaching Material</li> <li>E-learning, distance learning</li> <li>E-library</li> </ul>	<ul> <li>Deep analysis of policies and practices of the leading EU universities on education of specialists in Logistics, Multimodal Transportation, Transport;</li> <li>Participation in harmonisation of curriculum for Bachelor and Master programmes in the filed of Logistics and Transport, applying practices of the leading EU universities</li> <li>Participation in the experimental research in relation to the implementation</li> </ul>







University	Desirable objectives	Desirable activities	Possible contribution
			<ul> <li>of new educational programmes and on the assessment of students knowledge; development of guidelines and text books</li> <li>Establishment of international education association "Logistics and Transport" in the TRACECA countries</li> <li>Participation in scientific research on the development of transport corridors, logistics centres, effective multimodal transportation.</li> </ul>



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This Project is funded by the European Union

University	Preference in regards to the type of the TRACECA network	Recommendations on organisation	Recommendations on financing
State Engineering University of Armenia	<ul><li>Formal/Registered</li><li>Internet</li></ul>	Country characteristics should be taken in account at the beginning of the organisational process.	
Azerbaijan Technical University	<ul> <li>Formal/Registered</li> </ul>	Firstly, to establish coordination working group consisting of experienced academic staff from the TRACECA countries.	Preferably to obtain financing from the private transport companies and organisations and from the public sector (e.g. Ministry of Transport), and eventually from other sources.
Azerbaijan National Aviation Academy	<ul> <li>Formal/Registered</li> </ul>	To carry out activities that would speed up the process of information exchange and of decision-making within TRACECA project. Transition of TRACECA countries to the uniform EU standards and certification of scientific and educational organisations (transport education) as well as transport specialists.	
Georgian Technical  • Formal/Registered University		It is necessary to establish a regional transport centre in Tbilisi (faculty- based: Faculty of Transport and Machine-Building) as in Tbilisi there is a large number of scientific and educational centres.	It is necessary to determine the operating costs of the centre and agree on how the countries would split the contribution towards these costs.
Georgian Aviation University	<ul> <li>Formal/Registered</li> </ul>		
Kazakh Academy of Transport and Communication n.a. M.Tynyshbaev	<ul> <li>Formal/Registered</li> </ul>	Membership should not be limited only to scientific and education organisations but should also be available to business organisations.	Financing – single source.
L.N. Gumilyov Eurasian National University, Kazakhstan	<ul> <li>Formal/Registered</li> </ul>	Establishment of separate research division with independent financing.	

### Table 3 Preference in regards to the type of the TRACECA network; recommendation on organisation and financing of the TRACECA network







University	Preference in regards to the type of the TRACECA network	Recommendations on organisation	Recommendations on financing
Kyrgyz State University of Construction, Transport and Architecture named after N.Isanov	<ul> <li>Formal/Registered</li> <li>Internet</li> </ul>	The establishment of the regional platform and network for the interested institutions in the field of transport will be beneficial not only to the academic staff but also to other government organisations and to the transport engineers of private enterprises. This will increase the professional competency of academic staff in education and training of highly qualified transport engineers in the country.	Financing: within one of the upcoming European Commission Programs like Tempus, Erasmus Mundus, FP 7 and etc. KSUCTA will provide all necessary information and required documents.
Kyrgyz State Technical University named after I. Razzakov	<ul> <li>Formal/Registered</li> </ul>	Identify prior objectives in accordance with strategic programme on the transport development of the country and ascertain volume of financing necessary to achieve these objectives. Tender process should be established.	
Kyrgyz-Russian Slavic University	<ul> <li>Registered</li> </ul>		
Technical University of Moldova	<ul> <li>Internet</li> </ul>		Activities can be financed through membership fees, through sale of services such as scientific research and studies
Tajik State Technical University named after M.S. Osimi	<ul> <li>Formal/Registered</li> </ul>	Could provide recommendations as regards organisations in Tajikistan, i.e. potential members of the network.	Implementation of a differentiated approach, i.e. organisational and financial responsibilities of each country should be regulated. The GDP of each country should be taken into account. Each country may contribute in accordance with its GDP. Funding allocation according to the volume of carried our research.
Ukraine National Aviation University	<ul> <li>Informal</li> </ul>		Contribution by each member country
National Transport	<ul> <li>Formal/registered</li> </ul>		



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University	Preference in regards to the type of the TRACECA network	Recommendations on organisation	Recommendations on financing
University(NTU), Ukraine			
Tashkent Automobile and Road Construction Institute, Uzbekistan	Informal/Internet		Firstly: to obtain financing from the European Commission within the framework of TRACECA project including financing for internationa education association "Logistics and Transport" in the TRACECA countries and of training programmes for the academic staf and aspirants at the leading EU universities. Secondly: To develop and publish study texts, methodica recommendations, guidelines results of the research in the filed of logistics and transport in the TRACECA region. To obtain financing for the aforementioned activities partially from the European Commission and partially from the national transport universities in the TRACECA countries. Thirdly: Organisation of internationa seminars, conferences, e-forums or logistics and transport, university- based. To obtain financing for the aforementioned activities from the national transport universities in the TRACECA countries.







# Table 4 Possible electronic forums/willingness to lead a forum; participation in Erasmus Mundus programme

University	Possible electronic forums/willingness to lead a forum	Participation in Erasmus Mundus programme No	
State Engineering University of Armenia	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> </ul>		
Azerbaijan Technical University	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> <li>Transportation and Customs Law</li> <li>Mr. Gozalov/Forum "Increase effectiveness in utilisation of transport infrastructure in the TRACECA countries"</li> </ul>	No	
Azerbaijan National Aviation Academy	<ul><li>Logistics</li><li>Bologna Process</li></ul>	No	
Georgian Technical University	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> <li>Mr. Gelashviliv O.G., Professor, Doctor of Technical Sciences, Dean of the Faculty of Transport and Machine- Building/Forum "Transport logistics".</li> </ul>	No	
Georgian Aviation University	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> </ul>	No	
Kazakh Academy of Transport and Communication n.a. M.Tynyshbaev	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> </ul>	Yes	
L.N. Gumilyov Eurasian National University, Kazakhstan	Multimodal Transport	Yes	
Kyrgyz State University of Construction, Transport and Architecture named after N.Isanov	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> <li>Mr. Djenaliev/Forum "Transport Planning"</li> </ul>	Every year KSUCTA actively participates in co-operation with European and Central Asian partner institutions in the proposal submission for	







University	Possible electronic forums/willingness to lead a forum	Participation in Erasmus Mundus programme	
		Erasmus Mundus Program but up till now unsuccessfully.	
Kyrgyz State Technical University named after I. Razzakov	<ul> <li>Transport Planning</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> <li>Environmental impacts of transportation and reduction of negative impact on the environment</li> </ul>	Yes/however programmes in the field of transport are not available.	
Kyrgyz-Russian Slavic University	<ul> <li>Transport Planning</li> <li>Multimodal Transport</li> </ul>	No	
Technical University of Moldova	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> <li>Mr. Cheban/Forum "Transport and Logistics"</li> </ul>	Yes	
Tajik State Technical University named after M.S. Osimi	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> <li>Mr. Tursunov/Forum "Distinctiveness in development of uniform transport system for mountain countries</li> </ul>	Yes, programmes in the field of energy/however programmes in the filed of transport are not offered.	
Ukraine National Aviation University	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> </ul>	No	
National Transport University(NTU), Ukraine	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> </ul>	Yes	
Tashkent Automobile and Road Construction Institute, Uzbekistan	<ul> <li>Transport Planning</li> <li>Investment Appraisal</li> <li>Multimodal Transport</li> <li>Logistics</li> <li>Bologna Process</li> <li>Mr. Topalidi/Forums</li> <li>"Logistics – objectives, levels, methods and functions</li> <li>"Modern module heavy automatic trains and transportation Europe – Asia"</li> </ul>	No	







## Annex 2 Questionnaire

### TRACECA REGIONAL PLATFORM AND NETWORK FOR TRANSPORT TRAINING AND RESEARCH QUESTIONNAIRE

### Objectives

The aim of this questionnaire is to gather the opinions of the representatives of universities and other institutions on the establishment of a TRACECA regional platform and network for transport training and research that would enhance the regional coherence and co-operation in the field of transport training.

The questionnaire relates to the EuropeAid/126298/C/SER/Multi project "Strengthening Training Capacities in NIS TRACECA Countries". The project partners are looking for measures to facilitate mutual exchange and dissemination of latest know-how within the "transport sector teaching community" and strengthen the ties among the TRACECA countries.

### QUESTIONNAIRE

- 1. Name of university/institution and address
- 2. Country
- 3. Contact person/Faculty

4. Does your university/institution cooperate with other scientific and training institutions? If yes, please specify.

- TRACECA region
- Europe

Other regions/countries (please specify)

5. Does your university/institution participate in a scientific or educational platform or network on transport training?

Yes (please specify) No

6. Would your university/institution take part in establishment the TRACECA regional platform and network for transport training and research? Who would be the contact person?

	Yes
1	No
	Undecided
_	

Contact person

7. Which objectives you would like to achieve with the TRACECA regional platform and network for transport training and research?

8. In which way your university/institution could contribute to the TRACECA regional platform and network for transport training and research establishment?



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9. What is your preference in regards to the type of the TRACECA regional platform and network for transport training and research?

Formal Network/ Registered Association

Informal

Internet

Other (please specify)

10. Which recommendations do you have in relation to organisation and financing of the TRACECA regional platform and network for transport training and research?

11. Which activities you consider to be the most important (scale: 1 = least important and 5 = extremely important)?

Conferences Newsletters/Publications Seminars/Workshops Mentoring Scientific Research Training Activities Database of Teaching Material E-learning Discussion Forum Electronic Library Other (please specify)

12. Does your university/institution participate in Erasmus Mundus programme? If yes, please state whether the transport field of study is offered?

13. Could an electronic forum on the official TRACECA Training Website provide a basis for establishing of the TRACECA regional platform and network for transport training and research?

Yes No Undecided Other (please specify)

14. In which of the following possible electronic discussion forums and how frequently would you like to participate? Please select one (0 - seldom; 1 - sometimes; 3 - often).

- Transport planning
- Investment Appraisal Multimodal Transport Logistics Bologna Process Other (please specify)

1	5. Would you be willing to lead a forum?
	Yes (please, specify which) No
	No
1	Undecided

Name:

Date:\_\_\_\_\_



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# Annex 3 Possible structures for a regional network

### Legal structure of the TRACECA network

The network could initially comprise the beneficiary universities from the TRACECA countries and from the public (national and regional vocational training institutions, etc.) and private sectors (professional organisations representative of the transport sector, companies, etc.).

Four member categories could join the network:

- competent bodies, in order to allow the recognition and transfer of learning after mobility,
- training centres,
- companies responsible for providing work placements,
- professional organisations representative of the transport sector, in order to ensure adaptation to employment.

Regarding the issue of the *network's legal structure*, the results of the consultation of the various participants reveal their preference for:

- a co-operation structure that is simple to create and operate,
- a flexible structure that is able to adapt over time to changes in the objectives assigned to the network and to an increase in the number of its participants,
- a low-cost structure,
- a structure that has an autonomous legal personality and capacity.

#### Identification and description of the various possible legal structures

Given the purpose of the TRACECA network, several legal structures are possible. However, a comparative legal analysis reveals that association status meets most of the members' objectives in terms of creation, organisation, operation and funding. Moreover, it has a flexible legal form that is familiar to all the member states and which has the advantage of being able to easily change over time. After assessment of the feedback by the universities the project team discussed in addition the structures of a Coordination Council and of an Academy of Transport and Logistics. The comparative analysis of the possible legal structures can be summarised as follows:



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### Table 1: Possible Variants of the Network

Type of Network	Prevailing law	Main Features	Advantages	Disadvantages
Foundation	National law of choice	Long-term legal institution. Foundations are set up for non-profit activities of public interest. The foundation manages a fund which is established by donations. Unlike a company, foundations have no shareholders, though they may have a board, an assembly and voting members. A foundation may hold assets in its own name for the purposes set out in its constitutive documents, and its administration and operation are carried out in accordance with its statutes. The foundation has a distinct patrimony independent of its founder.	<ul> <li>Legal personality</li> <li>Clear Mission</li> <li>Non-profit making but commercially viable fund management</li> <li>Clear organisation and effective decision making through management board</li> </ul>	<ul> <li>Complicated creation procedure</li> <li>Considerable and enduring patrimony</li> <li>Substantial initial funding is necessary</li> </ul>
Co-operation agreement	National contract law selected in the agreement	Usually short or medium term agreement, no institution. Agreement concluded between several partners which may include a management mandate.	<ul> <li>Freedom of contract</li> <li>Flexible operation, organisation and funding</li> </ul>	<ul> <li>No legal personality</li> <li>Solution unsuitable for a long- standing project</li> </ul>
Association	Law of the location of the association's head office	A professional association is a non-profit organisation seeking to support particular professional purposes, the interests of the members engaged in that profession, and the public interest. The association is founded by an agreement including a statute. The association is led by the assembly of members, represented by a chairman and a council. At least one meeting of the members per year necessary.	<ul> <li>Depending on the prevailing law:</li> <li>Any public-law or private- law legal entity may become a member</li> <li>Nationality irrelevant</li> <li>Number of members irrelevant</li> <li>Easy to set up</li> <li>Easy to manage</li> <li>Legal personality</li> <li>Of fixed or open duration</li> <li>Association may establish separate profit-making</li> </ul>	<ul> <li>Purpose and objectives limited by its statutes</li> <li>Personal responsibility and financial liability of chairman / board.</li> <li>Costs for meetings of council and assembly, also costs for book accounting.</li> <li>Membership fees usually necessary.</li> </ul>



TRACECA

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			•	subsidiaries, e.g. own training centre. Open for all kind of members who support the objectives.		
Coordination Council for Education in Transport and Logistics	National contract law as determined in the foundation agreement	Agreement between partners (universities, training institutions) to establish a joint council for coordination of educational matters in transport and logistics on the level of the higher training institutions. It is a governmental body but a methodological and scientific organisation (example: Coordination Council for Logistics; Moscow RF http://www.ccl- logistics.ru ). Gives recommendations only and provide seminars on education and scientific subjects. Council gives recommendations on curricula and supports in training and training material.	•	Can be easily installed as part of an already existing training institution (example: CCL at MADI Moscow) Use of existing facilities.	•	Governmental licence for education may be needed. Risk of domination by hosting organisation may lead to non- acceptance by other partners.
TRACECA Transport and Logistics Academy	like association; Law of the location of the association's head office	A non-profit scientific organisation seeking to support particular scientific purposes, the interests of the members engaged in that science and education, and the public interest. The academy is founded by an association agreement including a statute. The academy is led by the assembly of members, represented by a chairman and a council. At least one meeting of the members per year is necessary. Members: persons, institutions, associations	•	Like association High reputation State and international funding is usual practice, also private donations. Clear focus on scientific and educational objectives. Improves the reputation of the sector, also obvious for students and post- graduates.	•	Like association But open for scientific and training institutions and scientists only.







#### Preferred organisational structure: association

Associations exist to serve their members. A well-defined and understood association organisational structure is crucial to the effective and efficient operation of the association. The structure must take into account the social, cultural, political, and developmental environment of the country in which the association is located, and will vary depending upon these factors. The structure helps to define relationships among all parts of the association (board, committees, task forces, etc.) and the membership. The structure can also serve to bring the association closer to individual members.

The project team recommends to discussing the possibility to form an academy on the legal basis of an association with the interested institutions and scientists.

#### Essential Documents

The association's bylaws provide the legal basis for the association's organisational structure — naming categories of membership, governing bodies, standing committees, chief appointed and elected officers, and other units of the association, and designating roles and responsibilities

The *foundation agreement* is the basic agreement of the founding members to found an association and to adopt the statute.

The statute of the association set the bodies of the association and clarifies the rules for entry, exit and decision making. The statute must conform to the relevant national law where the association has it's headquarter. In most countries associations must be registered in an association register at a municipal court in the town of registration. Usually there are also supplementary working documents like the membership fees and the (annual) working plans.

Objectives described in the documentation should be accounted for in an association's organisational structure. For example, if an association has been established to provide professional continuing education to its members, there should be a group established in the association to carry out this task. The association has several elements of organisational structure co-existing within the same association. The number of different entities present in each of these elements depends upon the size, diversity of interests, scope, and other aspects of the association.

#### Bodies of the association

An association is typically hierarchical in nature with *general assembly of the members* as the highest or ultimate authority of the association.

The general assembly elects the members of the executive council for a certain period of time (e.g. 3 years). The *executive council* is led by a chairman. The executive council consists of elected representatives and is responsible for the operational management of the association in matter of policy, finances and realization of the working plans. The executive council authorized to make decisions according to the statute or according to a separate council statute in which fields of competencies are determined.

The chairman represents the executive council.

The number, functions, and responsibilities of the bodies of the association will vary according to the size and nature of the organisation. Figure 1 below shows a typical association organisational chart.

Each member's ability to join the association is assessed according to the statue and to the national laws. Each member of the network should therefore personally ensure their ability to join and, where necessary, carry out the necessary formalities and duties (decision by deliberative bodies, administrative authorisation, duly payment of membership fees etc.).

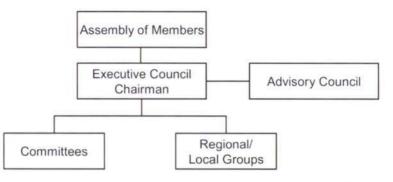


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### Figure 1: Example organisational chart association



In case of the association of scientific and educational institutions in transport and logistics the formation of task oriented committees and regional/local groups may be advisable.

Committees could cover for example:

- Curriculum development
- Accreditation of bachelor and master courses
- Multimodal Transport
- Logistics
- Investment Appraisal / Transport Planning...

#### Strategic and business plans

The organisational structure should support the objectives of the strategic plan. For example, if one of the objectives of the association is to increase membership, there should be within the structure a committee or other group assigned to work on this objective. On the other hand, if there are units within the organisational structure that are no longer supporting any goals or objectives of the association, the units should be examined for elimination.

Since the strategic plan is linked to the association's business plan and budget, the organisational structure should also support and be supported by the business plan. For example, committees should receive funds to accomplish the objectives assigned to them and budgeted activities should be assigned to groups responsible for completing the activities.

#### Geographic groups

The national association may often seem very remote to the individual members. To bring the association closer to individual members, an association may have, as part of its structure, local or regional groups (located in cities, countries or regions). This structure makes it easier for members to attend association-sponsored events and participate in association activities. These groups may either be legal parts of the association or affiliated groups with requirements for affiliation listed in the bylaws or other association policies.

#### Reporting structure

It is important that a reporting structure be developed so that the membership can have a comprehensive picture of the association's activities. The reporting structure should be reflected in the organisational structure. The governing body should require reports from all association units (committees etc.) and



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affiliates at least annually. These reports should be made available to the membership either through the association's website, annual report, or other mechanism. Typically the governing body will vote on all recommendations contained in unit reports and forward these decisions to the membership. In some circumstances described in the bylaws, the membership as a whole may be asked to vote on recommendations presented in unit reports. The governing body should also distribute minutes of meetings to inform members about decisions and major issues that are being discussed.







# Annex 4 Programme of seminar on foundation regional network

Name

The network's name should indicate who its members are and what the network is all about.

### Vision, mission, objectives and output

To ensure focused work and to allow for effective leadership and an efficient secretariat, it is imperative that the vision, mission and objectives of the network are defined clearly.

### Vision

The vision of the network should state what they hope to achieve through this network.

### Mission

The mission of the network should state how that vision would be achieved.

### Objectives

Objectives need to be more specific and state how those objectives will be achieved.

### Outputs

Outputs need to be specific products or deliverables that the network will produce.

### Type of network

The representatives of the beneficiary universities should discuss whether it would be a flexible network, perhaps based on the Internet that focuses on exchanges information or a more organized network that on top of exchanges via the Internet encourages regular and joint activities.

#### Membership

The representatives of the beneficiary universities need to decide who the members of the network would be. Whether membership will be offered to High Education Institutions, public and/or private sector, cooperation partners, international organisations and/or others. Given the large number of potential members another issue to decide is whether to make the network inclusive or exclusive. Can any education related institutions join the network?

#### **Decision making structure**

The representatives of the beneficiary universities need to decide how decisions related to the network activities and policies would be made. Whether there will be a formal structure with, for example, a general council, executive committee, president and vice presidents and a secretariat, or a more flexible structure. Should they aim for a formal "network of networks" with national "chapters"/associations as members of the regional network or should they have a more horizontal structure? How will activities be organized, who will organize them and how will they be held accountable?

### Financial and other resources of the network

The representatives of the beneficiary universities need to decide how the network's activities will be financed. Whether the necessary revenues to finance those activities would be generated through:

- Membership fees
- Donor financing



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- Sales of services to non-members
- Others

### Schedule of discussion

The following schedule is suggested for moderated discussion:

- Open brainstorming and reactions to this discussion paper.
- Discussions on the type of network, its name, vision, mission, objectives, outputs of the network.
- Discussion on membership, its benefits and responsibilities, its decision-making structure and its financial and other resources.
- Discussion on forming a committee to draw-up a draft agreement for the network.
- Preparation of a draft agreement of the network and all documentation required for the incorporation of the network.



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