Establishment of a Technology Foresight (TF) Regional Virtual Centre (RVC) for the CEE/NIS Countries

International Aspects

Scoping Report[*]

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[*] This document has been produced without formal editing.

Acknowledgments

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1.   Introduction

This report presents a scoping study in support of the launch of a Regional Virtual Centre (RVC) for Technology Foresight (TF) in the countries of Central and Eastern Europe and the Newly Independent States (CEE/NIS). As such, it is intended to feed into a strategy process that will shape the work programme of the RVC, which will in turn shape the UNIDO TF Programme for CEE/NIS countries over the coming 2-3 years.

1.1   Objectives

The RVC is intended to enable a CEE/NIS regional exchange of experiences and best practices on applying Technology Foresight efforts and programmes as important tools for governments, enterprises and research communities in the promotion of competitiveness, innovation and strategic decision making. Bearing this in mind, the objectives of this report are as follows:

1. Identification of areas to be covered by the 2006-2008 UNIDO TF Programme for CEE/NIS, with respect to the following items:
    - Needs and opportunities for support of TF programmes in the CEE/NIS
    - Compilation of ongoing and envisaged programmes promoted by other organisations/institutions
    - Identification of areas of interest for UNIDO
    - Indication of possible connections and coordination between UNIDO and other organisations/institutions

2. Identification of focal points on TF to participate in the RVC

3. Suggestions for funds mobilization, with identification of possible sources of funding

The report deliberately focuses upon international aspects of the proposed RVC.

1.2   Approach

The compilation of this report has relied upon three main sources of information:

a. Analysis of documents and reports gleaned largely from a wide range of web sites.

b. Consultation[1] with a select group of existing knowledgeable persons on TF in CEE/NIS countries. A list of those consulted is given below.

c. The author's existing knowledge and experience of foresight in the CEE/NIS region, as well as his familiarity with EC and UNIDO initiatives in the area of TF.

Country[2]	Interviewee	Affiliation

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[1] Consultations have been conducted face-to-face, on the phone, and via an email survey during July 2006.

Bulgaria	Daniela Tchonkova	ARC Fund
Czech Republic	Karel Klusacek	Technology Centre Prague, Czech Academy of Sciences
EC	Fabiana Scapolo	JRC-IPTS
Estonia	Rene Tonnisson	Institute of Baltic Studies
Hungary	Attila Havas	Institute of Economics, Hungarian Academy of Sciences
Latvia	Arturs Puga	Forward Studies Unit, Latvian Union of Scientists
Poland	Michal Miedzinski	Technopolis Group
Poland	Sylwia Melanowicz-Kielbiewska	Ministry of Science and Higher Education
Romania	Dan Grosu	National School for Political Studies and Administration
Russia	Alexander Sokolov	Institute for Statistical Studies and Economics of Knowledge, State University - Higher School of Economics
Turkey	Ozcan Saritas	Istanbul Technical University
Ukraine	Mihailo Zgurovsky	Kyiv Polytechnic Institute
Ukraine	Svetlana Demyanova	Donetsk National University

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[2] For the time being, no suitable candidates for consultation have been identified in the Western Balkans, the Caucasus, and the Central Asian Republics.

2. Foresight Needs and Opportunities in the Region

The need for foresight in the CEE/NIS region is substantial, yet opportunities for organising foresight exercises are few and far between. This is largely because the need for strategic futures-thinking is rarely appreciated, whilst at the same time, awareness of the available tools and approaches tends to be extremely low. Moreover, financial constraints often mean that strategic activities such as foresight are viewed as 'luxuries' that cannot be afforded. This picture is typically reproduced, irrespective of whether the scientific community, public policy makers, or the business community are considered.

Among the many orientations of foresight, Technology Foresight (TF) faces particular hurdles. Although the precise picture varies greatly from one country to another across the CEE/NIS region, common problems include low spending on R&D and innovation by the private sectors, out-dated and often decaying research and technological infrastructures, brain drains from east to west, an outstanding need for institutional reform and R&D selectivity in the public sector, and a misunderstanding on the nature of innovation. Together, these conditions instil a sense of perpetual crisis, certainly among scientific communities. Yet, this sense of crisis has largely failed to translate into a proactive and systematic search for alternatives (for example, through the use of TF).

A study carried out for the European Commission (Keenan and Scapolo, 2004) identified a number of potential barriers to the adoption of foresight in CEE countries that needed to be overcome. These barriers included:

- The current lack of coordination and consensus within fragmented innovation systems. In other words, some of the problems that foresight is said to be able to address are also thought to be significant barriers to the successful deployment of foresight;

- Unfamiliarity and lack of awareness of foresight as a concept within the wider society, but also specifically amongst policy makers;

- Scepticism or lack of understanding of foresight's uses amongst policy makers and other decision makers;

- Difficulty in relating foresight to existing national development programmes;

- Perceived lack of time to invest in activities like foresight;

- Perception that foresight is a too complex activity to undertake;

- Insufficient skills locally available to conduct foresight successfully; and

- Lack of financial resources.

Despite these unfavourable conditions, there have already been national TF exercises conducted in several countries in the region, including Russia (1997, 2003, 2006), Hungary (1999), Czech Republic (2001), Turkey (2002), Poland (2005) and Ukraine

(2006). Where little or no activity has occurred is in the Caucuses and Central Asian Republics. In some countries, interest in foresight has diffused to the sub-national regional level, often with the support of various European Commission (EC) programmes (e.g. RTD Framework Programme, Structural Funds, etc.). There has also been some international cross-border activity, although this has been relatively rare, with UNIDO, for example, funding some exercises in areas such as automotive and biotechnologies.

It is clear that much still needs to be done and that international organisations, such as the European Union (EU) and UNIDO, can play an important role in areas such as raising awareness, building interest, developing capacity, and even funding actual foresight exercises. However, at the end of the day, the onus rests with the actors in the region – governments, universities, enterprises, and so on – to take ownership of foresight and to use it for their own benefit. But first, they need to know about foresight, about its benefits and limitations, and about how it could be used in their context. There is some understanding of this among a few actors; for example, in a survey of policy makers from science and innovation ministries in several CEE countries (see Keenan and Scapolo, 2004), it was thought that foresight could be usefully deployed to:

- Involve stakeholders in policy decision making;

- Strengthen currently fragmented national (and regional) innovation systems;

- Bring technology and wider policy decisions into closer alignment;

- Reach greater consensus on development strategies and goals between research, business, education and policy communities; and

- Set strategic priorities and achievable goals.

Some of these ideas, along with others, are captured in the figure below, which shows some of the problems commonly found in innovation systems in CEE/NIS countries and the ways in which foresight might be used to address them. However, determining a focus for UNIDO activities based solely upon needs in the region would likely lead to an unfocused programme, on account of the wide range and variety of areas that could demonstrably benefit from foresight. For example, likely topic areas that would benefit from the use of foresight in the region include agriculture and fisheries, energy, education, healthcare and social protection, manufacturing, services, transport, science and technology, regional policy, and so on. The list is, in fact, almost endless. It might therefore be better to focus upon existing and emerging opportunities. The challenge is on how to identify these and how to go on to exploit them. This report begins this process, but identification and exploitation of opportunities is a continuous activity and will be, without doubt, an important role for the RVC to play.

Examples of policy problems and how foresight *might* help...
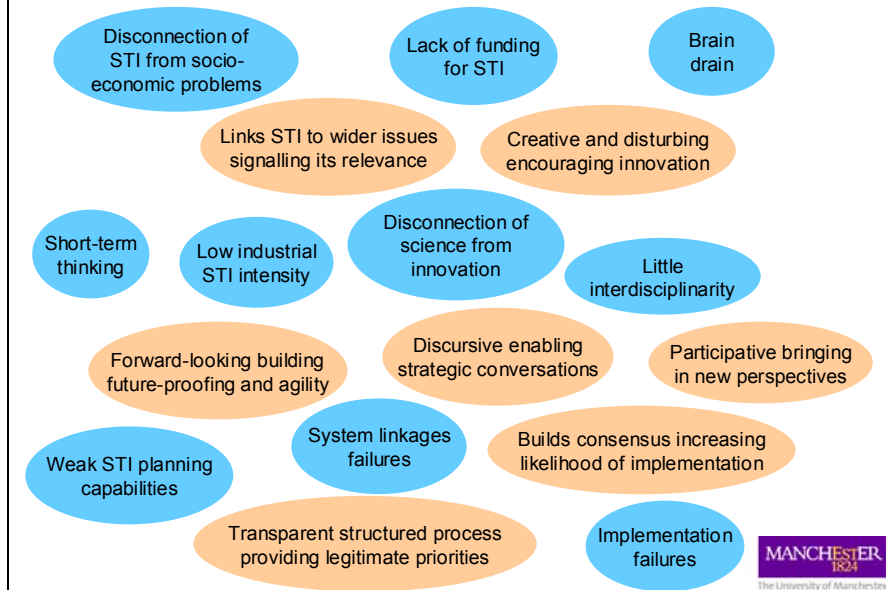
3.   The Landscape of Players and Activities

In this chapter, the possibility for coordination with other agencies and initiatives is examined, essentially with a view to identify fund mobilisation opportunities. The European Commission (EC) perhaps offers one of the best opportunities in this regard, but as this represents a complex landscape, it is dealt with separately in the next chapter. In this chapter, the focus is confined to the following actors:
- National Governments
- Other UN Agencies
- Private Foundations
- Other International Agencies

3.1   National Governments

The main players in the region are the national governments. These typically present themselves in a wide panoply of assemblies, ministries and agencies and cover a very wide range of topic areas. Much of this activity could benefit from the use of foresight. It is clearly impossible for a single report like this to review all of this activity across the various countries with a view to identifying opportunities for the use of foresight. This is, nevertheless, an important task that should be carried out early on by focal points of the RVC, and more will be said about this later in the report. In the meantime, a few generic remarks will be made instead:

- A few national governments are already playing an important role in the establishment of the RVC through the provision of sponsorship. This link needs to be nurtured and further extended to other governments, so that the RVC obtains some stability and certainty in its earliest days of operation. In this regard, the activities of the RVC should be sensitive to the needs of national governments – so that they get a sense of return in their investments. Moreover, a broad view should be taken, wherever possible, of clients across national governments, and certainly beyond the immediate interests of the sponsoring ministries (as was mentioned earlier, TF could be applied to almost any domain area, and it would be narrow-sighted of the RVC to focus only upon the interests of sponsor ministries).

- Beyond ministries, there are other important actors that constitute the state, including the legislature. In some Western Europe countries, parliaments have established foresight and technology assessment units with a view to informing parliamentarians of issues around technological developments. In some countries of the CEE/NIS region, similar initiatives also exist. These could potentially be very interested in the activities of the RVC, and it is recommended that links are made as soon as possible to scope their needs and the opportunities for engagement and collaboration.

- Also prominent at the national level are non-governmental groups, including business umbrella groups, individual enterprises, universities and academies, the media, and NGOs. These represent a rather disparate group, and are therefore difficult to target

in a directed way. Moreover, in some countries, to reach such groups means going through national governments. It is recommended that, in the first instance at least, these groups are engaged as the opportunity arises but that no special effort is made to obtain full coverage (which would be near-impossible in any case). On the other hand, many of the RVC's focal points are likely to come from this group of actors – especially universities, academies of science, and business innovation support centres.

3.2 UN Agencies

Various UN agencies have, at different times, shown an interest in developing capacities for futures thinking by governments and others. UNESCO has perhaps been the most active, though its interest and activities today are barely discernible. The current science, technology and innovation programme of UNESCO proposes the use of technology forecasting and trend analysis, within a participative framework, which essentially amounts to technology foresight.

UNDP featured technology foresight is its Human Development Report in 2001 and went on to fund a team of experts to develop and implement a series of foresight and strategic thinking workshops in support of the Romanian National Strategy for Sustainable Development in 2003. No trace of further work can be found, however. It is nevertheless recommended that UNDP is invited to participate in the RVC Steering Committee, with a view to encouraging the further use and diffusion of foresight methods in UNDP programmes.

Finally, the UNECE (United Nations Economic Commission for Europe) could offer possible opportunities for using foresight, given its new work programme. This includes a focus upon environment, transport, sustainable energy, and timber and forestry. In fact, the latter topic area has already seen some scoping work done on the use of foresight, though to date, no exercise seems yet to have been initiated. The small resource base available to the UNECE is an obvious barrier to collaboration with the RVC.

3.3 Private Foundations

Private foundations could offer another important source of funding, particularly in the NIS countries. With thousands of foundations in existence, it has been difficult to narrow down the focus of this search in an intelligent way. The situation has been further hampered by the author's general unfamiliarity with the workings of private foundations, and so a 'headline' approach has been followed, whereby a handful of well-known major foundations have been investigated. However, this approach has turned up few opportunities for the RVC, and it is recommended that UNIDO's fund mobilisation team is engaged to make a more effective search.

The following five foundations were examined:
- Ford Foundation – no obvious opportunities for the RVC to obtain funding support
- Rockefeller Foundation – no obvious opportunities for the RVC to obtain funding support

- Gates Foundation – no obvious opportunities for the RVC to obtain funding support

- Volkswagen Foundation – has programmes focused upon the Caucasus and Central Asian Republics. It basically funds mobility from academic organisations in the target regions to German institutes. It might therefore be possible to use the Foundation to fund mobilisation to German centres of excellence in foresight with a view to building foresight capacity in the target regions.

- Open Society Initiative – has programmes devoted to the spread of democracy and development of civil society in the CEE/NIS region. Foresight activities could be funded under this initiative, particularly given their participative nature, but further research is required to understand how such opportunities could be exploited.

3.4　Other International Agencies

There are lots of other international agencies active in the region, but few, if any, are likely to want to fund the RVC. As with the UN agencies, some may contribute to the funding of individual foresight exercises on a topic of their concern – these opportunities would need to be pursued on a case-by-case basis. Such agencies include NATO and its Science Programme; the British Council; the World Bank (though this would generally be funding on a national basis), and ISTC in Moscow and STCU in Kyiv.

4. Opportunities from the European Commission (EC)

Without doubt, the main international player in the region is the European Union (EU) and specifically the European Commission (EC). The EC covers a wide range of policy domains (see the box below), and some of its programmes, including those in support of R&D policy and regional policy, make explicit reference to the EC's commitment to using foresight. These will be examined in more detail below. The EC also has units dedicated to conducting and supporting foresight activities, and again, these will be briefly described below.

Policy Domains of the European Commission

Policies
Agriculture and Rural Development
Competition
Economic and Financial Affairs
Education and Culture
Employment, Social Affairs and Equal Opportunities
Enterprise and Industry
Environment
Fisheries and Maritime Affairs
Communication
Health and Consumer Protection
Information Society and Media
Internal Market and Services
Joint Research Centre
Justice, Freedom and Security
Regional Policy
Research
Taxation and Customs Union
Transport and Energy

External Relations
Development
Enlargement
EuropeAid
External Relations
Humanitarian Aid
Trade

Whilst any of the policy domains covered by the EC could be potentially interested in supporting foresight activities, there are two areas where a commitment has been clearly made already. These are in research policy and regional policy. The budget lines for these two domain areas are huge: more than €300 billion for regional policy and a little under €50 billion for research policy in the period 2007-2013. Of course, only a fraction of this funding will be used to support foresight activities. But it could still be a considerable level of funding given that foresight has been mentioned in programming documentation.

So this is all good news for the RVC, since it is quite possible that funding will be available to pursue certain opportunities. However, on the negative side, much of the programming around these areas has still to be fully worked out – the reader should note the 2007 start date for research, regional, and innovation programmes. This means that

current programmes are due to expire at the end of 2006 whilst there is still considerable uncertainty on the details as to what will replace them and how any new initiatives will actually work in practice. The same is true of the EC's programmes directed at external relations – including its enlargement policy, neighbourhood policy, and development policy, all of which are relevant for the RVC – where new instruments are to be introduced for the 2007-2013 funding round. It might therefore be concluded that the timing of this scoping study is rather unfortunate, since at the time of writing, it is difficult to be very specific on the real opportunities that will exist from 2007 onwards. On the other hand, many groups are already beginning to organise and position themselves in readiness for 2007, and it is no doubt imperative that the RVC begins to do this as well as a matter of urgency.

In the following sections, a number of EC policy areas are introduced where it seems there will be opportunities to introduce foresight activities in the CEE/NIS countries. These include research policy, regional policy, innovation policy, and external relations policy.

4.1   Research Policy: Foresight in the 6th Framework Programme

Over the years as TF has become increasingly fashionable, its use has grown at the European level. For example, studies have been recently conducted in areas such as biotechnology, information society, and transport. This has been made possible since TF was mentioned in the regulations of the current Framework Programme (FP6 (2002-06)), and has again been highlighted in proposals for FP7 (2007-2013). However, one of the challenges for the EC is in operationalising these regulatory commitments: nobody is forced to use TF simply because it has been mentioned in the regulations, and since few people understand what TF is and how it can be used, they chose to ignore it. Thus, despite some successful uptake, the level of use of TF as an activity embedded in the main programme areas of FP6 has been disappointing.

The challenge of mainstreaming TF across the FP was never an easy one, and the EC was well aware of the problems it would face. With this in mind, a specific action line on foresight was included in FP6. A dedicated foresight unit (Unit K2) was set up in DG RTD to implement this action line (see the box below for more details). Much of its activities have only very recently produced results that are now available and so it is too early to assess its usefulness and impacts. Its main activities have focused upon the building of a Foresight Knowledge Sharing Platform, which has included the generation of guides (ForLearn – developed in collaboration with JRC-IPTS – see below) and the construction of a database profiling foresight activities that have been carried out in Europe and beyond (European Foresight Monitoring Network). Some of these activities are likely to remain in place during FP7. Already, they have generated resources that should prove invaluable to the RVC.

S&T Foresight Unit in DG RTD

Unit K2's mission is as follows:

- Promoting co-operation in European Foresight

- Monitoring and exploiting Foresight, informing European research policy developments and contributing to policy thinking in DG Research

- Implementing S&T Foresight activities under the 'Support for the coherent development of S&T policies' in FP6

- Promoting Foresight dissemination and experience sharing

- Preparing Foresight activities in FP7

- Preparing the Outlook Foresight Report for 2006

European Foresight Knowledge Sharing Platform
The European S&T Foresight Knowledge Sharing Platform diffuses and exploits information from forward-looking activities. These activities are aimed at informing policymakers dealing with research and innovation. Platform activities are implemented under three layers:

1. Monitoring Foresight activities in Europe and fostering their European dimension. This activity is implemented through the work of the European Foresight Monitoring Network (EFMN, www.efmn.eu).

2. Support to mutual learning between Foresight managers, practitioners, users and stakeholders of policy-making organisations in Europe: FOR-LEARN project (http://forlearn.jrc.es/index.htm).

3. Studies for the promotion of EU wide Foresight approaches:

- The future of R&D in services: implications for EU research and innovation policy

- Emerging science and technology priorities in public research policies of European countries, the US and Japan

- Perspectives of national and regional research and innovation systems in an enlarged EU 2015: specialisation, complementarity and competition

- The future of research and innovation policies in an enlarged EU: key issues 2015

- EU research and innovation policy and the future of the European Common Foreign and Security Policy

- Scenarios of future science and technology developments in emerging economies 2015

- Scenarios of future science and technology developments in developing countries 2015

- Professions with a science and technology dimension in Europe 2015: implications for education and training policies

- Improving the science/policy relationship with the help of Foresight: a European perspective

4.2   Research Policy: Foresight in the 7th Framework Programme

The proposed Seventh Framework Programme (2007-2013) will be organised in four programmes corresponding to four basic components of European research:

- **Cooperation**
  Support will be given to the whole range of research activities carried out in trans-national cooperation, from collaborative projects and networks to the coordination of national research programmes. International cooperation between the EU and third countries is an integral part of this action (more on this below). This action is industry-driven and organised in four sub-programmes:

  - **Collaborative research** will constitute the bulk and the core of EU research funding.

  - **Joint Technology Initiatives** will mainly be created on the basis of the work undertaken by the European Technology Platforms.

  - **Coordination of non-Community research programmes**

  - **International Cooperation**

- **Ideas**
  This programme is intended to enhance the dynamism, creativity and excellence of European research at the frontier of knowledge in all scientific and technological fields, including engineering, socio-economic sciences and the humanities. This action will be overseen by a newly established European Research Council

- **People**
  This programme aims at quantitative and qualitative strengthening of human resources in research and technology in Europe by putting into place a coherent set of Marie Curie actions.

- **Capacities**
  The objective of this action is to support research infrastructures, research for the benefit of SMEs and the research potential of European regions (Regions of Knowledge) as well as to stimulate the realisation of the full research potential (Convergence Regions) of the enlarged Union and build an effective and democratic European Knowledge society.

Each of these programmes is the subject of a Specific Programme. In addition, a Specific Programme for the Joint Research Centre is being drafted and this will cover the foresight activities of JRC-IPTS (see below). With reference to foresight, each of the four Specific Programme texts contains the following quotation:

> "… considerations of the ethical, social, legal and wider cultural aspects of the research to be undertaken and its potential applications, as well as socio-economic impacts of scientific and technological development and **foresight**, will where relevant form a part of the activities under this Specific Programme".

In reality, this amounts to no more than an 'after-thought' in the general introduction to the Specific Programmes and should not be interpreted as a meaningful commitment to conducting foresight across FP7. It does indicate, however, that virtually any part of FP7 could potentially accommodate foresight activities – as was the case in FP6. At the same time, consideration of the Specific Programmes shows that two of them – Cooperation and Capacities – make more detailed reference to foresight activities. Each is described in more detail below.

4.2.1 The Cooperation Specific Programme

FP7 presents strong elements of continuity with its predecessor, mainly as regards the themes which are covered in the Cooperation programme. The themes identified for this programme correspond to major fields in the progress of knowledge and technology, where research must be supported and strengthened to address European social, economic, environmental and industrial challenges. The overarching aim is to contribute to sustainable development. The nine high level themes proposed for EU action are the following:

1. Health
2. Food, agriculture and biotechnology
3. Information and communication technologies
4. Nanosciences, Nanotechnologies, Materials and new Production Technologies
5. Energy
6. Environment and Climate Change
7. Transport and Aeronautics
8. Socio-economic sciences and the humanities
9. Space and Security Research

Proposals for a **specific programme on foresight** have been drawn up as part of Theme 8 (Socio-economic sciences and humanities). The aim is to provide national, regional and Community policy-makers with foresight knowledge for the early identification of long term challenges and areas of common interest that can help them formulate policy. Accordingly, foresight activities in FP7 will be designed as horizontal activities and structured into four areas of activities:

- Area 1: Wide socio-economic foresight on a limited number of key challenges and opportunities for the EU, exploring issues such as the future and implications of ageing, migration, globalisation of knowledge, changes in crime and major risks.

- Area 2: More focused thematic foresight on the developments in emerging research domains or those cutting across existing domains, as well as on the future of scientific disciplines.

- Area 3: Foresight on research systems and policies in Europe and on the future of key actors involved.

- Area 4: Mutual learning and co-operation between national and/or regional foresight initiatives; co-operation between EU, third country and international foresight initiatives.

Each of the four Areas is expanded upon below. The RVC could most obviously be supported under Area 4, whilst TF activities in the focal points could easily be supported under any of the other Areas.

At the time of writing, it remains unclear how the foresight specific programme will be operationalised: Unit K2 is being abolished as part of an overall re-organisation of DG RTD. It seems likely that support for foresight will be moved into a new unit that also focuses upon economic analysis – the name of the new unit is rumoured to be "Economic and Prospective Analysis", but this will be confirmed later in the year, along with the unit's work programme. There remains considerable uncertainty surrounding the scale of resource commitment to a specific programme dedicated solely to foresight. In initial FP7 proposals from the EC, some €70 million were being proposed, but the latest information available to the author indicates that this figure has been cut back drastically – to around €20 million over seven years. This situation could improve, however, as the foresight mission is moved into the new directorate – it is simply impossible to say at the moment.

In addition to Theme 8, two further Themes explicitly mention foresight in their regulations (see the box below). But in fact, any of the Themes could accommodate foresight activities. It is simply a matter of the scientists and policy makers being aware of foresight and understanding its contribution to their fields. If this can be achieved more widely than at present, then there is every chance that many of the Themes will support TF studies. The foresight 'community' itself needs to be more active in this regard, and the RVC could play a critical role in the CEE/NIS region.

Theme 2: Food, Agriculture and Biotechnology
"Consideration of the social, ethical, gender, legal, environmental, economic and wider cultural aspects and potential risks and impacts (**foresight**) of the scientific and technological development will form a part of the activities, where relevant."

Theme 6: Environment (including climate change)
Specifically referring to the action, *Conservation and sustainable management of natural and man-made resources*: "The research will benefit from and contribute to the development of open, distributed, inter-operable data management and information systems and will underpin assessments, **foresight**, and services related to natural resources and their use."

Specifically referring to the action, *Assessment tools for sustainable development*: "The analysis of technology, socio-economic drivers, externalities and governance as well as **foresight** studies, will be included."

Proposed Areas in FP7 Foresight Specific Programme

Area 1. Early identification of long term challenges in science, technology, and innovation

Science and technology and innovation have a high impact on the future of the EU as indicated in the Lisbon agenda. This area will carry out studies in order to identify early long term challenges and opportunities for the socio-economic dimensions of Europe's future in relation to science and technology. Research topics could include:

Depletion of natural resources: e.g., socio-economic challenges to/from global environmental change, the tensions from accelerated consumption of scarce resources like energy, water and raw materials, the role of science and technology in the balanced sustainable development;

S&T industries and business systems: e.g., Europe's competitive industrial renewal including its service industries, dynamics of new industries in ICT, nanomaterials, service management and engineering, biotechnologies in food and health;

Security and Safety issues: e.g., vulnerability to natural or human caused disasters of technology dependent societies, interaction between internal safety and external security factors, threats perception and risk preparedness;

Health prospects: e.g., opportunities and threats derived from growing life expectancy and an ageing population, S&T prospects in health services developments; a sustainable knowledge-based bio-economy for human health.

Area 2. Focused thematic foresight

Thematic foresight activities will focus on developments in emerging research domains or on those cutting across existing S&T domains, as well as on the future of scientific disciplines. Research topics could include:

New fields of science and technology e.g., which disciplinary developments and apparent convergences are pointing to new RTD fields;

Global food issues: e.g., food security in its various aspects, bio-diversity preservation and the food chain, implications of climatic change, genetic engineering;

Rural development: e.g., which advances in S&T, education and innovation can foster sustained development in rural areas;

Greening of the transport system: e.g., what are the likely roles to be played by bio-fuels, fuel-cells, and the integration of renewable energies with transport systems.

Area 3. Research systems and research policies in Europe

These Foresight activities explore the long-term issues and factors influencing the future of European research systems. The studies will focus on the future of their architectures, interactions, drivers of change and key actors involved. Research topics could include:

The future of the European Research Area (ERA): e.g., dynamics and barriers for emergence of ERA between European and national research funding, dynamics of new European funding instruments and the role of multinational firms and philanthropic funding, optimal synergies with innovation and education;

Human resources in science and technology: e.g., demographic trends, ageing, and migration flows as well as on the attractiveness and capabilities of the education systems and labour markets; global sourcing for researchers;

The prospective role of Emerging Economies: e.g., prospective assessment of developments, opportunities and EU's capabilities, strategic cooperation and competition, evolution and preparedness of the EU RTDI systems;

Universities: e.g., identification of their role and functions in training and research in the knowledge society, the value of certification, universalism / specialisations in a growing service economy, the forms of operation, management and ownership/control.

Area 4. Mutual learning and co-operation

These activities will concentrate both on mutual learning and co-operation between national and/or regional foresight initiatives, their sponsors and practitioners and co-operation between EU Member States, third countries and international organisations. In several Member States Foresight programmes and initiatives have been set up to explore issues relevant to policy design needs. In order to provide added value to those activities at the European level, a platform for co-operation and the exchange of experiences and results will be established. The European Foresight platform will continue to support the exchange of foresight knowledge.

4.2.2   The Capacities Specific Programme

As with the other components of FP7, a general statement of commitment to using foresight is made in the Specific Programme on Capacities. However, the Capacities Specific Programme goes a stage further by outlining one possible way in which foresight will be integrated and that is through its Regions of Knowledge Programme. Regions of Knowledge was originally launched by DG RTD in 2003 at the request of the European Parliament, the aim being to promote the active involvement of local players in designing and shaping regional knowledge development models. Under FP6, 14 pilot projects were selected to take part in the Regions of Knowledge initiative, including the MetaForesight and SPIDER projects (see the box below for details).

<u>Foresight projects funded under Regions of Knowledge Pilot Action in FP6</u>

MetaForesight Project
MetaForesight is promoting intelligence processes in the participating regions through the application of information and communication technologies. The project aims to produce an integrated system that fosters regional knowledge-based capacities and policies, and supports regional business intelligence. It is sought to exploit the benefits of foresight models and IT systems that have already been created in various regions to enable them to operate in an intelligence-driven environment.

MetaForesight is integrating five fields of intelligence: regional foresight; R&D result databases; benchmarking of regional companies and regional innovation potential and development policies; technology and market watch; and regional technological competences and skills. In the long run, the project will help regional stakeholders adopt or develop the necessary technologies and systems to operate effectively in an intelligence-driven business environment. This will assist firms, industries and regions in dealing with increasingly informed global competitors.

SPIDER Project
SPIDER seeks to enhance regional competitiveness through the application of foresight techniques to explore the potential of emerging economic activities. It is aimed to find the best way of putting in place a self-renewing regional innovation system, which will focus on four essential elements: players, networks, knowledge management, and mastering time.

The project will develop foresight methodologies specifically for the regions by adapting national approaches. These new methodologies will not just be applicable for the participating regions but can also be adopted more widely. For this purpose, SPIDER is gathering future-oriented and foresight expertise. In order to raise awareness of foresight studies and to spur their future development, the project aims to plant the first seeds of a European Futures Academy.

Under FP7, the Regions of Knowledge Pilot Action will be transformed into a fully-fledged component of the Capacities Programme and will be substantially expanded. Moreover, Regions of Knowledge is viewed by the Commission as a potentially useful interface between the activities of DG RTD and those of DG Regio, particularly around the latter's Cohesion Policy (Structural Funds), which has been reoriented to take better account of the need to build innovation capacity in lagging regions (see below).

Box: REGIONS OF KNOWLEDGE IN FP7

Objectives
Strengthening the research potential of European regions, in particular by encouraging and supporting the development, across Europe, of regional "research-driven clusters" associating regional authorities, universities, research centres, enterprises and other relevant stakeholders.

Approach
Regions are increasingly recognised as important players in the EU's research and development landscape. At the same time evidence indicates that investment in R&D improves regional attractiveness while increasing competitiveness of local businesses. R&D intensive clusters rang among the best drivers of such investment activity resulting in direct gains in local competitive advantage with beneficial effects in terms of growth and jobs. The 2003 Pilot Action Regions of Knowledge confirmed the importance of such clusters and the interest to support and encourage their development.

This action will enable European regions to strengthen their capacity for investing in RTD, while maximising their potential for a successful involvement of their stakeholders in European research projects. Increased and more focused use of Structural Funds for R&D investment and activities will be also pursued by improving synergies between Regional and Research Policies primarily by producing regional research strategies which regional authorities can integrate into their economic development strategy.

"Regions of Knowledge" aims at supporting the definition and implementation of optimal policies and strategies for the development of R&D driven clusters. In particular it will improve the relevance and effectiveness of regional research agendas through mutual learning; promote and strengthen cooperation between clusters; and contribute to strengthening the sustainable development of existing R&D driven clusters as well as foster the creation of new ones. Support will be provided in particular for demand-driven and problem-oriented projects addressing specific technological areas or sectors. This action will apply to all regions, including Convergence ones.

Activities
Projects would normally involve regional authorities, regional development agencies, universities, research centres, and industry as well as where appropriate technology transfer, financial or civil society organisations. *Regions of Knowledge* projects will cover the following activities:

- **Analysis, development and implementation of research agendas** of regional clusters and cooperation between them. These will include analysis as well as an implementation plan focusing on R&D capacity and priorities. Projects shall use **foresight**, benchmarking or other methods, demonstrating expected benefits, such as strengthened links between clusters involved, optimised involvement in European research projects and higher impacts on regional development.

- **"Mentoring"** of regions with a less developed research profile by highly developed ones based on R&D focused cluster building. Transnational regional consortia will mobilise and associate research actors in academia, industry and government to deliver "guidance" solutions with and for technologically less developed regions.

- **Initiatives to improve integration** of research actors and institutions in regional economies, through their interactions at cluster level. These will include transnational activities to improve links between research stakeholders and the local business communities as well as relevant activities between clusters. Support will also be provided to activities to promote systematic mutual information exchange as well as interactions between similar projects and where appropriate, with actions of other relevant Community programmes (e.g. analysis and synthesis workshops, roundtables, publications).

4.2.3 *International scientific co-operation in FP7*

Participation in the main parts of the Framework Programme (FP) has traditionally been confined only to those countries that contribute funding: essentially the EU Member States. some of the Pre-Accession Countries and a few association states (e.g. Israel, Norway, etc.). Other countries, such as those from the NIS, have been allowed to participate in the FP in special initiatives that have been set aside from the main programmes. This picture changed in FP6 as all programmes were opened up to all countries in the world. On the face of it, this seemed like a positive development, but the reality was less than positive as third countries, such as those from the NIS, found it difficult to participate in the main programmes for a variety of reasons that will not be discussed here.

Much has been learnt from this experience and the expectation is that matters will improve significantly in FP7. It is claimed that a comprehensive EU strategy for international scientific co-operation will provide the context for the coordination of international co-operation activities under the different FP7 Specific Programmes. Again, the whole of the FP will remain open to third country participation, and the bulk of international co-operation activity, relating to the different themes, is to be accomplished in the Cooperation Specific Programme, connected to thematic priorities. As well as opening all thematic areas to international cooperation, a series of specific actions for international cooperation will be established in each area. The latter will cover activities dedicated to co-operation with third countries in the case of shared interest and mutual benefit, while meeting their specific needs. Many of the topics to be covered will have both global significance and significance for the EU itself.

The Capacities Specific Programme will provide input and set the research priorities for the "specific actions for international co-operation" of the Cooperation Specific Programme. This will be done through supporting bi-regional dialogue and networks. The Specific Programme will also focus on exploiting the potential of **bilateral S&T agreements** (for example, with countries like Russia and Ukraine), in order to improve their operation in a mutually beneficial way.

At the time of writing, many details must still be worked out and budgets decided upon. To illustrate this point: since 1993, the EC has funnelled much of its RTD support for countries in the NIS region through an organisation called INTAS (see the box below). However, the future of INTAS is now much in doubt, with the Commission wishing to close it down at the end of 2006, whilst the Parliament has indicated that it wishes to see it continue its work into FP7. These details, like many others concerning all EC programmes, are unlikely to be resolved until the autumn of 2006.

INTAS is an independent association formed in 1993 by the European Community, the EU Member States and like-minded countries. INTAS plays an important bridging role between the New Independent States (NIS) and the European Community, especially through activities relating to the EU Framework Programmes. INTAS promotes scientific co-operation with the twelve New Independent States (NIS) and strengthens their research potential to facilitate the long-term integration of the NIS scientific communities with those of the EU Member States and the FP6-associated countries.

4.3   Foresight in JRC-IPTS

The EC's Joint Research Centre (JRC) also has its own Institute for Prospective Technological Studies (IPTS) which carries out its own foresight studies for other parts of the EC. The JRC-IPTS has an action line dedicated to supporting foresight capacity, especially in the New Member States and Pre-Accession Countries. Known as FOR-ERA (Foresight for the European Research Area), the action has several components, the major one being FOR-LEARN. The aim of this activity is to consolidate European expertise on foresight through codification and to raise the quality of foresight practice by the exchange of knowledge between foresight practitioners, sponsors and other stakeholders. To achieve this, FOR- LEARN is composed of two main elements: the 'Foresight know-how' and the 'mutual learning pool':

- The 'foresight know how' has looked to contribute to the codification, assessment, and dissemination of existing foresight knowledge and know-how. It has sought to make practical knowledge on how to carry out foresight more accessible to foresight managers, users and stakeholders. It has essentially done this through the development of an online foresight guide, which was launched in 2006.

- The 'mutual learning pool' consists of a) bridging services (between newcomers in need of support – in particular in less favoured regions/Member States of the enlarged EU - and more experienced managers, practitioners and/or experts) and b) issue-related workshops and participative seminars to share, consolidate and transfer lessons between foresight programme managers and researchers. A service known as 'Foresight Answers' has been launched during 2006 under this element, whilst several issue-related workshops have been organised during 2005 and 2006.

There are many resources here that the RVC could make use of. Moreover, it is quite possible that the JRC-IPTS could look to the RVC to help it to roll out its services in the CEE region. However, as with the other EC programmes discussed here, there remains considerable uncertainty as to the continuation of this activity in FP7, particularly given the action line's partial dependence upon funding from Unit K2 in Brussels. This picture should hopefully become clearer during autumn 2006, and it is recommended that UNIDO continue to maintain personal contacts with the FOR-ERA action leader with a view to developing collaboration in FP7.

As well as a dedicated action line for building foresight capacity, JRC-IPTS also funds several 'prospective' studies around technologies each year, hence its name. Some of these studies are conducted by researchers in the JRC-IPTS, but many are contracted out, at least partially. Given that so much outsourcing occurs, JRC-IPTS has established the European Techno-Economic Policy Support (ETEPS) Network as a means of efficiently distributing much of its research work. Some of Europe's leading innovation research centres are members of ETEPS, which works through series of calls. Some of the stronger focal points who are not already members of ETEPS should seriously consider joining the Network. Moreover, ETEPS could be examined as a possible model of organization for the RVC to follow. Accordingly, more details on the Network are provided in the box below.

The ETEPS Network

The objectives of the ETEPS network are to provide intellectual services for carrying out techno-economic and policy-related studies in the context of EU policy-making. To this end, ETEPS is:

- Undertaking scientific research on the interdependencies between science, technology, economy and society, with a focus on foresight, policy analysis and technology assessment;
- Developing and using scientific models, data, and other related tools to improve the scientific understanding of European Science & Technology related policies; and
- Taking appropriate actions to disseminate the knowledge thus gained.

The ETEPS network is organised around the ETEPS AISBL (Non-profit making international association), and presently consists of 19 Effective members from 15 member states and 20 Associated members worldwide. The network is further supplemented by a number of external organisations.

Membership of ETEPS is in principle open to all public or private organisations, which undertake prospective science & technology, technological, techno-economic, socio-economic and societal research and analysis. Such organisations shall be legal entities, fully able to participate in the purposes and activities of ETEPS, and to undertake the responsibilities of membership. They may operate at international, European, national or regional level within any nation or combination of nations.

It is the aim to keep ETEPS Effective membership at a manageable size of not more than 20 to 25 organisations. The two key admission criteria for Effective membership are that the applicant covers a broad range of scientific research fields and adds significant value to the network in terms of covering geographic regions and research areas not covered sufficiently by present ETEPS members. The ETEPS AISBL General Assembly reviews all membership applications and decides on the admission of new members.

Membership categories, criteria, benefits and responsibilities
There are three levels of involvement in the ETEPS Network: ETEPS Effective members (EM), ETEPS Associates (AM), and external organisations (EO).

- ETEPS **Effective members** are signatories of the ETEPS AISBL statutes, established in an EU member state, major players in national / international S&T with high standing and a significant size of organisation, and cover all or most of ETEPS' activity areas. They must have access to relevant national science, research and technology data, possess analytical skills, as well as the capability and capacity to participate in a large number of ETEPS activities.
- ETEPS **Associates** are organisations that have expertise and the potential to contribute to ETEPS activities or at least to selected activities. They would normally meet the same criteria as Effective members, but could also be more specialised scientific institutes and/or smaller organisations. They may be established in any country worldwide.
- **External organisations** that support the ETEPS network are either organisations with a (highly) specified activity focus, which matches one of ETEPS' broad thematic activities, and which enables them to participate in some ETEPS activities, or organisations that wish to become ETEPS members.

Membership admission and review process
The process below describes how an organisation might migrate into and within the ETEPS membership scheme. The steps are:

- Database of privileged external organisations: ETEPS will on a case-by-case basis invite these external organisations to participate in selected ETEPS activities. Each organisation that wants to be listed in the database has to submit an application form (www.eteps.net), because this database is operated on the opt-in principle.
- Associated membership: after the satisfactory completion of at least one activity carried out for ETEPS, an organisation from the database may apply to be elevated to Associated member status. Preference will be given to applicants with credentials in areas not covered sufficiently by present ETEPS members.
- Effective membership: the key admission criterion for Effective membership is that the applicant must add value to the network in terms of covering research areas and geographic regions not covered sufficiently by present ETEPS members. After the satisfactory completion of at least one activity carried out as ETEPS Associate, an Associated member has the possibility to apply for ETEPS Effective membership.

4.4   Regional Policy

Regional policy, through the use of what are commonly referred to as Structural Funds, represents the second largest budget line of the EC (the first being the much-maligned Common Agricultural Policy), amounting to more than €300 billion over seven years. The aim of regional policies is centred (mostly) on promoting economic convergence between the regions of Europe with a view to achieving greater cohesion across the EU more generally. More than three-quarters of the regional policy budget is directed at this aim. However, there are two other aims for the EC's regional policy, namely to increase regional competitiveness and employment across a wider set of regions, and to nurture territorial cooperation between all regions of Europe. Some of the conditions of eligibility and priorities associated with these aims are shown in the table below.

Cohesion policy 2007–13 (EUR 336.1 billion)

Programmes and instruments	Eligibility	Priorities	Allocations
Convergence objective including the special programme for the outermost regions			**78.5 % (EUR 264 billion)**
National and regional programmes (ERDF, ESF)	Regions with per capita GDP < 75 % of EU-25 average	• Innovation • Environment/risk prevention • Accessibility • Infrastructures • Human resources • Administrative capacity	67.34 % = EUR 177.8 billion
	Statistical effect: regions with per capita GDP < 75 % of EU-15 and > 75 % of EU-25		8.38 % = EUR 22.14 billion
Cohesion Fund	Member States with per capita GNI < 90 % of Community average	• Transport networks (TEN-T) • Sustainable transport • Environment • Renewable energy	23.86 % = EUR 62.99 billion
Regional competitiveness and employment objective			**17.2 % (EUR 57.9 billion)**
Regional programmes (ERDF) and national programmes (ESF)	The Member States propose a list of regions (NUTS1 or NUTS2)	• Innovation • Environment/ risk prevention • Accessibility • European employment strategy	83.44 % = EUR 48.31 billion
	'Phasing in' regions covered by Objective 1 between 2000 and 2006 and not covered by the convergence objective		16.56 % = EUR 9.58 billion
European territorial cooperation objective			**3.94 % (EUR 13.2 billion)**
Cross-border and transnational programmes and networks (ERDF)	Border regions and large transnational cooperation regions	• Innovation • Environment/risk prevention • Accessibility • Culture, education	35.61 % cross-border cooperation 12.12 % European neighbourhood and partnership instrument 47.73 % transnational cooperation 4.54 % networks

Source: EC (2004), *Cohesion Policy: the 2007 Watershed*, DG Regio Factsheet, Brussels

As the table above shows, innovation is the top priority across virtually all areas – a reflection of the EC's renewed commitment to the Lisbon Strategy and its intention to reorient the Structural Funds to this end. Moreover, the sums of money involved are huge by any standard. The question is, what has any of this got to do with foresight? Well, the strategy guidelines for the Structural Funds already make reference to foresight, as highlighted in the box below. And the foresight community, in Western Europe at least, see the new Structural Funds as a major opportunity for initiating new regional foresight activities – see the table below. The challenge for the RVC will be to build the same sort of awareness in Central and Eastern Europe.

Community strategy guidelines reference to foresight

Improving knowledge and innovation for growth
The necessity to enhance national and regional RDT capacities (…) should be encouraged by regional **foresight** and other regional strategic planning methods, involving regular and systematic dialogue with key stakeholders. (p17)

Actions in RTD should be aligned with EU RTD policy and the needs of regions in question. In terms of method, these need be based on a sound analytical approach, such as **foresight**; as well as use of indicators, such as patents; human resources in RTD; location of private and public research institutions; and on the existence of clusters of innovative businesses. (p19)

More and better jobs
Support good policy and program design: monitoring, evaluation and impact assessment, through studies, statistics, expertise, and **foresight**, support for interdepartmental coordination and dialogue between relevant public and private bodies. (p28)

Table: Some suggestions on the use of foresight for the Structural Funds[3]

Structural funds process	Foresight answers
Community's strategic guidelines on cohesion	Foresight is quoted in the guidelines : - Enhance national and regional RDTcapacities by regional foresight (…) -Support good policy and program design by (…) foresight
National strategic reference framework	
Operational Programmes	-Foresight approach can provide **priorities and strategic actions** -Foresight approach can provide **long term and shared SWOT (Evaluation ex-ante)**
Programme management and project selection	Foresight approach can be **a criteria of eligibility to access** to the operational program / can be promoted by **actions** inside the program / can be **a pilot action** launched by the Commission (such as RITTS-RIS initiatives)
Strategic follow-up	Foresight approach can develop **new indicators**

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[3] Taken from a presentation by Pascale van Doren, "Possibilities for Foresight-related activities in the new Structural Funds", MLP-Foresight Workshop, Stuttgart, 31 March 2006.

From the RVC's perspective, the really good news is that a significant share of the funding available through the Structural Funds is to be spent in the New Member States and those Pre-Accession Countries that are expected to accede to the EU within the next year or so (i.e. Bulgaria and Romania). The map below clearly shows this with regards to existing Member States.
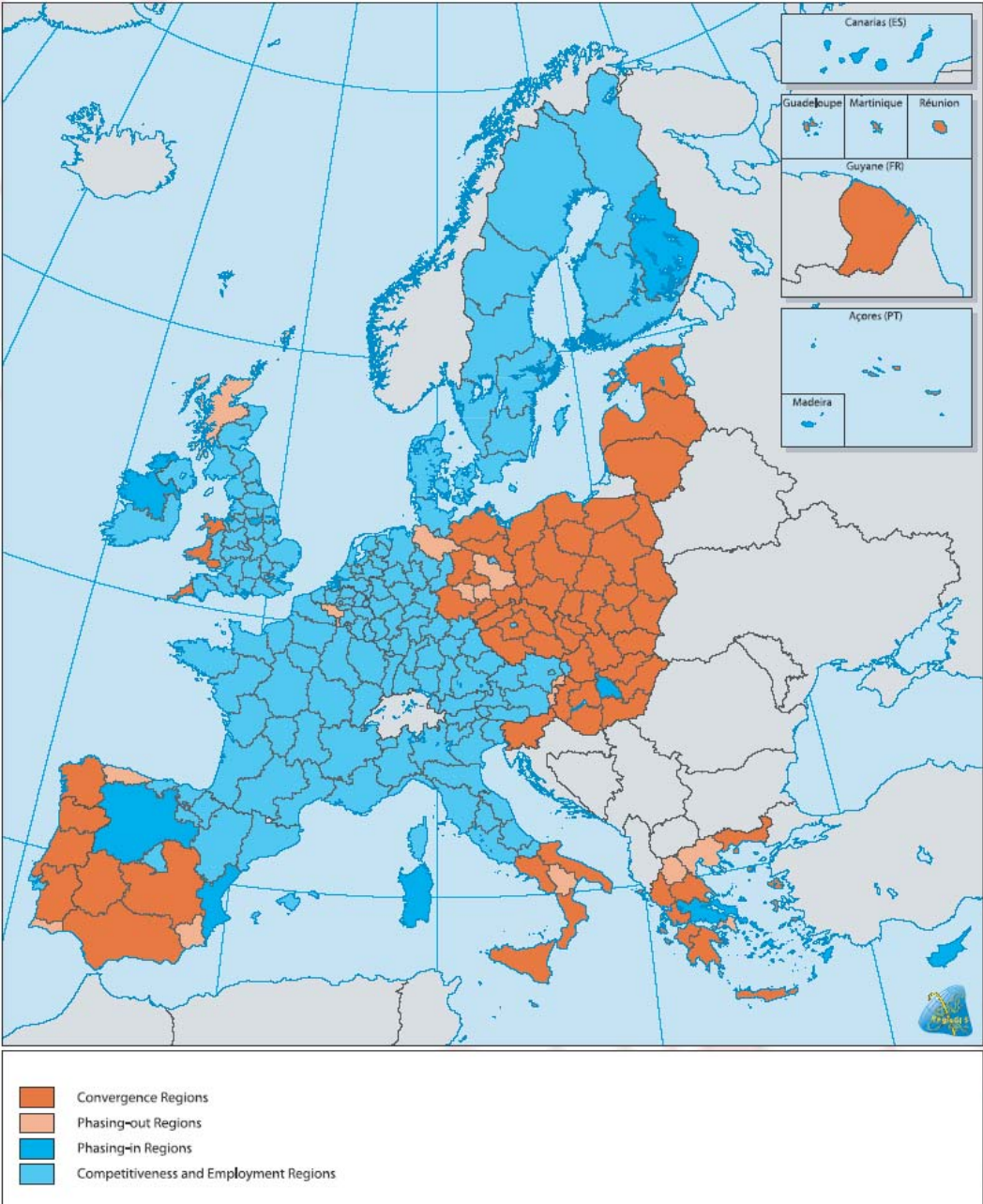
Source: EC (2006) *Regions for Economic Change*, DG Regio, Brussels

The EC has recently hired consultants to advise them on how the innovation agenda can be operationalised in the Structural Funds, and it is understood that the resulting report (to be delivered in late 2006) is likely to feature regional foresight as a key recommendation. This is good news for the RVC, since it is likely that many beneficiary countries and regions will seek support in trying to make sense of foresight. Such support is likely to include a demand for training and information, as well as consultancy support to run foresight exercises. However, at the same time, the news is not all good. The difficulty with the Structural Funds from an RVC perspective is the manner in which they are managed and allocated. Each Member State essentially manages their own allocation of funds and much responsibility is then further delegated to sub-national regions. There is no "one-stop shop" in the EC, for example, in which decisions are being taken. This makes reaching the 'target audience' for foresight less than straightforward for the RVC. It will require a good geographical spread and understanding of local conditions, as well as local contacts, for the most to be made of this significant opportunity. This points to an important role for the distributed focal points and the need to provide them with the necessary support to reach local target audiences. It also suggests that focal points should be established in all countries covered by the Structural Funds. The establishment of a dedicated 'chapter' for interacting with Structural Fund actors might therefore be considered, particularly given the scale of funding that could be available.

The European Territorial Cooperation Objective (shown as "cross border and transnational programmes and networks" in the table above) is the smallest component of the Structural Funds, but still amounts to over €3 billion over seven years. From an RVC perspective, this is an important funding line, since it is solely dedicated to funding transnational cooperation between regions. Significantly, it also includes a component that allows the participation of regions outside of the EU – in the so-called pre-accession countries (e.g. Turkey) and neighbourhood countries (e.g. Ukraine). The main policy instrument to be used under this Objective is the European Regional Development Fund (ERDF). The cross-border component of the Objective will concentrate on encouraging entrepreneurship, joint management of the environment and the sharing of infrastructures. The transnational component will include water conservation and management, access to major networks and the interoperability of systems, risk prevention and related research and technological development activities.

Up until now, inter-regional and transnational cooperation have faced many difficulties due to the many national laws and procedures that must be respected. To overcome such difficulties, the EC will allow the establishment of 'European Groupings of Cross-border Cooperation' (EGCCs), which will have their own legal statutes, organs and budgetary rules. Such groupings are intended to oversee the implementation of specific tasks as agreed by the member organisations. Consideration might be given to establishing an EGCC around the RVC if this will make transnational cooperation more straightforward.

4.5   Innovation Policy

From 2007, the Competitiveness and Innovation Framework Programme (CIP) will bring together into a common framework specific Community support programmes and relevant parts of other Community programmes in fields critical to boosting European productivity, innovation capacity and sustainable growth, whilst simultaneously addressing complementary environmental concerns. It is proposed to be allocated a budget of €4.2 billion for the duration of 2007-2013.

The CIP will provide the legal basis for Community actions that share the overarching objectives of enhancing competitiveness and innovation, complementing the research-oriented activities promoted by FP7. It will be composed of specific sub-programmes:
- the Entrepreneurship and Innovation Programme,
- the ICT Policy Support Programme, and
- the Intelligent Energy-Europe Programme.

Significantly from an RVC perspective, the CIP will be open for participation to the members of the EU, candidate countries and countries of the Western Balkans. Other third countries, in particular neighbouring countries or countries interested in co-operating with the Community in relation to innovation activities can participate in the framework programme if bilateral agreements with them provide for this.

4.6   External Relations Policy

At present Community assistance and cooperation involving third countries is delivered through a range of regional instruments, for example CARDS, TACIS, and a substantial number of thematic instruments, for example the European Initiative for Democracy and Human Rights. However, as with the other EC policy areas outlined above, everything is also set to change in 2007 in the area of external relations policy. Instead of the current wide range of geographical and thematic instruments that has grown up in an ad-hoc manner over time, the new framework will comprise six instruments only, four of them new. The four new instruments are:

- An Instrument for Pre-Accession Assistance (IPA), covering Bulgaria, Romania, Turkey, and all countries of the Western Balkans;

- A European Neighbourhood and Partnership Instrument (ENPI), covering Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine, with Russia falling under a separate Partnership Agreement;

- A Development Cooperation and Economic Cooperation Instrument (DCECI), covering the Central Asian Republics; and

- An Instrument for stability.

Two existing instruments, for Humanitarian Aid, and for Macro Financial Assistance are being maintained. These and the Instrument for Stability are of little concern to the RVC and will not be discussed further. Instead, discussion will focus upon the IPA, ENIP, and DCECI. But before describing each in turn, it is perhaps worth remarking upon the

similarities between these new instruments and the Structural Funds. This is not accidental, with the EC deliberately setting out to reproduce some of the support schemes offered in the Structural Funds, at least in the IPA and ENIP. In fact, both the IPA and ENIP will overlap with the Structural Funds around the European Territorial Cooperation Objective, whereby regions in EU Member States will be able to collaborate with bordering regions in Pre-Accession and Neighbourhood Countries. This means that these new external relations instruments could potentially fund foresight activities and capacities in support of external relations policy aims. However, at the time of writing, it remains difficult to be precise about the actual opportunities that might exist, and again, the RVC will need to be alert to possibilities for funding.

4.6.1 IPA

At the junction between external assistance and internal policies, the IPA intends to facilitate the entry into the EU of candidate countries (Turkey, Croatia) and potential candidate countries (e.g. Western Balkans). The IPA will be an accession driven instrument, fulfilling all the requirements stemming from the accession process, notably in terms of priorities, monitoring and evaluation. It consists of five components:

1. Transition Assistance and Institution Building,
2. Regional and Cross-Border Cooperation,
3. Regional Development,
4. Human Resources Development, and
5. Rural Development

The first two components will apply to both potential candidate and candidate countries, the last three will apply to candidate countries only.

4.6.2 ENPI

ENPI is the financial instrument designed to support the European Neighbourhood Policy and the strategic partnership with Russia. As such, it replaces MEDA, Tacis and other existing instruments. The objectives of the European Neighbourhood Policy are as follows:

- to share the benefits of the EU's 2004 enlargement with neighbouring countries in strengthening stability, security and well-being for all concerned,
- to prevent the emergence of new dividing lines between the enlarged EU and its neighbours,
- to offer neighbouring countries the chance to participate in various EU activities, through greater political, security, economic and cultural co-operation, and
- to help build security in the EU's neighbourhood.

As already highlighted, there are six beneficiary countries within Europe: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. A special strategic partnership is being developed with Russia, focusing upon four 'common spaces':

1. **Economic (incl. environment and energy)** - promote integration via market opening, regulatory convergence, trade facilitation, infrastructure

2. **Freedom, security and justice** - Joint Home Affairs (JHA), human rights and fundamental freedoms

3. **External security** - partnership on security issues and crisis management

4. **Research and education** (incl. cultural) - capitalise on strong intellectual and cultural heritage

A specific and innovative feature of the ENPI is its cross-border cooperation component. Under this component, the ENPI will finance "joint programmes" bringing together regions of Members States and partner countries sharing a common border. It will use an approach largely modelled on "Structural Funds" principles such as multiannual programming, partnership and co-financing, adapted to take into account the specificities of external relations. The cross-border cooperation component of the ENPI will be co-financed by the European Regional Development Fund (ERDF).

4.6.3 DCECI

The DCECI covers all Countries, territories and regions not covered by the IPA and the ENPI. Its guiding principle is to contribute towards the general objective of developing and consolidating democracy and the rule of law and to that of respecting human rights and fundamental freedoms. Its primary aim is to reduce, and in the long term, eradicate poverty. Cooperation with developing countries will be in line with the Millennium Declaration adopted by the UN General Assembly in 2000, contributing to achieving the Millennium Development Goals and the objectives and principles agreed in the context of the United Nations Conferences and other competent international organisations in the field of development co-operation.

5.   Activities of the RVC

The stated aim of the RVC is to provide methodological and informational support on technology foresight to industry and innovation policy decision makers, with a view to developing a foresight culture in the CEE/NIS region. With this in mind, the RVC is anticipated to fulfil the following functions:

- Provide advice and professional coordination of TF activities in the CEE/NIS region, with special emphasis upon the national TF centres of the region;

- Network persons and national institutions in the field of TF;

- Commission studies and communicate results to decision makers and the general public;

- Organise and support international comparative studies;

- Organise education and training programmes;

- Collect and transmit information on TF;

- Operate an Internet portal and database;

- Provide an information service for corporate partners;

- Fulfil the secretariat functions of the Regional Operative Steering Committee; and

- Prepare and organise Regional TF Summits every three years.

These functions can be broadly summarised into four groups of activity: (1) networking of TF centres and coordination of activities; (2) delivery of TF training; (3) commissioning of TF studies; and (4) provision of TF information. More will be said on each of these in the sections that follow. In the meantime, the users of the RVC are anticipated to be the following:

- Relevant institutions from the CEE/NIS region, participating in the UNIDO Regional TF Initiative;

- Governmental and parliamentary administrations of the countries participating in the project through financing;

- Regional administrations of the countries participating in the project through financing;

- Governmental and parliamentary administrations of the countries not participating in the project through financing;

- Regional administrations of the countries not participating in the project through financing;

- Business companies;

- Professional and interest groups of SMEs and other companies; and

- Others.

These points will now be considered in the sections that follow.

5.1 Understanding Context and Conditions

When considering the areas of activity that the RVC should seek to cover, a number of aspects need to be considered at the outset, for example:

- Should the RVC give more focus to certain **geographical areas** over others? For example, given the presence of so many EC programmes in CEE countries, should the focus be mostly upon NIS countries, such as the Caucasus countries and Central Asian Republics, where fewer support programmes already exist? Or should the RVC position itself in such a way as to exploit as far as possible the funding opportunities that exist (mostly) in the CEE countries? Most probably the RVC will want to address both, but how to manage this dual focus?

- Should the RVC give more focus to certain **administrative levels** over others? In the initial proposals prepared by UNIDO, emphasis has been placed upon working with national TF centres. But there is also acknowledgement that the sub-national regional level is important in foresight terms, not least due to (a) the fact that much business innovation support programming is delivered at this level; and (b) the availability of EC funding to address aspects of regional innovation. Moreover, EC funding programmes allow for cross-border collaboration between sub-national regions in different countries, so that wider regional concerns can be addressed. There are therefore a lot of opportunities at the sub-national level that the RVC should look to exploit, and focusing simply upon the national level is unlikely to be wise.

- Should the RVC give more focus to certain **domain areas** over others? The choice here will be mainly opportunity-led: if there are funding opportunities emerging from UNIDO or the EC covering particular sectors, for example, then the RVC will have to follow the money. But it might also be possible for the RVC to set the agenda too, though any pre-selection of domain area focus should be based upon both analysis and wide agreement among member organisations.

- Should the RVC give more focus to certain **activities** over others? From the list of functions provided in the previous section, it is apparent that the RVC will be engaged in a wide variety of tasks, namely (1) networking of TF centres and coordination of TF activities; (2) delivery of TF training; (3) commissioning of TF studies; and (4) provision of TF information. Inevitably, some of these will take precedence over others, at least in the short-term whilst the RVC seeks to establish itself. The question is, what range of activities will the RVC initially engage in and how will this be determined?

- Should the RVC give more focus to certain **actors** over others? Clearly, the answer to this question partly depends upon the answers to the previous points above. Nevertheless, the RVC might be expected to target all of the actors identified in the previous section, in one way or another, from the outset. But there will need to be

acknowledgement that different actors require quite different services – assuming a one-size-fits-all approach is likely to produce only limited success. These services will take time to develop and it is likely to be difficult to pursue everything with the same vigour from the start. So again, some early choices will have to be made on which actors and targeted activities should constitute the initial emphasis of the RVC.

Below, each of the four types of activities identified above is considered in more detail. But before doing this, it is worth considering the following generic points, all of which have implications for the activities of the RVC:

- There is a great **variety** across the CEE/NIS region, in terms of socio-economic development, political culture, and S&T activities, not to mention awareness and experience of TF. Clearly, the onus will largely lay with the focal points to assess local needs and opportunities and to translate these into proposals for RVC activities. But it will remain a major challenge for the RVC to be sensitive to and to manage this variety.

- Foresight often works best when it is **linked** to other tools and/or activities. For example, when working with SMEs, foresight should be incorporated normally into their business planning activities rather than as a standalone exercise. In this way, foresight is given meaning and relevance. A similar position should probably be taken in the majority of situations, with the promotion of standalone foresight exercises more the exception than the rule. This is also in line with many of the funding opportunities emanating from the EC, where calls for foresight activities are likely to be embedded components of a wider policy instrument or programme. The RVC will therefore need to give consideration to creating cognitive links between foresight and other (perhaps) better-known decision-making and/or business processes – for example, through the provision of guidelines and/or case studies. This will be important for potential users of foresight to understand how it links with some of the processes they may already be familiar with. The RVC will also need to look for opportunities that are often embedded (and even hidden) in funding calls for these wider processes.

- There are already significant foresight **resources** and support services offered by other actors, especially the EC. Whilst the RVC should not seek to duplicate these, it should look to exploit, adapt, and expand upon them where possible. For example, the EC has supported the writing of a number of foresight guides. One of these is even available as an online interactive guide (ForLearn). The RVC should utilise and build upon these guides rather than start from scratch. The EC has also supported the Foresight Knowledge Sharing Platform: as was seen earlier, this has not only funded several foresight projects, but has also supported the creation of the European Foresight Monitoring Network (EFMN). Again, the RVC should seek to exploit the EFMN as far as possible. Last, but by no means least, UNIDO itself has funded foresight guides, including a distance learning module (available in English and Russian), as well as several publications, all of which should be fully exploited by the RVC.

- The types of activities carried out by the RVC are likely to **evolve** over time. In the short-term, activities are likely to be focused upon consolidating existing training programmes and preparing for the Summit for the Future in 2007. However, focusing *solely* upon these activities over the coming 12 months runs the risk of missing out on some important opportunities, particularly those associated with the new funding programmes emanating from the EC in 2007. It will take time to prepare for these and to position the RVC and its focal points appropriately, something that will need to begin in earnest in the latter part of 2006. At the same time, consideration will need to be given to the make-up of the RVC, particularly with regards to the number of focal points in the early stages. There are certainly arguments for and against an expansive strategy at the outset – a 'Big Bang' versus a more gradualist strategy – and more will be said on this in later sections.

In the sub-sections that follow, each of the four proposed functions of the RVC – networking TF centres and coordinating TF activities; delivering TF training; commissioning TF studies; and providing TF information – are discussed in more detail.

5.2   Networking TF Centres and Coordinating TF Activities

Networking is often a stated aim of many programmes and policy initiatives. More often than not, however, the objectives of networking, its expected outcomes, and how it might be done remain rather nebulous and ill-defined. In such circumstances, networking is often viewed as an add-on (or side-effect) to some other substantive activity. But this cannot be the case for the RVC, since networking will be a core activity. Networking must therefore be defined at least in terms of what it means, who it will benefit, and how it will be done.

To begin, the purpose of networking between existing (and possibly 'latent') foresight centres in the region should be articulated. Rationales include at least the following:

- To allow knowledge exchange between centres based upon their accumulated experiences and practices

- To provide mutual support from like-minded centres across the CEE/NIS region where little support and understanding might be available within national borders

- To pool resources to create sufficient critical mass

- To encourage and nurture collaborative working on specific projects

Potential beneficiaries of such networking are the foresight centres (the 'focal points') and the communities they seek to serve. But the form that such networking might take, especially if it is to be effective in realising the points above, is less straightforward to determine. This issue was also of concern to the architects of the (yet-to-be-realised) European Foresight Academy (EFA), which concluded that:

> "There is much interest in the establishment of discussion forums for mutual learning between Foresight users and practitioners. These could be remotely convened through online discussion groups, or they could be physical meeting events, such as knowledge fairs and other conferences / workshops. They would be places where practitioners could share their knowledge and experiences

for mutual gain. (…) However, if this were to be done, it would need to be framed and delivered carefully with appropriate focus. For example, it is well known that many online discussion groups generate disappointing levels of traffic, whilst conferences often fail to meet expectations" (Keenan & Scapolo, 2004: 57).

In the case of the RVC, the Summit of the Future offers an obvious forum for the various focal points to come together to exchange views and experiences and to discuss future pathways for mutually beneficial development. But the Summit alone is unlikely to be long enough or to occur with sufficient frequency for long-lasting bonds to develop between focal points. Instead, these will have to be formed through the other day-to-day activities being furnished by the RVC.

Coordinating TF activities in the various focal points via the RVC is likely to be especially difficult – other than where UNIDO or national governments provide funds directly to the RVC for this purpose. This is because focal points are likely to want to protect their sovereignty and independence, especially if they already have considerable experience in conducting foresight exercises. Of course, it might well be that focal points are conducting foresight exercises in similar areas and would like to exchange views and results, possibly through the RVC. But even here, it is possible that the focal points will prefer to deal with one another bilaterally. Therefore, it is likely that focal points will act through the RVC when it suits them, but at other times, they will act independently or in self-organised groupings that will exclude the RVC. Trying to prevent this from happening is likely to be futile and to cause resentment among the focal points. Instead, the RVC should look to maximise its activities in those areas where interventions are most likely to be welcomed and to add value.

5.3   Delivering TF Training

UNIDO has already acquired around five years of experience in delivering TF training courses in the CEE/NIS region. At the current time, there are four types of courses being offered, as follows:

1. Module 1: TF for Organisers

2. Module 2: TF for Practitioners

3. Module 3: TF for Decision-Makers

4. Module 4: TF for Corporate Managers

In a review of the types of training courses that could be delivered by the European Foresight Academy (EFA), Keenan and Scapolo (2004) identified a number of different options (see the box below). Taking these into account, it is clear that the RVC could potentially seek to offer a wider variety of courses in a wider variety of settings and perhaps in a number of different languages. The latter point is especially important: serious consideration should be given to delivering some courses at least in Russian as well as in English. The development and piloting of the UNIDO-funded Russian language distance learning module on technology foresight is to be welcomed in this regard, though more

work needs to be done to ensure its full implementation. The issue of language will be retuned to below.

The shape and scale of training courses and their intended beneficiaries should be kept under constant review, as has happened over the last five years. With new training needs possibly arising as a result of foresight's mention in the EC's Structural Funds programming regulations, for example, the demand for courses could grow significantly. At some point, consideration will have to be given to delivering courses on a commercial basis – though this is perhaps still some way off at the moment, unless training courses are opened up to participants from the rest of the world (in which case, a two-tier system might operate, with participants from Western countries paying a fee, whilst those from the CEE/NIS region still receive the training free-of-charge). In the shorter term, it is possible that the EC could decide to fund further TF training, at least in the New Member States, and that this funding could be funnelled through the RVC.

Box: Suggestions on types of training courses to be offered by the EFA

(Source: Keenan and Scapolo, 2004)

1. Awareness-raising workshops, directed primarily at policy makers, but also directed at scientists and EU project proposal writers, e.g. those intending to submit Integrated Project proposals under FP6

2. Foresight methods 'toolbox' training, covering some of the main methods

3. Training courses focused upon state-of-the-art Foresight methods, including use of ICTs in Foresight

4. Training in the management and organisation of Foresight exercises, similar to the courses offered by PREST and UNIDO

5. Courses on how to use (absorb) Foresight results for successful implementation outcomes

6. In addition, workshops where organisations can discuss the implications of Foresight results for their own policy areas, business sectors, etc.

7. Wider courses, for instance, directed at a particular domain area (e.g. urban regeneration) or issue (e.g. the new governance of science), with Foresight embedded within them

8. Courses for explicitly multiplying Foresight practice through the training of trainers (e.g. staff in business support programmes) and teachers (e.g. high school teachers)

9. University courses, ranging from individual modules embedded in other courses through to full Masters programmes

10. Incorporation into school and college curricula

11. Workshops, rather than training courses (or conferences, where there is rarely any intimacy), where practitioners and theoreticians can meet to share ideas and experiences

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5.4   Commissioning TF Studies

The extent to which the RVC will be in a position to commission TF projects and/or international comparative studies of TF exercises remains unclear. It would seem that the funding for such studies would largely have to come from UNIDO or from the national

governments supporting the RVC. Funding from elsewhere, such as the EC, for TF studies is more likely to be granted to individual focal points or to small groupings of centres rather than to a virtual network like the RVC. On the other hand, it could be possible that the EC will look to the RVC to organise comparative studies of foresight in the CEE/NIS region. The funding of the RVC and its focal points will be discussed further in Chapter 6.

5.5   Providing TF information

Last, but by no means least, the function of the RVC is to collect and disseminate information on TF to a host of actors using a variety of media. This is perhaps the most important function of the RVC, since it is through information dissemination that awareness of foresight will reach a wider audience, which in turn should lead to a mushrooming of foresight activity in the region. Much of this activity will be unaccountable to the RVC and may even be difficult to attribute to the services of the RVC. But providing the support for it to happen is absolutely critical if a foresight culture is to develop in the region in the medium-to-long term.

As with the other activities discussed above, fundamental questions also need to be asked of this activity. For instance, who are the host of actors that require information on TF? What sorts of information do they specifically need? To what use are they expected to put this information? What further information (and other support services) are they likely to need? How will TF information be mediated to the various actors? Who will be responsible for identifying, collecting, collating, analysing, synthesising, packaging, and disseminating TF information? And so on…

To begin at the beginning: who are the actors? These are likely to be focal points and their clients. As will be seen below, focal points are likely to include government ministries and agencies, business-oriented intermediaries, and academic centres. Their clients will include politicians and senior policy makers, other policy actors, enterprises, NGOs, scientists and technologists, and students. It goes without saying that these are all very different groups with different traditions of acquiring knowledge.

Next, the sorts of TF information that these actors could need should be considered. Some will want to know the basics of foresight, just enough to be aware of its benefits and limitations. Others, on the other hand, will want to organise their own foresight exercises and will be hungry for as much detailed guidance on methods and organisational issues as they can obtain. Furthermore, between these two extremes lies a wide variety of informational needs. To complicate matters even further, different sorts of actors are likely to need similar sorts of information packaged in different ways. Whilst this may sound daunting, and to some extent it is, many guides and information booklets on foresight already exist. An initial task of the RVC might be to collect all of these together and to screen them for their suitability for recycling and adaptation for different audiences and different needs in the CEE/NIS region.

A further task will be to follow up on the use that is being made of the disseminated information. This is important not only to better tailor future informational outputs to the

needs of clients, but also to get a measure of any further support that might be needed, e.g. in the shape of training courses. In other words, through a professional information campaign, the demand for other services to be offered by the RVC might be built.

The next question concerns the medium through which information is to be disseminated. Much use is made today of web sites, where web pages and downloadable guides and brochures can be easily accessed. But this alone is unlikely to be sufficient. A wider audience are unlikely to find out about such online resources on their own. An information campaign based upon leaflets, brochures, and possibly attendance at fairs and conferences will therefore be needed to raise awareness of foresight and the services being offered by the RVC and its focal points. As was already mentioned, the EC and UNIDO already provide a rich seam of material on TF that can be further exploited by the RVC and its focal points. Links to all of this material should be included in the RVC web site. Consideration should also be given to setting-up a mailing list, though traffic would need to be regulated and kept to a minimum to avoid being perceived as a nuisance.

The final question concerns responsibility for managing the information activities of the RVC. To some extent, this will need to be centralised in one or two centres (it has been suggested that TCP in Prague performs this function, but a Russian language information centre – possibly located at one of the existing foresight centres in Moscow or Kyiv – could also fulfil such a role). But all of the focal points will have responsibilities too: for distributing leaflets and brochures, for promoting foresight and the RVC at local events and meetings, and for translating the RVC web site into their native languages. This last point is absolutely critical, yet largely overlooked by international organisations seeking to promote foresight. There are some notable exceptions, for example, the EC's translation into EU15 Member State languages of the *Practical Guide to Regional Foresight* (2002) and UNIDO's translation into Russian of its distance learning course on TF (2004). But more of this sort of thing needs to be done, not least since many people in the CEE/NIS region who work in enterprises, in regional authorities, and in national agencies cannot speak English. In this regard, UNIDO might make translation a minimum condition for centres to become focal points of the RVC. This would also have the added value of ensuring active commitment to the RVC by focal points – as opposed to joining yet another network without any responsibilities.

As a final remark in this sub-section, the discussion so far has been concerned with disseminating information about what foresight is and how it might be used. But an additional stated role of the RVC is to collect and disseminate information on the results of TF. This would see the RVC as a sort of scanning network, collecting and analysing data on foresight exercises and other future-oriented studies, presumably limited to those conducted within the region. Such an activity would probably need to involve the focal points as 'scanning nodes'. Such activities can be major undertakings and should not be attempted lightly. Fortunately, the European Foresight Monitoring Network (EFMN), which is funded by the EC, is already doing much of this work on a wider European scale. UNIDO should therefore consider to aim pooling the RVC's efforts in this area with those of the EFMN, which is much better resourced. With some negotiation, the RVC should be able to gain free access to the EFMN data and to use it for its own purposes.

6.   Organisation and Operation of the RVC

Perhaps a useful place to start here is to consider the guiding principles drawn up for the construction of the European Foresight Academy (EFA) – see the box below. These are surely the sorts of principles that the RVC should also adopt. With these in mind, in this section, the overall structure and scale of the RVC, the relationships between focal points, how the activities of the RVC might be organised and managed, and, finally, how the RVC might grow and be sustained over the medium-long term are each considered.

Box: Guiding principles in the construction of the EFA

(Source: Keenan and Scapolo, 2004)

In designing a future European Foresight Academy, there are some essential features that should be observed:

- The EFA should be lean and non-bureaucratic, irrespective of the scope of its activities;

- The EFA should not seek to displace existing training or awareness-raising activities that are offered on a commercial basis;

- The EFA should be open to new ideas and new people, and not a 'closed shop' that harbours vested interests and/or narrow views on what Foresight is;

- The EFA should, wherever possible, develop linkages with existing relevant initiatives, so as not to "reinvent the wheel" (duplication);

- The EFA should observe the principle of subsidiarity, ensuring that training and capacity-building activities are devolved to Member States, if appropriate;

- The EFA should be a distributed Academy, its nodes spread across all parts of the EU28; and

- The EFA should be financially sustainable, meaning it will need to develop multiple sources of funding, both public and private.

6.1   Overall Structure and Scale of the RVC

The overall structure of the RVC sees the establishment of a Service Centre and the nomination of institutions with TF competence as distributed focal points. Already, a small number of institutions have been nominated as focal points – essentially those institutions in the region that have already been involved in the UNIDO TF programme over the last few. The expected number of focal points has still to be decided, but assuming that there should be at least one institution per country in the region, then a rather large RVC can be anticipated. At the same time, some of the larger countries, e.g. Poland, Russia, Turkey, and Ukraine, should probably have more than one focal point. A tentative list of possible focal points, drawn from the policy, academic, and business worlds, is provided in Chapter 8. Serious consideration should be given to including one institution from each 'world' in each country, though this might result in an overly large RVC that becomes too difficult to manage. It should nevertheless be considered, possibly along the lines of introducing

different 'levels' or 'types' of membership to the RVC. Another option would be to introduce 'chapters' along functional lines. The timing of accession of focal points will be an issue – should the RVC go for a 'Big Bang', with scores of focal points joining at the outset? Or should a more cautious and gradualist approach be followed with successive waves of accession as the RVC matures? The pros and cons of both approaches will be further discussed in Chapter 8.

It has already been determined that the RVC will be advised by a Steering Committee made up of country representatives and foresight experts. In addition, representatives of the selected focal points will establish a Management Board for the RVC in order to prepare proposals of activities and to implement them after evaluation and approval by the Steering Committee. This paper has little to say about these structures, other than to recommend the inclusion of representatives from the EC and other UN agencies in the Steering Committee, with a view to (a) raising awareness of the RVC and (b) keeping up-to-date with developments and opportunities emanating from these international institutions.

6.2   Relations between Focal Points

The likely relationships between focal points have already been touched upon in earlier parts of this chapter, and it is clear that there are some fundamental issues here that will need to be addressed:

- What will be the main role of the Service Centre vis-à-vis the focal points, particularly if a fully distributed model of the RVC is to be implemented? For instance, will a set of pre-packaged services be assembled at the Service Centre for reproduction in the focal points? To what extent will the Service Centre operate as a centre of exchange for the focal points to share experiences and materials?

- What should be the division of labour between focal points? There is a variety of competences between focal points, meaning some will be better placed to do certain things than others. Perhaps some sort of competence-profiling of focal points could be carried out early on, not only to discern strengths, but also to identify weaknesses that could be tackled through the activities of the RVC.

- Some organisations are expected to be more active than others in the core activities of the RVC. Multiple levels/types of membership could allow a greater number of organisations to join the RVC without the hassle of having to manage, on a day-to-day basis, a huge and disparate network. There are a variety of possibilities for introducing levels or types of membership: for example, membership level/type could be based upon (i) the payment of membership fees, or (ii) the TF competences of an organisation, or (iii) the nature of the organisation (government, academic, intermediary), or (iv) by geographical region (possibly following the EC's four-way programme coverage: New EU Member States, Pre-Accession Countries, Neighbourhood and Partnership Countries, and Central Asian Republics), or (v) by some other principle.

- Focal points will rightly ask what benefits they can expect from the RVC, particularly in the absence of any significant funding, and are unlikely to fully

appreciate the intangibles that might accrue from participation. Some of the arguments that have been made in this report, along with others, will need to be mustered in order to convince centres to become focal points. However, arguments alone are unlikely to be sufficient, so that incentives will have to be thought about. For intermediaries, the possibility of offering to their clients a new set of services based upon foresight may be sufficient incentive. But the prospect of being able to use the UNIDO logo is probably a stronger incentive, though care will be required here for some obvious reasons. In other words, the RVC should attempt to become a brand that draws upon the reputation of UNIDO, thereby attracting centres to join.

- But benefits cannot flow only one-way, and the focal points should also be aware of their responsibilities to the RVC. Responsibilities essentially take the form of being active in some way or another over a given period. As has been proposed already, focal points could commit themselves to translation and dissemination tasks as conditions for their participation in the RVC, and other conditions could also be applied. The RVC may consider introducing Service Level Agreements (SLAs) for focal points, which sets out their duties for a given period. On the other hand, SLAs will be difficult to enforce without incentives and sanctions for non-compliance. Inactive focal points will be a fact of life and decisions will have to be taken on what to do about these. One option would be to introduce memberships that expire after a certain period, say 2-3 years. Focal points would then have to actively seek re-admittance to the RVC once their membership had lapsed, and this would provide an opportunity to review their past and future commitment.

- Nevertheless, probably the greatest threat to the RVC is that it will become an empty gesture, with few, if any, active focal points. This may be one argument for appointing a great many focal points at the outset, since a few amongst the many are likely to be active. This point will be returned to below.

- Regarding the level at which activities should be coordinated, the principle of subsidiarity will need to be applied by the RVC. What this means is that those activities that can be done more efficiently and effectively within the individual focal points should remain at that level without any need to involve the RVC in any coordinating role. This is likely to happen by default anyway: whilst focal points will be pooling their sovereignty to some extent, established foresight centres in particular will not want to have the RVC as the gatekeeper for their foresight activities. As was highlighted earlier, focal points are likely to use the RVC when it suits them.

- As a final point, UNIDO might consider drawing up an "RVC Charter" that serves to clarify many of the issues raised above. As well as being aspirational, this could set out the respective roles and responsibilities of the various actors, and need not be long.

6.3   Organising and Managing the Activities of the RVC

The need for subsidiarity has been already highlighted, which means that many activities will be organised and managed locally by focal points and need not directly concern the

RVC. Nevertheless, a great amount of activity will need to be coordinated at the level of the RVC, and how this will be done and by who needs to be considered.

Not everyone will be able to be involved in everything in an extensive RVC. So an important issue will concern the selection of focal points to participate in any given activity: some activities might require all to participate, but others will require just a few. This is not so much of an issue if the number of focal points is kept small. But if an expansive strategy is followed, then selection is inevitable. Self-selection is probably the best option initially, based upon existing competences and resources – this is how ETEPS operates. But there still remains the delicate matter of selecting the final list of participants.

Returning to the issue of language, the RVC should give serious consideration to using two working languages: English and Russian. Dedicated training and guides should be prepared in both languages, and where possible in native languages too (as has been already suggested, this might be a commitment from focal points – that they must translate materials and distribute them – in return for the services and status they will receive from the RVC). Russian is almost universally understood in the NIS countries. If the RVC is to be useful in this part of the world, it will probably have to use Russian.

6.4   Growth and Sustainability of the RVC

In the short-to-medium term, a pressing concern for the RVC is its survival. It has secured modest funding for two years until 2008, based upon monies from UNIDO and a handful of national governments. However, these sources of funding could be relied upon after 2008. This means other sources of funding will need to be sought. In fact, other sources of funding need to be sought from the outset, since many of the ambitions set for the RVC are dependent upon further financial backing. One of the purposes of this report has been to identify other international organisations that might act as funders of the RVC and/or its focal points. It is clear that the EC offers the best opportunities for securing further support, and the following section will discuss how the RVC might best position itself to meet the criteria for obtaining EC funding. As for the other agencies, the RVC should keep in close contact with these. This can be done by inviting them to participate in the RVC Steering Committee and to encourage them to attend training courses and the Summit of the Future.

In the meantime, it is perhaps worth opening Pandora's Box by asking why the long-term growth and sustainability of the RVC should be of concern. To do this, it is once again worth revisiting the functions/activities of the RVC, namely to network TF centres and to coordinate TF activities in the region; to deliver TF training; to commission TF studies; and to provide TF information. These activities are supposed to contribute to a set of general aims, which might be summarised as follows:

- To raise awareness of foresight amongst policy makers, business people, scientists and technologists, and civil society in the region;

- To nurture and strengthen a set of fledgling focal points across the region that will grow into internationally recognised centres of excellence in TF;

- To encourage and nurture collaborative working on specific TF projects that deal with issues transcending national boundaries; and

- To develop a foresight 'culture' in the region

These aims could no doubt be achieved in many different ways, some of which might not feature an organisation like the RVC. If this is taken as a starting premise, the issue of growth and sustainability might therefore be reframed: concern need not necessarily be with the growth and sustainability of the RVC as an institution, but might rather be refocused upon the growth and sustainability of foresight in the CEE/NIS region. In the short-term, the two are inextricably linked, with the former constituting the means for achieving the latter. But what if the RVC cannot be sustained beyond 2008? What if it fails to fulfil current expectations in the short-to-medium term? In such circumstances, it may be necessary to decouple the sustainability of the RVC with that of the growth of foresight in the region.

Given the uncertainty surrounding the long-term sustainability of the RVC, at least in its current proposed form, options should be considered for a world without the RVC or at least for a world with a rather limited RVC in operation post-2008. With this as a starting point, the immediate mandate of the RVC becomes clear: there should be a dash for 'expansion' and 'deepening' of focal points – they have the reach, they are potentially numerous, and they have a greater chance of survival. Under this scenario, there should be at least one focal point set up in each of the countries in the region as a minimum. Moreover, at least some of the focal points should have their TF capacities strengthened as far as possible – for example, by becoming training centres and/or leading foresight exercises. Focal points should also be well integrated into TF activities in other parts of the world, especially in Western Europe. In fact, the guiding principle for the RVC should be to create across the region as many effective foresight 'multipliers' as possible through measures like training trainers, generating promotional materials and guides for wider dissemination, and aiding focal points to obtain funding for foresight exercises (for example, from the EC). By nurturing well-developed and numerous focal points, the RVC will provide the best chance for its future survival.

6.5   Exploiting EC Funding Opportunities

Whilst other international players may provide support for TF activities in the region, these are likely to be dwarfed by the potential opportunities offered by the EC. However, as Chapter 4 has shown, the EC provides a complex and somewhat messy landscape, with lots of overlaps in programmes, as well as major changes planned for 2007. Making connections with the various EC programmes is therefore complicated: there is no simple one-stop location from where all foresight activities will be funded or coordinated. This is even the case in the same DG (e.g. DG RTD), where the potential for funding foresight activities is often spread across several administrative units and sub-programmes.

Taken together, these conditions create a significant level of uncertainty around the possibilities to exploit funding opportunities from the EC. The possibilities are clearly there, but what is the likelihood of them being realised? If left to itself, the chances are that

the EC would fail to make the most of these opportunities – history has certainly proven this to be the case. Even where units and teams have been established that are dedicated to the promotion of foresight, as in DG RTD (Unit K2) and JRC-IPTS, they have largely failed to connect to foresight opportunities that might exist outside of their immediate environs. As this situation is unlikely to improve in the coming years, there is much scope for 'external' actors, such as the RVC, to begin to make more of these connections.

But what chance is there that the EC will provide funding for a network like RVC as opposed to simply funding a few of the focal points to participate in individual projects? The EC is likely to fund the RVC only through budget lines dedicated to dissemination of foresight results and practice, i.e. through the activities of Unit K2 and JRC-IPTS (or their successors), or possibly through the establishment of an EEGC under the Structural Funds and ENIP. Other funding for TF will only be accessible by focal points rather than the RVC as a whole. Thus, for virtually all EC funding, the individual focal points of the RVC will have to tender for bids in their own capacity. It will be important for them to keep abreast of these opportunities, hopefully through the RVC, but also by staying in close contact with the EC Delegations in their countries.

But could the EC be convinced to fund such a centre, or at least some of the activities it will carry out? Here, questions of credibility and coverage (geographical and policy domain) prevail. If the major foresight centres in the region sign up to the RVC, then it has a chance. On a more positive note, many measures that are intended to support the development of foresight capacity are likely to be focused upon New Member States and Pre-Accession Countries.

7.   Learning from other Foresight Centres

The RVC for CEE/NIS is not the first attempt to network foresight resources on a regional basis. In this section, three examples of other international initiatives that have tried to do just that are examined:
- The Nordic Foresight Forum
- APEC Technology Foresight Centre
- UNU Millennium Project

7.1   The Nordic Foresight Forum

Over the last decade or more, all Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) have had some experience in using foresight, but they have used rather different approaches in doing so. In addition, a transnational body known as the Nordic Innovation Centre (NICe) has launched three foresight projects (on Hydrogen, Bio-medical sensors and ICT) covering the whole Nordic region. These national and Nordic level activities create opportunities for mutual exchange, learning and identifying 'good practices'. Moreover, the countries in the region share a common set of social values to a large extent and there are significant areas of overlap where there are common interests. This creates the potential for economies of scale and scope in carrying out foresight projects.

With this in mind, NICe has set up the Nordic Foresight Forum (NFF) as a meeting place where Nordic foresight practitioners can exchange, learn and identify good practices for prioritising in science and technology. Currently, it is a pilot project with a two-year duration (2005-06), but there are hopes that it will become firmly established on a more long-term basis. The work packages associated with the project are outlined below as an indicator of the sorts of activities that an early-phase RVC might consider conducting.

NFF Work Packages

The work to be carried out in NFF is summarised in five work packages:

WP 1. Nordic Foresight Forum: Secretariat and Meetings. The objective of the Nordic Foresight Forum for practitioners and researchers is to facilitate the exchange of experience and learning.

WP 2. Mapping of Nordic Foresight Actors and an Analysis of Recent Nordic Foresight Activities. The objective here is an updated mapping of Nordic foresight actors and description of foresight activities in the Nordic countries including the two ongoing and one finalized foresight projects sponsored by NICe.

WP 3. Mapping of Nordic national research and innovation council system and analysis of the needs for foresight and similar strategic intelligence. It is the objective to describe national (and Nordic) research and innovation councils and similar system and organisations. Description and analysis of current use of foresight with the five national

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research and innovation council systems – and interaction between national actors and on the Nordic and the EU level.

WP 4. Identifying fields of science and technology for possible future Nordic (NICe) initiatives. The objective is to identify systematic processes for ways of identifying possible future fields of technology and knowledge based on available Nordic and national information (Nordic Strengths and Weaknesses). This WP will also identify good practices in matching future fields of technology to national preconditions: Current capabilities in science and technology, industry structure, socio-economic demand factors etc. Finally it will be discussed and analysed how different actors in the innovation system can implement results from foresight studies.

WP 5. Nordic Foresight Conference and final report: A Nordic foresight and "priority setting in research councils" conference will be arranged by NICe in 2006 where a report of Nordic foresight activities will be presented.

For further information, contact Kristian Borch (web: http://nff.risoe.dk/About%20NFF.htm; e-mail: kristian.borch@risoe.dk)

7.2 APEC Centre for Technology Foresight

The APEC Centre for Technology Foresight was launched in 1998 with the support of the Thai Government. The Centre's office is in Bangkok but it operates as a virtual Centre, serving and involving all APEC member countries. Its establishment follows a comprehensive two-year feasibility study, initiated by Thailand.

The Centre is well-known for building foresight capacity across APEC countries and for conducting transnational regional foresight exercises. Capacity-building takes the form of annual training workshops, similar to those already run by PREST and UNIDO, with other shorter training events also held throughout the year (for example, there are dedicated sessions on technology road mapping, whilst in September 2006, a course was run on using futures studies in policymaking). It is possible that from 2007, the APEC and PREST training courses will enter into alliance. Concerning region-wide foresight exercises, among the topics covered are the future of water supplies and management, sustainable transport, technologies for learning and culture, nanotechnology, and healthy futures in mega cities.

A recent project undertaken under contract to the Japan-ASEAN Exchange Programme (JAEP) has sought to overtly combine the project-based work with capacity-building. Known as the ASEAN Technology Foresight and Scan project, it looked to develop capability in technology foresight amongst ASEAN member countries by building up expertise through workshops and a pilot ASEAN foresight project. In a similar vein to the UNIDO production chain foresight exercises, the regional exercise was largely constituted by supporting sub-projects from each member country. The project has also aimed to establish a regional network of "foresight champions" who have been regularly updated about foresight developments worldwide through a bi-monthly newsletter and through

attendance at three project workshops. The project ran for two years, finishing in 2005. The status of any follow-up activities remains unclear.

Use of the web site has been important for disseminating information about training workshops and reports. However, beyond this, it does not seem to have any other roles. At some point, it was decided to establish a Technology Foresight Network (TFN), which was essentially open to anyone to join from the APEC region and beyond. Its stated purpose has been to
- facilitate the exchange of information, ideas and expertise about foresight;
- improve access to reports of foresight activities and projects;
- enhance communication amongst foresight practitioners in order to stimulate collaboration, development of foresight techniques and best practices.

Looking at the traffic across the network, at least as evidenced by the web site, the TFN appears to be inactive at the current time.

For further information, contact Ron Johnston (http://www.apec.org)

7.3   AC/UNU Millennium Project

The Millennium Project of the American Council for the United Nations University (AC/UNU) is a global participatory futures research think tank of futurists, scholars, business planners, and policy makers who work for international organisations, governments, corporations, NGOs, and universities. Set up in 1993/94 with seed-funding from UNESCO and UNDP, the purpose of the Millennium Project is to be an international utility to assist in organising futures research by continuously updating and improving humanity's thinking about the future and making that thinking available for feedback as a geographically and institutionally dispersed think tank. The Project is not a one-time study of the future, but provides an on-going capacity as a geographically and institutionally dispersed think tank. It works by connecting local and global perspectives via regional Nodes (groups of individuals and institutions) in several countries across the globe – in the RVC region, there are nodes in Moscow and Prague.

The Millennium Project's primary products include:
- On-going assessment of what are the most significant long-range issues and opportunities, as well as focused analysis of policies and agencies to address them;
- Communications network of futurists and scholars with an international information system of futures research that provides public access;
- The annual State of the Future report (based on an integration of others' forecasts and the Project's own work, and built on the foundation of the previous year's reports);
- Special studies such as Future Issues of Science and Technology, Futures Research Methodology, Middle-East Peace Scenarios, Environmental Security, Future Global Ethical Issues, Lessons and Questions from History, and Future of Africa;
- Advanced training in the methodology and analysis of critical issues, opportunities, and challenges of the future.

Sponsors for the operational programme over the years have included the following: Alan F. Kay & Hazel Henderson Foundation for Social Innovation; Amana Institute (Brazil); Applied Materials; U.S. Army Environmental Policy Institute (AEPI); Dar Almashora for Consulting, Kuwait; Deloitte & Touche LLP; Ford Motor Company; Foundation for the Future; General Motors; Hughes Space and Communications; Monsanto Company; Motorola Corporation; Pioneer Hi-Bred International; Shell International, (Royal Dutch Shell Petroleum Company); UNU; U.S. Environmental Protection Agency (EPA); U.S. Department of Energy; Foresight and Governance Project of the Woodrow Wilson International Center for Scholars.

For further information, contact Jerome Glenn (jglenn@igc.org and http://www.acunu.org/)

7.4   Lessons for the RVC?

The first lesson from these case studies is the feasibility of a centre like the RVC – all three case examples are virtual centres to some extent, networking existing geographically dispersed organisations across international boundaries. All three centres also conduct their own foresight studies on issues of concern of member countries. One centre, i.e. the APEC TF Centre, conducts training courses, in common with the RVC. A couple of recommendations emerge from this brief review:

1. The architects of the RVC should make urgent contact with the managers of the networks described above with a view to capturing relevant lessons in a more directed way than has been possible to do in this report.

2. Contact should also be made with other networks in the area, e.g. the European regional foresight college operated by DIACT in France, the European Futures Academy coordinated by the Finland Futures Research Centre, etc. to learn any lessons for the RVC and to investigate opportunities for possible collaboration.

8.   Possible Focal Points for the RVC

According to existing proposals, institutions with TF competences will be nominated as focal points of the RVC. These proposals also highlight an emphasis upon national technology foresight centres in the region, no doubt on account of their accumulated experience and their linkage to national funding streams. Many countries in the region, particularly in Central Europe, Russia, Turkey, and Ukraine already have such national centres that could be networked in the RVC. However, the same cannot be said for the Central Asian Republics, the Western Balkans, or the Caucasus countries. There will therefore be a need to identify 'latent' foresight centres to 'complete' the network. These may include government ministries, universities, institutes of academies of sciences, or NGOs. They should be centres that offer the potential to champion foresight in the future and to become practitioners, sponsors, or users of exercises. But 'latent' centres will also need to be built in most countries, since existing centres tend to have a narrow focus (this is true in Western Europe as well). For example, foresight has much potential in sub-national regional development, but national science ministries are rarely well-placed to realise this potential. Instead, regional actors, such as regional development agencies, need to become active foresight champions and users. Clearly, focal points will need to have different profiles if they are to reach out to different communities of actors.

Thus, focal points will need to be identified intelligently, which will be a major challenge for UNIDO, on account of the following factors:

- As already stated, in many instances, only latent potential may be present and will need to be nurtured and developed. Identifying such potential is extremely difficult to do as an international organisation and will require extensive local knowledge to be successful.

- There is the requirement that UNIDO work through national delegations to identify appropriate focal points. This will almost certainly lead to problems, since, for one reason or another (e.g. a tendency for clientelism and cronyism in the region), it is likely that organisations will be proposed that are not best suited to act as focal points. This is a fact of life, and whilst unfortunate, will have to be accommodated but also circumvented somehow (e.g. through the appointment of multiple focal points in countries, particularly the larger ones).

As for the profiles and numbers of focal points to involve, much depends upon the way the RVC will work and the extent of its intended coverage. A "fully-fledged" RVC would have multiple focal points in many countries, possibly arranged into 'chapters' to reflect their functions and communities (for example, there could be a government chapter, consisting of ministries; an academic chapter, consisting of universities and academy institutes; and a business-oriented regional development chapter, consisting of regional development agencies, innovation-support centres (e.g. Innovation Relay Centres), and so on). Scores of focal points would be set up under this scenario. A fully-fledged RVC along these lines might be too ambitious to establish in the first instance, in which case, a

more piecemeal and incremental approach could be followed. But a fully-fledged RVC should be set as the ultimate vision towards which to work.

There have also been discussions about the shape of the RVC itself since the first draft of this report was submitted in July. During this time, a 'distributed' RVC has been proposed that de-centres the network from the Service Centre in Budapest and sees essential network services distributed across focal points. The latter already includes information management services, but such a model could be extended to all parts of the RVC, particularly given the need to translate some materials.

On a final note, consideration should be given to including centres from outside of the region to participate in the RVC. It has already been proposed that PREST (UK) and OPTI (Spain) should be included, given their existing arrangements with UNIDO. However, other organisations might also be considered, for example, JRC-IPTS (Seville) and possibly even NISTEP (Japan).

In the table below, around fifty organisations are proposed as possible focal points for the RVC. For several countries, no proposals have been made – more research will be required to identify suitable candidates. For others, more than one organisation is suggested. This is usually in the larger countries and fits with the principle of having multiple focal points focused upon different topic areas and constituencies.

Table: List of Possible RVC Focal Points

Country	Organisation Name	Type	TF Experience
Albania			
Armenia			
Azerbaijan			
Belarus	The Republican Centre for Technology Transfer (RCTT)	Intermediary	Supported by UNIDO; offer TF as one of their support services
Bosnia			
Bulgaria	ARC Fund	Intermediary	Participation in EC ForeTech pilot foresight project and EC ForeIntegra project
Bulgaria	Ministry of Education and Science	Government	Co-organised TF training with UNIDO in 2004; dept head, Albena Vutsova, formerly of JRC-IPTS
Croatia			
Cyprus			Participation in EC eFORESEE pilot foresight action
Cyprus	Middle Eastern Technical University	Academic	Headed by Turgut Tumer, former programme manager for Turkey 2023 Vision project
Czech Rep	Technology Centre Prague, Czech Academy of	Intermediary	Organisers of Czech national Foresight; existing TF training

	Sciences		collaborators of UNIDO
Czech Rep	Dept for Futures Studies, Charles University	Academic	
Estonia	Institute of Baltic Studies	Intermediary	Participation in EC eFORESEE pilot foresight action
Estonia	Praxis Centre for Policy Studies	Intermediary	Members of ETEPS
Georgia			
Hungary	Institute of Economics, Hungarian Academy of Sciences	Academic	Attila Havas, leading Foresight practitioner and analyst in Europe
Hungary	Dept for Futures Studies, Cornivus University, Budapest	Academic	30 years experience with futures studies, working with govt and business; run biennial training course for young futurists with the support of UNESCO; deliver courses to students in Cornivus and have PhD programme
Kazakhstan			
Kosovo			
Kyrgyzstan			
Latvia	Forward Studies Unit, Latvian Union of Scientists	Academic	Member of ETEPS
Latvia	Latvian Technological Centre	Intermediary	IRC; organised awareness workshop on TF in 2004
Lithuania			
Macedonia			
Moldova			
Montenegro			
Poland	Ministry of Science and Higher Education	Government	Sponsors and organisers of national TF programme
Poland	Institute of Fundamental Technological Research, Polish Academy of Sciences	Academic	Members of ETEPS
Poland	OPI Information Processing Centre	Intermediary	Unknown; IRC Central Poland
Poland	Warsaw University	Intermediary	Unknown; IRC North-East Poland
Poland	Krakow University of Technology	Intermediary	Unknown; IRC South Poland
Poland	Wroclaw Centre for Technology Transfer	Intermediary	Unknown; IRC West Poland
Romania	National University Research Council, Executive Agency for Higher Education and Research Funding	Government	Organisers of Romanian national foresight exercise

Russia	Institute for Statistical Studies and Economics of Knowledge, State University - Higher School of Economics	Academic	Collaborator with UNIDO on training courses; responsible for conducting national and regional foresight in Russia; will establish a Foresight Centre in Moscow in late 2006
Russia	International Science and Technology Centre (ISTC), Moscow	International	Unknown; funders of R&D projects in Russia
Serbia	Science and Technology Policy Research Centre of the "Mihajlo Pupin" Institute	Academic?	Foresight champion, Djuro Kutlaca, has been active in promoting TF in Serbia
Slovakia	BIC Group Bratislava	Intermediary	Collaborators with UNIDO on TF training; currently organising pilot foresight exercises in regions
Slovenia	Slovenian Research Agency	Government	Conducted pilot foresight projects; organisers of Bled Forum; employ Blas Golob, formerly of JRC-IPTS
Slovenia	Josef Stefan Institute	Intermediary	IRC; co-organised with EFA an awareness workshop on regional foresight in 2003
Tajikistan			
Turkey	Istanbul Technical University	Academic	Ozcan Saritas, leading Foresight practitioner and analyst in Europe
Turkey	TUBITAK	Government	Organisers of Turkey Vision 2023; collaborators with UNIDO on TF training
Turkey	METU-Technopolis, Ankara	Intermediary	Unknown; IRC Anatolia
Turkey	TUSSIDE	Government	Collaborators with UNIDO on TF training
Turkmenistan			
Ukraine	Kyiv Polytechnic Institute	Academic	Collaborators with UNIDO on TF training; responsible for UNIDO TF Distance Learning project
Ukraine	Dobrov Centre, Ukrainian Academy of Sciences	Academic	Managers and organisers of national TF programme in Ukraine
Ukraine	Science and Technology Centre of Ukraine (STCU)	International	Unknown; major funders of R&D in Ukraine and other NIS countries
Uzbekistan			

Besides approaching individual centres to join the RVC, consideration should be given to enlisting existing networks. This has the advantage of reaching many more centres in an efficient way, without the hassle of having to deal with each of them individually. There are countless such networks across the region, and it will remain a task of the RVC in its early days to identify the most appropriate to involve. In the course of the research for this report, one network was identified that could be activated to work for the RVC. This is the Central and Eastern European Virtual University (CEEVU), which has already been used by KPI (Ukraine) to pilot the UNIDO technology foresight distance learning course in

English (Tallinn University) and Russian (Donetsk National Technical University). Details of the CEEVU are provided below.

Central and Eastern European Virtual University (CEEVU)
Its mission is to combine the efforts of e-learning centres of technological and engineering universities of Central and Eastern Europe. By implementing the main principles of information society – lifelong and limitless learning, it will ensure the training of new formation specialists able to speed up economic and social development of the region due to efficient and productive application of the latest achievements in the field of natural, abstract, and engineering science, as well as informational and communication technologies, in their practical work. Member universities are as follows:
- State Engineering University of Armenia
- Technical University of Sofia
- Budapest University of Technology and Economics
- Kaunas University of Technology
- Warsaw University of Technology
- University Politehnica of Bucharest
- Donetsk National Technical University
- National Taras Shevchenko University of Kyiv
- National Technical University of Ukraine "Kyiv Polytechnic Institute" (KPI)
- International University of Finance, Ukraine
- Lviv Polytechnic National University
- National Technical University "Kharkiv Polytechnic Institute"
- Brno University of Technology
- Tallinn University of Technology

Annex: Regional Experts Questionnaire Survey

Name:

Organisation:

1. In your opinion, where could foresight be deployed most usefully in your country over the coming five years?

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2. What sorts of opportunities exist in your country for the conduct of foresight exercises at the moment?

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3. What are the main barriers to the wider use of foresight in your country?

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4. What centres of (a) foresight competence and (b) foresight understanding/awareness already exist in your country?

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5. In your opinion, what competences are still missing and/or remain weak? And where could understanding/awareness be <u>realistically</u> improved for maximum benefit?

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6. What sorts of activities and support measures do you think the RVC should provide?

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7. What would be the likely benefits <u>and</u> limitations of these activities and support measures in your country <u>and</u> in the CEE/NIS region as a whole? Please explain your answer.

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8. What organisations in your country do you think should be involved in the RVC, for example, as focal points?

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9. If you were asked to provide a mission statement for the RVC (in less than 50 words), what would it be?

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10. Do you have any further comments or suggestions?

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Thank you! Please e-mail completed forms to Michael.Keenan@manchester.ac.uk