



**DANISH
TECHNOLOGICAL
INSTITUTE**

eTEN

Study on trans-European deployment potential, sustainability and exploitation models for public services in the context of an enlarged European Union

FINAL REPORT

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Although active support has been provided by the eTEN Unit, DG Information Society of the European Commission, all results, conclusions and views expressed are those of the study team alone, with the active support of 12 National Correspondents and three external 'think-tank' experts (see Annex 2), and do not necessarily represent the views of the European Commission. While every effort has been made to avoid errors and misjudgements, the study team takes full responsibility for any that have been made.

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1 Executive summary

The New Member States (NMS) participated in the eTEN Programme for the first time in 2004. Despite this recent start, they are already participating strongly as evidenced by their positive financial return and good mixing with each other and with the older Member States (MS) in forming eTEN project consortia. Thus, the issues facing eTEN are to:

- maintain the level of NMS participation in the future
- examine how to determine which trans-European eServices are needed, and how to deploy them across the EU, taking into account the specific needs of the NMS, as well as of all MS, given that enlargement has changed the dynamic of eTEN
- increase the quality and deployment impact of projects in meeting the needs of the citizen.

1.1 Analysis of eServices in the New Member States

The Information collected in this study shows that all NMS have national strengths and weaknesses. There are common problems, such as the quality of infrastructures (and thus access), the urban-rural divide, the need to develop trust in eServices, the lack of interoperability, and relatively under-developed eHealth services. However, there is also great potential to replicate, or learn from, good practices elsewhere, including amongst the NMS themselves. Although the resources available to the study did not allow a comprehensive assessment, there are also many strong points within each NMS, such as:

- Bulgaria: large pool of skilled IT professionals
- Cyprus: eTourism, creating 'paperless' organisations
- Czech Republic: experience with WiFi hotspots, portals for people with special needs, Public Administration portal
- Estonia: eGovernment, eVoting, sharing good practices, demonstrating cost-effective development
- Hungary: digital evaluation of students, services for the blind, software skills
- Latvia: private sector and NGO initiatives
- Lithuania: using 'm-signature' technology, providing Russian language services
- Malta: experience with public-private-partnerships, interactive eGovernment
- Poland: eGovernment, pool of IT specialists, university registration systems, criminal register
- Romania: programming skills, eProcurement and eTendering services
- Slovakia: IT skills, using/adapting imported eLearning tools
- Slovenia: development of health insurance smart card, improving usability studies on cost-effective development models, 'm-payment' systems,

eTEN can exploit these strengths at a transnational level, rather than as purely national or regional services which are the domain of the Structure Funds. However eTEN should coordinate its work better with the Structural Funds, so that the two programmes can exploit common synergies without competing with each other. For example, eTEN can assist the Structural Funds by developing the international aspects of national services.

In terms of potential trans-European eServices, a number of clear opportunities exist which should override the rigidity of the existing six themes:

- cross-border services for ethnic minorities
- civic society services which have a cross border context
- eEnvironment and disaster warning systems
- reliable eHealth information systems
- searching for jobs and educational courses by the young across the EU
- support for services for citizens contacting EU institutions
- support for the tourist and traveller
- support for SMEs in cross border contexts.

For example, ethnic minorities provide an important opportunity for eServices directed at them, but such services must be implemented in conformance with national policies. Supporting cross border minorities, such as ethnic Russians, could benefit relations with neighbouring states by opening up borders and improving trade and employment. There is a need to put aside old fears and build for the future.

Further, it is important not just to consider the direct support of trans-European eServices, but also to assist the creation of the non-technical infrastructures, thereby removing the barriers inhibiting such services being developed, whether by the public or private sector. Opportunities include:

- distance learning and eHealth quality validation through certification service providers
- trust and security accreditation for users and providers
- establishing EU-wide standards for interoperability
- regional programmes to support the Internal Market and the Lisbon goals
- the extended use of mobile infrastructures

There are already good examples of trans-European eServices involving the NMS:

- cooperation between Estonia, Sweden and Finland on personal ID cards
- the Estonian priority is regional cooperation
- Slovenia 'cross border' cooperation
- Poland cross border trade priority
- replication is active (Poland, Look@World in Latvia)
- competition for the best NMS municipal website (Eurocrest) run by Czech SME
- the Northern eDimension plan (Denmark, Germany, Poland, Lithuania, Latvia, Estonia, Finland and Sweden).

However overall, the general picture within the NMS is the same as in the old MS. Priority is given to national services and there is little consideration of trans-European issues, except where these have a clear and direct national or regional interest. No government is concentrating on trans-European service requirements. Trans-European aspects are weak and are often not self-sustainable without public funds for support, although there is much agreement that many are necessary and need much greater attention. eTEN is the vehicle to meet this need.

1.2 Recommendations for future adaptation of eTEN beyond 2006

The status, implementation and strength of Information Society (IS) programmes, and how responsibility for the IS is handled in respective NMS, seem to be important. Those leading in eServices tend to drive the IS through strong programmes already being implemented and often backed by a centralised ministry or unit. This supports the conclusion that top level commitment and priority given to IS strategies can result in the faster roll-out of eServices.

Trans-European services therefore need the support of a strengthened and extended eTEN Programme. Rich good practice evidence bases exist (such as the Beep Best eEurope Practices knowledge base, and the eEurope Awards Programme), or are being developed (such as in the Modinis Programme), but much of this derives from national or regional examples. An evidence base for trans-European services urgently needs developing to support eTEN.

Subsidiarity principles suggest that the European Commission (EC) should take the leading role in defining trans-European eService requirements for a set of strategic priorities. This should be limited to the resources available, so that funds are highly focused and not too thinly spread for maximum impact, and undertaken in cooperation with the MS. In agreeing such strategic priorities, an assessment will need to be made of:

- where EC and MS policies and priorities overlap – potential is considerable here, including but not limited to the Internal Market and the Lisbon goals, and could also include overlap

with the priorities of groups of MS, rather than them all, where acceptable, so that for example different groups operate to different time horizons with some perhaps joining an early adopters and some a late adopters group, and benchmarking themselves against group norms rather than Europe-wide norms

- how the EC can facilitate the cooperation between MS or groups of MS
- existing good practice evidence for replication, demonstration or learning
- specific trans-European and cross border eService needs
- the likely costs and benefits of providing a specific trans-European eService, i.e. comparing the resources needed, including those provided from public funds, with likely take-up and benefits.

In order to achieve this goal, greater cooperation is needed not just with and between MS but also within the EC and across different programmes. Realising this goal will probably require separating the identification of trans-European strategic priorities from their implementation within the new Directorate H of DG INFSO. A Cross Unit Strategy Group should be established to undertake the top-down identification of trans-European strategic priorities, which would liaise with other DGs, the MS, regional authorities and other interested stakeholders. Such an approach would also improve the buy-in from, and participation of, national governments and public administrations in eTEN.

This Strategy Group would undertake a thorough analysis of the need for trans-European eServices, as described above, together with funding requirements from eTEN as well as from additional sources such as venture capitalists and the EIB, where this is realistic. It would encompass, or be supported by, a service with a number of strategic functions, including an 'ideas factory', a 'clearing house', an on-line knowledge base of good practice, and a brokering service to link potential ideas, partners and funding sources.

Implementing suitable deployment projects, within the strategic priorities agreed, should be undertaken using a flexible and differentiated approach in which a variety of identification and support methods are available. The portfolio of implementation measures thus needs to be revised. For example, a removal of theme barriers (as illustrated above), a multi-stage process to elicit and assist good potential proposals, a service demonstration phase following RTD and prior to market validation, and a reduction or the removal of the break between market validation and initial deployment. Overall, the current supply-driven approach needs to be complemented by a stronger demand-driven approach based on the assessments described above.

Some regulatory measures may be needed if all MS are to achieve a minimum standard to allow pan-European service provision.

Funding levels for projects should be determined in direct relation to the interest or need to provide the service, for example by assessing the cost-effectiveness of potential eServices as described above. Generally, 10% support for deployment falls far short of what is required, and barely covers the administrative overhead. Flexible funding of all phases should be possible, including the sustainable deployment phase if this is in the EU and public interest. A call for tenders need not be based on 100% eTEN funding, and could also include a competitive element in which a business model is part of the proposal.

In conclusion, a programme directed specifically at the deployment of trans-European eServices in the public interest is essential, otherwise they will not be implemented. eTEN already constitutes an experience base, and it is clear that this must be led by the EC, but in full cooperation with the MS. However, a more realistic and expanded approach to such service provision is needed. It should be designed as part of the structural, programme and policy changes currently taking place in the context of the second phase of the Lisbon Strategy, the Kok Report, proposals for i2010 to replace eEurope, and proposals for the ICT Policy Support Fund. Given the solid experience already possessed by eTEN, it is paramount that the programme develops into an expanded mechanism funding the approach described above.

2 Introduction

2.1 The eTEN Programme and its context

2.1.1 Goals of eTEN

eTEN¹ is a key instrument of the eEurope Action Plan 2005 for promoting the development of the information society in terms of growth, employment, social cohesion and participation for all in the knowledge-based economy. eTEN's role is to:

- support the European aspects of the life of a citizen or business
- promote a Single Market for eServices
- support the establishment of so-called “operational eServices of common interest” by public administrations
- promote different levels of eService (national, regional, local, etc.) within a trans-European context.

Given the above, the participation of public administrations is essential in eTEN. Public administrations are here defined as national, regional and local public authorities, other public organisations (such as hospitals, education establishments, public museums, public agencies in tourism or commerce), NGOs and other civic society associations, and similar. Other actors can also be involved in eTEN projects, both from the civic and private sectors.

Present planning and financing for eTEN is assured until the end of 2006. The specific objectives of eTEN in 2005 and 2006 are:

- facilitating the integration of New Member States (NMS) into the programme
- increasing the impact of eTEN with the given budget
- reviewing programme implementation methods, e.g. the balance between calls for proposals and tenders.

The nature, scope and operational modalities of eTEN in the period 2007-2103, are under intense scrutiny at the present time, as are those of related instruments such as eEurope, the IST Programme and the IDA Programme. Indeed, the future of the Lisbon Strategy itself, which provides the overarching framework for these instruments, is currently under review particularly in the light of the Kok Report² published in November 2004.

This present study aims to make an important input to these deliberations as far as eTEN is concerned, particularly in light of enlargement.

2.1.2 Specific features of eTEN

eTEN operates with a specific set of definitions and assumptions in relations to the types of eServices it supports. Within the range of “operational eServices of common interest” Government to Citizen (G2C) services, specifically the three domains of eGovernment, eHealth and eLearning, where the public sector is the supplier, plus the issues of eInclusion and eTrust which cut across these three vertical domains. Government to Business (G2B), in the context of eServices for SMEs, is also included, given the importance of SMEs for inclusion and community life.

Another essential aspect of eTEN is its “trans-European” nature. This means that support for eService deployment is not normally confined within one Member State but must involve at least

¹ The eTEN web-site is: http://europa.eu.int/information_society/programmes/eten/index_en.htm.

² Kok, Wim et al (2004) “Facing the Challenge: The Lisbon strategy for growth and employment, Report from the High Level Group chaired by Wim Kok, November 2004, European Commission.

two if not in eService deployment then in other forms of cooperation. eTEN, in other words, must make a real contribution to the European dimension of eServices.

Finally and crucially, eTEN does not support development at research, technology development or pilot stages. The programme only supports projects involved in the deployment of eServices, either directly or to assist in such deployment. Given this, the eServices supported by eTEN are often ones which have already been developed and/or deployed elsewhere, at least in pilot form, although support for completely new eServices is also given as long as eTEN funding is confined to post-RTD and pilot stages. Current funding modalities are up to 50% for short validation phase, with maximum 10% for an initial deployment phase. Overall funding should not normally exceed 10% of both phases.

eTEN is thus an implementing programme within the broad framework of eEurope's "Information Society for all"³ and its general goals of growth, employment, productivity and the modernisation of public services. eTEN supports the achievement of eEurope's specific goals of access to secure services applications and content; the roll-out of broadband and mobile infrastructures; and the interoperability of services.

The present legal base of eTEN runs until end of 2006 with a budget of 45 MEUR per year in 2005-6. A new legal basis and financial perspective is expected from 2007 onward.

2.2 Objectives of the eTEN enlargement study

2.2.1 Purpose and objectives of the study

The present study entitled "Study on trans-European deployment potential, sustainability and exploitation models for public services in the context of an enlarged European Union" has been commissioned by the eTEN Unit of DG Information Society between July 2004 and February 2005. Its purpose is to assess, analyse and make operational recommendations that could:

- achieve the key objective of extending the programme, including in the New Member States (NMS) that are currently under-represented
- take into account the state of development of eServices in both new and current Member States, national priorities, and the objectives of the eTEN programme.

The objectives of the study are therefore to assess, analyse and recommend actions that could address the following factors:

- status of eServices in New Member States and status of planning
- identify priority needs in New Member States
- possibilities for replication of best/good practices
- identify structural impediments
- assess limitations in infrastructure
- assess access to capital
- identify variability across new Member States
- identify methods for promoting eTEN and encouraging participation (especially NMS)

The key objectives of the study are therefore to facilitate the integration of the NMS into eTEN, and the assist in the accelerated take-up of trans-European eServices.

2.2.2 Study outputs

The study will be used:

- as a strategic input to future eTEN work programmes
- to facilitate awareness with stakeholders EU-wide
- as a focal point for understanding the state of eServices in NMS

³ "eEurope 2005: An information society for all", An Action Plan agreed by the European Council at Sevilla, 21-22 June 2002, European Commission.

- to liaise with other EC and national programmes
- to improve national planning for eServices
- as a reference document for future activities.

Key questions of the Study include:

1. What must be done to attract and keep the NMS in the existing eTEN programme (up to 2006)? Although the Commission will respond and develop policy, demand should come from the NMS themselves. How is this to be achieved?
2. Which operational actions should be taken to develop the eTEN programme post 2006, for example in relation to:
 - the relation of the programme to other EU programmes, and relevant national programmes
 - the operational goals of the programme
 - the organisation of the programme
 - financing modalities
 - different call mechanisms (for example, calls for proposals, calls for tenders, a mix of these or mechanisms)

The study must take into account the limited knowledge of eServices and the eTen programme, particularly in the NMS, and that fact that most eService planning is undertaken nationally rather than trans-European. The study should consider how eTEN can have a real impact on deployment, and the need to encourage good eTEN proposals if this is to succeed and the programme is to be successfully continued in some form post 2006.

In operational terms, this study follows a two track approach:

1. Specific focus on the NMS, their position and needs in relation to eServices and the impact and implications of enlargement on the eTEN Programme. Recommendations are given in relation to these issues.
2. A broader analysis of the present state and performance of eTEN, and of the different options and consequences of these in both the short and longer term future. These issues are treated both in relation to enlargement and more generally. Recommendations are given in relation to these issues.

2.3 Methodology

The study is a 'means to an end', following the steps:

- aggregation of existing knowledge and studies
- targeted field research
- analysis leading to operational recommendations.

In line with the original TOR and the contractor's tender, the study had two main phases:

1. The first phase lasted for eight weeks and mapped the current, and near future, eServices situation in the NMS, through both field and desk research, in order to illustrate the background from which eTEN moves forward. Phase 1 culminated in the first workshop in Brussels for policy makers and others from the NMS and the eTEN Programme.
2. The second phase ran for approximately sixteen weeks and covered field research, analysis of collected data, testing concepts, interviews with EC and other actors and structured brainstorming sessions, culminating in the second workshop in Brussels for a similar audience. Most emphasis has been laid on Phase 2 of the study.

The methods employed by the study included:

- extensive desk research

- two rounds of field studies in collaboration with twelve National Correspondents, one in each NMS:
 - i) in Phase 1, in country data collection, desk research and back-up interviews
 - ii) in Phase 2, validation of Phase 1 results and interviews with selected stakeholders in the NMS
- interviews with EC staff and other experts
- structured brain storming workshops with invited experts and stakeholders.

Details of the references and sources used, personnel involved in the study, including stakeholders interviewed, a note on the data analysis, and a copy of the guide and template for stakeholder interviews, are given in the annexes.

2.4 Purpose and structure of this report

This Final Report fully considers the results of Phase 2 of the study and draws in work from Phase 1 where necessary. It does not otherwise repeat information contained in the Phase 1 report, "the New Member State Survey", published in October 2004, which remains a separate resource document (Danish Technological Institute and Steppingstones Internet Ltd., 2004).

Apart from the executive summary and this introduction, there are two main parts to this report:

1. Sections 3 and 4 focus specifically on the NMS and report on the NMS survey, an analysis of the results of this survey, and provide a compendium and reference of how the NMS (both as a group and individually) can contribute to and derive benefit from eTEN.
2. Sections 5 to 8 focus on eTEN as an instrument, what it means, how it operates and how it can be strengthened and improved. This part is not specifically presented in relation to the NMS, but NMS issues and feedback are used together with those from the other MS, as well as from EC and other expert sources.

Much of this Final Report engages in, as requested, 'blue sky' thinking. This means that no attempt has been made to ensure that all recommendations are mutually compatible or feasible in terms of financial, administrative or political requirements. Although, we believe that overall the recommendations made here do constitute a coherent package, the aim has also been to stimulate ideas and further debate rather than provide a final, complete, precise and comprehensive blueprint for the future development of eTEN.

A brief note on terminology

Throughout this report the abbreviation NMS is used to signify the New Member States, to which we add for convenience the two Candidate Countries, i.e.:

- NMS covers the following twelve countries: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.
- Similarly, the abbreviation MS is used to signify all 25 EU Member States, plus the two Candidate Countries, i.e. EU 25+2.

Other standard abbreviations used in this report:

- DG = Directorate General
- EC = European Commission
- EU = European Union
- ICT = Information and Communications Technology
- IS = Information Society
- IST = Information Society Technology Programme
- IT = Information Technology
- OMC = Open Method of Coordination
- PA = Public Administration
- RTD = Research and Technology Development.

3 eTEN and the position and needs of New Member States

3.1 Introduction

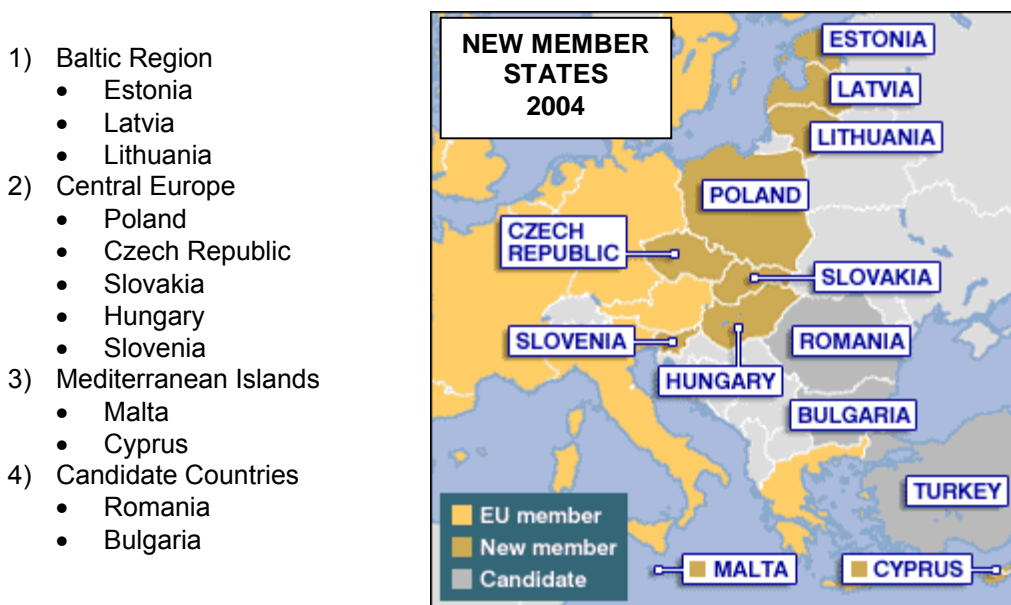
Ten New Member States (NMS) joined the European Union in 2004 and two others, Bulgaria and Romania were negotiating with the EU. This section provides a profile of each of these twelve countries based on interviews with recommended stakeholders and relevant information from Phase 1 of the study⁴.

Each NMS profile begins with a brief statistical overview, including the political and media climate as published by the EC (<http://www.europa.eu.int/enlargement/>) and the BBC⁵. This is followed by summaries of strengths, weaknesses and trans-European actions and potential as seen by the stakeholders. The purpose of the NMS profiles is to sketch the potential political support, possible channels for dissemination, and the eService environment as seen by the various stakeholders surveyed, together with a summary of their suggestions for ways to drive public eServices forward and raise awareness of eTEN within their country.

3.1.1 Overview

The NMS come from four geographical regions of Europe, as mapped in the figure below. Although the recent period of communist control has left a common legacy between states in the Baltic and Central European regions, there are still clear differences of culture, language and resources.

Figure: map of New Member States



- 1) Baltic Region
 - Estonia
 - Latvia
 - Lithuania
- 2) Central Europe
 - Poland
 - Czech Republic
 - Slovakia
 - Hungary
 - Slovenia
- 3) Mediterranean Islands
 - Malta
 - Cyprus
- 4) Candidate Countries
 - Romania
 - Bulgaria

⁴ "The New Member State Survey", published in October 2004, Danish Technological Institute and Steppingstones Internet Ltd., 2004.

⁵ More comprehensive surveys of the general Information Society trajectories of the NMS (and others) have been published by the Institute for Prospective Technological Studies and are available at <http://fiste.jrc.es/pages/enlargement.htm>

The information and data in this section have been compiled from the stakeholder survey conducted during November 2004 and January 2005. Fifty six stakeholders were identified with the help of the eTEN National Experts, and included representatives from government, service providers and service users. The table below shows the number of each.

Country	Government Official	Service Provider	Service User	Total
Bulgaria	3	1	1	5
Cyprus	1	0	1	2
Czech Republic	4	0	1	5
Estonia	2	1	2	5
Hungary	3	3	0	6
Latvia	2	1	2	5
Lithuania	2	0	2	4
Malta	2	0	1	3
Poland	2	1	2	5
Romania	2	2	1	5
Slovakia	3	3	1	7
Slovenia	1	1	2	4
Totals	27	13	16	56

Stakeholders comments were supplemented by the information collected in Phase 1 of the study, interviews with experts, plus other background sources. Tables summarising some of this information are provided in section 4.1 below. A full overview of sources is provided in the Annexes.

3.1.2 Common barriers

Individual stakeholders from each NMS reported a shared set of barriers to deployment or take-up of eServices in their countries. These common barriers are listed here to save duplication. Many could equally apply to the EU15 member states. These barriers should thus be borne in mind when reviewing the individual NMS profiles:

- shortage of funds to invest in new technology
- shortage of e-content in the national language
- shortage of eTEN information in their native language
- the need for eService applications to be designed to be user-friendly
- the need for 'real world' practical examples to act as role models and examples of good practice
- methods for enabling trust in the provider (by the user) and trust in the user (by the provider) are not in place
- the lack of interoperability between systems and administrations
- coordination and complementarity between eTEN and other EU funding initiatives is necessary.

A fuller analysis of these is given in sections 4.2 and 4.3 below.

In the following country reports, the initial data table given for each country contains details from the European Commission website (www.europa.eu.int/enlargement/) which was archived in May 2004. The source data was Eurostat/ITU and is for the year 2002 unless otherwise stated. Where available more recent data has also been included in the right hand column.

3.2 Bulgaria

Europa website (Eurostat/ITU 2002)
Area: 111,002 sq km
Population: 7,869,000
Average pay: 1,518 euros (per year, 2001)
Mobile phones: 32 per 100
Internet users: 12% (944,000)
Main ethnic groups (2001): Bulgarians, 84%; Turks, 9.5%; Roma, 4.6%
Inflation: 5.8%
Unemployment: 18.1%
GDP per head: 25% of EU average
Growth rate: 4.8% (2001 to 2002)

Unemployment has fallen from highs of nearly 20% and inflation is low.

National radio and TV were given the status of public services and granted independence. Many of Bulgaria's newspapers are linked to a political party, or interests such as trade unions or a government ministry.

Strengths

There is a political will to introduction of all kinds of eServices in the public interest. Interest is high amongst the young and the IT sector has seen recent growth of approximately 35%.

Full telecom market liberalisation was effective from 1 January 2003, when the Bulgarian Telecommunication Company (BTC) monopoly over the fixed voice service and leased lines was eliminated.

A high number of GPs have computers and relatively high percentages have Internet access in their consulting room. Most GPs use electronic patient records.

There are strong traditions in IT education at the universities in the country and there is a surplus of certified IT professionals. Bulgaria has a history of software development under the Soviet era. In addition to the number of traditional college and university programmes available, there are many other opportunities for study in fields related to information technology. There are a variety of certification programs offered through professional training institutes, such as Oracle, Cisco Networking Academy or Microsoft Academy. Bulgaria is a member of the South East European Research and Education Network (SEEREN)

There is political will introduction of eServices for **SMEs**. An increase of their demand is taking place in the country. eSignature legislation and ePayment instruments are in place. Many entrepreneurs understand the role of R&D for better competitiveness

There is a genuine concern about the needs of the disabled. Of all the different countries stakeholders surveyed for this report, only the Bulgarian stakeholders raised lack of resources for disabled users as a weakness. Accordingly, this awareness and concern has been recorded as a strength within the context of this report.

Weaknesses

There is still a lack of fully integrated information environment (electronic data exchange in the administration). One of the reasons is the lack of standardised eDocuments in XML code. There is no established register for information objects, for standards or electronic services in the country. The introduction of international standards for electronic documents is in process.

There is a lack of **trust and confidence** in using Internet facilities and IS services, and there is also a low awareness of IT among the general population.

eHealth services have not been developed.

The lack of digital infrastructure with high transmission and exchange capacity has serious implications for the development of broadband services.

The **eLearning** curricula in the schools are rather old. Most children are still taught under DOS. According to the present curriculum, the classes in informatics start from the 9th grade. eLearning has no place in curricula for primary school. There is no eContent in Bulgarian for the subjects in the curricula. There is also a lack of trained teachers for eLearning acquisition, but IT specialists in the country are not allowed to teach in schools unless they are also qualified as a teacher. This barrier can be overcome if short-term courses for IT specialists (there are many of them in the country), providing certificates, are introduced.

There is no legal and regulatory framework for eCommerce, whilst a substantial proportion of entrepreneurs do not have sufficient marketing, financial, accounting and legal knowledge.

Trans-European actions

The Bulgarian stakeholders all agreed that more co-operation with EU members was desirable both to help develop better eServices and to ease the process of accession. The need to agree and adopt standards was also seen as important as was the need to deliver more content in Bulgarian. One suggestion was to develop an eService network of translators to “put content into the vernacular” (i.e. language as spoken in everyday life).

Two of the stakeholders felt strongly that Public-Private-Partnerships (PPPs) would help achieve broader goals and speed up the process of projects such as rolling out PIAPs.

As in Romania and Poland, the Bulgarian stakeholders were concerned about the high level of unemployment amongst qualified IT specialists, and wished to see some mechanism for tapping into this talent for the benefit of Europe as a whole.

Some Bulgarian stakeholders felt that the terms of eTEN were too narrow and should not be limited to only public services. It was felt that any and all services should be promoted to establish a critical mass of users who might then demand additional services to meet their real needs.

The minimum level of funding recommended was 50% for both phases, but careful monitoring and the option to cease a project at any stage.

The stakeholders were all aware of eTEN prior to interview, but felt that general awareness amongst potential actors was minimal.

3.3 Cyprus

Europa website (Eurostat/ITU 2002)	National Expert Update
Area: 9,251 sq km	-
Population: 797,800	-
Average pay: 17,607 euros (per year, 2001)	-
Mobile phones: 58 per 100	76 per 100 (2003)
Internet users: 29% (232,000)	-
Main ethnic groups (2001): Greeks, 80.6%; Turks, 11.1% (not including an estimated 115,000 settlers from Turkey); Other, 8.3%.	-
Inflation: 4.0% (2003)	-
Unemployment: 4.7% (2003)	-
GDP per head: 72% of EU average	83% EU average (2004)
Growth rate: 2.2% (2002 to 2003)	-
Main exports: medicines, fruit and nuts, vegetables	-

Cyprus has a service oriented economy with a high level of dependency on tourism.

Strengths

The required Information Society legislation is being put in place. The recent development of the Cyprus National Strategy for Information Society for the period 2004-2006 is waiting for adoption by the Council of Ministers.

Political commitment is also high. Information Society and **eGovernment** are political priorities and the eEurope+ Action Plan is taken seriously. Successful implementation of the eGovernment Office Automation System in Government Departments has brought the benefits of a paperless office, enforcing the existing rules and regulations, improving productivity and operational efficiency and reducing operational cost. Development of a paperless hospital in Nicosia is underway.

The small size of the country means policy-making is easier than in larger states. Advanced technology infrastructure including a Government Internet Node (GIN) and Government Portal implementation are in place. There is sufficient supply of highly educated IT people.

Digital Signature legislation was adopted in 2004.

Weaknesses

- Low level of digital literacy in the general population.
- A mindset which is not necessarily conducive to e-Government take-up. E-Government strategies and policies are not clearly distinguished from IS policies in general.
- Lack of sufficient resources in the public sector for implementing e-Government projects.
- Too much focus on the technological aspects in existing strategy, and not enough attention being paid to acceptance by final users.
- Concerns about security and privacy implications.
- Approval of legislation regarding Electronic Payment Transactions and the adoption of Smart Cards is delayed.
- Lack of **trust** in electronic transactions.
- Lack of strong co-operation between related stakeholders.
- The small size of the country means that there might not be enough critical mass for uptake of more complex and costly service components such as digital signatures, smart cards, card readers.
- No actual **eHealth** services available yet.

Trans-European actions

All stakeholders looked forward to the roll-out of some proposed **eHealth** services. One stakeholder even suggested the need to develop high quality services aimed particularly at wealthy residents as a way to encourage service development in a cost-effective manner (perhaps even cross-subsidising other services).

Amongst suggestions for exploiting the potential for eServices were an expert council for coordination, training teachers and doctors and closer cooperation between eTEN and the Cohesion Fund.

The small size of Cyprus was seen an advantage for deploying new eServices as the initial set-up costs would be low.

The Cypriot stakeholders agreed that current funding levels were too low and suggested that 70% would be more appropriate, with some allowance for technical modification or further development during both validation and deployment phases. The desirability of expert groups for the eService domains to come up with ideas was also mentioned. As was the "One-Stop-Shop" concept for all EU funding as proposed by IDA.

The stakeholders felt that they were well aware of eTEN but that general awareness was low and required improved dissemination.

3.4 Czech Republic

EUROPA Website using ITU and Eurostat data	National Expert Update
Area: 78,868 sq km	-
Population: 10,201,000	10,215,600 (30-9-2004)
Average pay: 5,148 euros (per year, 2001)	17,738 CZK per month (30-9-2004)
Mobile phones: 84 per 100	104 per 100 (January 2005)
Internet users: 26% (2,650,000)	1,797,000 (21% of individuals 15+)
Main ethnic groups (2001): Czechs, 90.1%; Moravians, 3.6%	-
Slovaks, 1.8%; Poles, 0.5%; Germans, 0.4%	-
Inflation: -0.1% (2003)	2.8% (31-1-2005)
Unemployment: 8.0% (2004)	9.8% (31-1-2005)
GDP per head: 62% of EU average	250,033 CZK per head (2003)
Growth rate: 3.4% (2002 to 2003)	3.6% (3q 2003 - 3Q 2004)
Main exports: cars, vehicle parts, computers	-

Czech Republic has a rich cultural heritage and a vibrant tourist economy.

Strengths

- The existence of a central body of public administration to coordinate the development of the information society
- A high penetration of mobile communication (104 /100)
- High general literacy of the population
- Highly developed infrastructure
- An evenly populated territory
- There are a number of skilled individuals at regional level who manage to deliver some services without central help.
- There are some good practice cases available, including portal.gov.cz, czechtourism.com and businessinfo.cz.
- The current infrastructure has the potential for expansion relatively cheaply.

Weaknesses

- Low penetration of ICT in households and high relative costs of purchasing and operation
- Low takeup of high-speed (broadband) access
- Insufficient administrative capacity to use EU funds
- Lack of appreciation for the role and potential of information and communication technologies for the development of society
- Inconsistencies in political support to various developments of information policy
- Low computer literacy amongst the public and lower motivation to use modern technology
- The 'average' citizen sees current eGovernment services as too complex for use.

Trans-European Actions

The Czech stakeholders generally agreed that the best placed people to aid the development of eServices at present were at the regional, not national, level. Motivating regional development and providing employment opportunities were seen as the main ways to overcome barriers to eService deployment.

The Czech stakeholders all agreed that more emphasis should be placed on deployment within eTEN whilst half (3) thought some research effort should be included as well. It was pointed out that as administration costs are normally calculated at 12% for projects in the Czech Republic funding should be at least 30% in order to add genuine value to a project. A number of stakeholders also appealed for the ability to mix funds from other EU initiatives to integrate the objectives of the funds more efficiently and to allow complete and proper development to take place.

All the Czech stakeholders were aware of the eTEN programme prior to interview, but some felt that general awareness in the relevant communities was low. Suggestions for improvement included workshops and working more closely with local mayors and other key regional actors.

3.5 Estonia

Europa website (Eurostat/ITU 2002)

<p>Area: 45,227 sq km Population: 1,359,000 Average pay: 4,343 euros (per year, 2001) Mobile phones: 65 per 100 people Internet users: 33% (449,000 in total) Main ethnic groups (2000): Estonians, 65.3%; Russians, 28.1%; Ukrainians, 2.5%; Belarusians, 1.5%; Finns, 0.9% Unemployment: 9.5% (2004) GDP per head: 42% of EU average Growth rate: 4.6% (2002 to 2003) Main exports: telecoms equipment, furniture, simply worked wood</p>

As a small country, with its own telecom industry and strong political support, it has become the most advanced of the ex-Soviet Member States in terms of IT literacy and the provision of eServices.

The legacy of the Soviet years has left a mark which the country carries with it into its EU era of a large number of the Russian-speaking industrial workers brought in decades ago that have ended up without Estonian citizenship for which they are required to pass an Estonian-language test. Just under 12% of the population has no citizenship of any kind. The Estonian language is closely related to Finnish (and to some extent Hungarian).

The government has taken tough steps to encourage the development of the free market, cutting social welfare and taxes and boosting growth. Broadcasting witnessed spectacular

growth after 1991. The industry has attracted a number of foreign players; the two main commercial TV stations are owned by Swedish and Norwegian concerns.

Strengths

Political and Economic factors: Estonia is a small country with political desire to increase eService development and the use of ICT for government and administration. Because it is small it is able to agree targets and make quick decisions, and has strong and rapid economic development. This favourable general economic environment (strong monetary system and competitive financial sector) is couple with a stable fiscal policy, so that local companies are investing strongly in ICT.

There is a favourable legislative environment for ICT (e.g. as of spring 2004, Estonia was the only country in the European Union with an eVoting law for national elections actually in place although some technological solutions are still under development). Among eGovernment initiatives are the Public Information Act (RT I 2000, 92, 597) which guarantees electronic access to public information (including draft legislation) and eServices. The Estonian Parliament Electoral Law (RT I 2002, 57, 355) legislates the use of eVoting at a national level. The Estonian ID-card, a compulsory identity document for all citizens, is an application of the Digital Signatures Act (RT I 2000, 26, 150). A common Public Key Infrastructure is established, focused on the implementation of digital signatures, equivalent to the ordinary signature on paper.

Telecommunications market: Liberalised telecommunications market; High level of FDI in the sector from neighbour countries which are technologically advanced (Finland, Sweden); Strong mobile telecommunications market, high mobile phone penetration. Rapid developments within broadband and WiFi markets.

IT developments: ID-card initiative and digital signatures as public key infrastructure; Network of Public Internet Access Points; Wide acceptance of broadband by users; Internet use has spread quickly and widely; Tiger Leap Programme has contributed increased awareness among school pupils; Provision of training to Internet non-users (Look@World Internet Training Project).

Specific factors affecting supply: eBanking as leader and standard-setter; NGO sector (especially Look@World Foundation) active in catalyzing provision of eServices; advancement in interoperability of State Registers; Public Key Infrastructure and use of digital signatures within population; Funding from the EU Structural Funds.

EGovernment: The National Development Plan attaches a very high priority to the development of online Government services and within that Government-to-Citizen electronic public administration, and in particular to eServices offered by local governments. Priority areas are related to further development of the eCitizen portal, guaranteeing interoperability of State registers, provision of public key infrastructure (PKI) and digital signatures to offer secure services, and the development of content services (eGovernment, eHealth, eLearning, eInclusion and eTrust).

Specific factors affecting uptake: As a result of Tiger Leap and activities by Look@World Foundation, an increasing number of people have skills to access eGovernment services. The roll-out of PIAPs (Public Internet Access Points) has extended the reach of eServices.

Weaknesses

There is a large current account deficit and high level of structural unemployment. There are strong regional differences resulting from the lack of an effective regional policy. The industrial structure is oriented towards low-value-added manufacturing. There is a shortage of ICT specialists.

eHealth is the least developed of the eTEN domains, largely due to the number of private health care organisations that are currently unable to integrate their systems.

Specific barriers to supply: The organisational structures for coordinating eServices development sometimes lack collaboration between public and private sectors; Lack of funding for deployment of eServices, especially at a local level. Information Society development has concentrated mainly on the development of ICT infrastructure and less on the supply of eServices. Most Internet users still use modems to access the Internet

Trans-European actions

Although there has been some cross border cooperation, it remains limited. Estonia has worked with Belgium and Austria on electronic information systems and shared its Look@World project with Latvia.

Proposed developments: Pollution is frequently a cross-border problem and some form of database of polluting firms and pollution control methods would be an advantage. Expanding the number of PIAPs would increase the potential market for eServices, as would providing Russian versions. To make it appear 'more normal' to be an eService user, it might help to obtain the involvement of other media, such as television and radio.

The Estonian stakeholders did not agree on a common set of services for eTEN to promote in future, with comments ranging from adding value to existing services, through prioritising SMEs and Health to "as broad a field as possible".

All stakeholder agree that funding levels were currently too low with suggestions ranging for 30% to 50% for both phases of the projects. They all preferred the bottom up approach, though not at the exclusion of some top-down. One suggestion was for an "ideas factory" to:-

1. proactively seek out both existing services that could be encouraged to use eTEN to develop at a transnational level
2. to generate original ideas for new services to meet perceived needs and worthy of further investigation that might eventually lead to a call for tender.

The Estonian stakeholders were all well aware of the eTEN programme and felt that the general level of awareness was "reasonable". To raise awareness (or take-up) further, they suggested increasing the funds and making more examples of successful eServices available.

There is some cooperation between the three Baltic States on transnational eServices, but it is limited at present, though there have been some knowledge transfer and replication within the Northern eDimension Action Plan.

3.6 Hungary

Europa website (Eurostat/ITU 2002)	National Expert Update
Area: 93,030 sq km	-
Population: 10,159,000	-
Average pay: 5,301 euros (per year, 2001)	-
Mobile phones: 68 per 100	80% (Q1 2004)
Internet users: 16% (1,625,000)	-
Native languages (2001): Hungarian, 98.6%; Romany, 0.5%; German, 0.3%	-
Inflation: 4.7% (2003)	-
Unemployment: 5.9% (2004)	-
GDP per head: 53% of EU average	-
Growth rate: 2.9% (2002 to 2003)	-
Main exports: telecoms equipment, engines, computers	-

Hungary has a colourful and varied culture reflecting its mix of peoples - the majority are Magyars, with Roma, German, Slovak, Croat, Serb and Romanian minorities.

Hungary was the first Eastern European country to embrace aspects of the free market. This helped to smooth economic transition. By 1998 Hungary was attracting nearly half of all foreign direct investment in the region. However, a number of problems left over from the Communist era, including pollution and environmental damage, have yet to be resolved.

Hungary's private broadcast media compete with state-run radio and TV. Public radio services operated by Hungarian Radio compete with numerous local radio stations and national commercial services.

Hungary's national and local newspapers are privately owned, some of them by foreign groups and investors.

Strengths

e-Government is taken seriously in Hungary and a public Information Act has recently removed some barriers. **eLearning** and **eHealth** are making steady, if slow progress. ICT skills are being taught in the schools and young people are showing some enthusiasm for the Internet.

A number of projects have successfully tried to foster access to and use of ICT, most prominently the Sulinet Expressz programme. It will provide all schools with broadband Internet by 2005, help households to purchase ICT hardware and software through tax discounts, facilitate public and private Internet connections, supply professors and teachers with the necessary ICT skills, and improve the quality and quantity of content services. 25,000 PCs were bought with financial assistance from Sulinet Expressz in 2004.

The mobile phone (GSM) network is well developed and mobile phone ownership is high. Broadband is being rolled out gradually and 5,000 PIAPs are being installed throughout the country.

The 5 million plus Hungarians living beyond the border provide a viable market for transnational eServices.

Weaknesses

The frequent modification of the structure of government in recent years acts as a barrier to the development of **eGovernment** services because there has been a frequent rearrangement of tasks between and inside of public agencies.

Internet penetration is still relatively low. According to a study published by Gfk Market Research Institute in October 2003, 18% of the 15 year+ population used the Internet, less than in most of the EU15 and even less than the average in the NMS. Older citizens in particular tend to prefer traditional face to face services.

Data protection and privacy laws are considered to be very strict in Hungary, which means that any personal data exchange via Internet and personal data storage poses legal questions. Many Hungarians dislike the need for registration when using websites, they prefer to remain anonymous. There is a general lack of awareness as to the potential benefits of eServices (probably due to the lack of such services), and as a result the public in general is apathetic towards further development.

Trans-European actions

The large Hungarian populations in Romania and Slovakia provide a potential market for developing some eServices, but there is a need to improve accessibility.

The stakeholders felt that the best eServices to promote were those that either facilitated cross-border working, increased competitiveness or supported local services. Replicating existing services was seen as an ideal way forward. The stakeholders all appeared to believe that the most important issue at present was to involve more citizens in using electronic services of any form by whatever means. The trans-national aspect of a service was secondary to the main task of providing as broad a range of useable services as possible. Standardisation and interoperability were seen as vital issues.

A greater emphasis on market deployment was requested and funding levels ranging from 30% to 100% were suggested with some mixture of top-down and bottom-up approaches and even local meetings specifically designed to produce ideas.

Only one of the stakeholders was “well aware” of eTEN prior to interview and all agreed that most of the relevant actors would not be aware at all. Suggestions for improving awareness included paper based publications, and the dissemination of good practices.

3.7 Latvia

Europa website (Eurostat/ITU 2002)	National Expert Update
Area: 64,589 sq km	-
Population: 2,339,000	-
Average pay: 3,426 euros (per year, 2001)	3,741 euros (2004)
Mobile phones: 39 per 100	-
Internet users: 19% (445,000)	34% (936,000) (2004)
Main ethnic groups(2000): Latvians, 57.7%; Russians, 29.6%;	-
Belarusians, 4.1%; Ukrainians, 2.7%; Poles, 2.5%; Lithuanians, 1.4%	-
Unemployment: 10.5% (2004)	-
GDP per head: 35% of EU average	-
Growth rate: 7.3% (2002 to 2003)	-
Main exports: Simply worked wood, rough wood, iron and steel bars	-

For centuries Latvia was primarily an agricultural country, with seafaring, fishing and forestry as other important factors in its economy. Around a third of the population is Russian-speaking. Many ethnic Russians have taken the tests necessary to obtain citizenship. Many others have not and are without citizenship.

Prime minister Aigars Kalvitis has identified the need to tackle health care problems and inflation as his government's priorities, together with promoting the Information Society. Public broadcasting is financed by state subsidies and commercial revenues, mainly from advertising.

Strengths

There is a growing political willingness to look at the potential for eServices in Latvia. A National Action Plan (2007 – 2012) is being worked on and some Municipalities have initiated actions. There are currently 8 state and 5 municipal eServices in operation at level 1 (information only).

Although state investment in eGovernment development decreased year by year since 2000 (Latvia is now behind Estonia and Lithuania), positive actions have started again with the establishment of an Information Society Bureau, which became the Secretariat of the Special Assignments Minister of electronic government affairs in December 2004. The public sector has a large number of opportunities and potential, but the lack of a digital signature is limiting development. It is both the reason and excuse for not developing eServices in the public sector. Most of the necessary basics are already in place; large-scale projects exist in Riga, Ventspils and some other cities. Tax and customs administrations are also technically ready to provide eServices.

There are a number of successful commercial eServices available to the citizen and entrepreneur, including a complete eBanking service. These are managing to deliver results despite the lack of a digital signature. There is also a willingness to replicate services developed elsewhere. The successful [Look@World](#) project was copied from Estonia and supported by the EQUAL Programme. Other initiatives include the Network of Light (Libraries), eLatvia, LILs (Education) and PVIS (Municipalities)

Weaknesses

The main additional barriers specific to Latvia are:

- Low Internet penetration in households due to high access costs when compared with those in the majority of other MS. 90% of Internet banking transactions are conducted during office hours because people do not have access at home.
- Lack of fixed telephone lines in many rural regions.
- Lack of an electronic signature, which makes filling in of forms and full transactions impossible.
- Lack of well-known, coordinated access points with list of public services available online and information how to access them.
- The public sector is currently perceived as a barrier. It is frequently not willing to use the commercial eServices such as eBanking themselves, preferring instead to send someone to the bank physically to pay individual wages.
- Apart from e-Banking there is a shortage of private sector eService initiatives that could be held up as role models.

The current situation is well summed up by the Head of Development at Hansabanka in Latvia: "eServices in Latvia have developed quite independently from the state and are based on private initiative to a large extent. The divide between state and private activities and level in eServices is quite significant. However the development of eServices in different sectors is very different. Several sectors, such as banking and information agencies are at world level, but there are many sectors with little or no development. **SMEs** should be able to handle all their business transactions from the office, but currently this is not possible. The current way of thinking is still to use paper; information that is already available to one state institution is often requested by another. Often people are used as couriers by institutions."

EGovernment: There is an appearance of weak political commitment and diverse responsibilities with little interoperability between departments who each have their own responsibilities that should be coordinated by the Secretariat of the Special Assignments Minister of Electronic Government Affairs.

eHealth: There are currently no eHealth services available, there are some strategy documents being worked on, but these are not as clear as they could be.

eLearning: There are some very limited initiatives. Riga University, Latvian University and others have distance learning programmes and provides copies of some lectures on-line.

Trans-European actions

At present Latvian citizens have real problems with using transnational services at the security level and with language problems.

Proposed developments: The stakeholders highlighted services for tourists and Russian speakers as desirable eServices. Encouraging the private sector to take the lead and produce practical solutions that could be adapted to public service was proposed by two stakeholders.

Updating existing policies and supporting existing actions were seen as important future developments by the government stakeholders and one service supplier. All stakeholders felt that promoting pan-European availability for eServices is important

All but one stakeholder felt that the minimum funding level should be 50%, the exception being a private sector stakeholder who felt that the amount should be variable depending upon the likely cost of achieving a critical mass of users.

Most of the Latvian stakeholders claimed to have a good understanding of eTEN and all agreed that general awareness was low.

3.8 Lithuania

Europa website (Eurostat/ITU 2002)	National Expert Update
Area: 65,300 sq km	-
Population: 3,469,000	-
Mobile phones: 47 per 100	86.7 per 100 (Q3 2004)
Internet users: 14% (485,000)	21% (Q3 2004)
Main ethnic groups (2001): Lithuanians, 83.5%; Poles, 6.7%; Russians, 6.3%; Belarusians, 1.2%	-
Inflation: -1.1% (2003)	-
Unemployment: 11.7% (2004)	-
GDP per head: 39% of EU average	-
Growth rate: 8.8% (2002 to 2003)	-
Main exports: Refined oil products, ships, cars	-

Lithuania is the largest and most southerly of the three Baltic republics. Historically it has close ties with Poland. In the run up to EU entry, the republic saw strong growth and very low inflation.

Lithuania's television market has seen a mushrooming of commercial channels, which over the years have eroded the audience figures for public television. The radio market is similarly competitive, with more than 30 stations competing for listeners and advertisers. Lithuania's media are free and operate independently of the state, and there are no government-owned newspapers.

Strengths

Internet penetration in Lithuania has been steadily increasing in recent years. There are a few online services which have succeeded in attracting Lithuanian Internet users, such as the online job search network maintained by Lithuania's Labour Exchange and Labour market Training Authority.

The government is continuously investing huge sums in ICT. As a consequence, equipment of government institutions with software and hardware devices is continuously improving. The legal framework for offering, administering, coordinating and supervising eGovernment services is well developed.

The Government of Lithuania has declared the development of an inclusive information society as a top priority, and one of the key factors of the country's well-being with a target of 2015 for compliance. Direct implementation of the eEurope initiative started in the middle of 2000 by the Ministry of Interior Affairs and Information Society Development Committee under the government. Plans approved in November 2003 concentrated upon:

- improvement of public administration by providing the long-term strategy
- implementation of organisation measures, such as to formulate the methods of coordination and inspection of eGovernment propositions
- filling the integral database for registers with the relevant information
- creation of an ePortal for Government
- establishment of a safe state institutions network

- establishing a personal identification system
- supply of public services using digital technologies, for e.g. to create an open consulting and information system (AIKOS), a blood usage information system, etc.

Of the Baltic States, Lithuania appears to have made the most progress with regard to eInclusion, including providing some services in the Russian language.

Weaknesses

The public administration maintains that the main technical problems are related to slow growth of Internet connections, the necessity to update software and hardware infrastructure, software incompatibilities, and insufficiency of technical know-how. Securing financing for investments in ICT, as well as marketing of eGovernment services, is also seen as a problem. Another problem is the lack of ICT knowledge among civil servants.

The provision of eGovernment services supply and uptake is closely related with the issue of digital identification. While an eSignature Law was adopted in 2000, the Lithuanian government has not succeeded in making the electronic certification system attractive for the majority of citizens. Neither the infrastructure nor the common procedures and standards which would ease the development of eService supply are in place. Cooperation between state institutions is not properly developed, causing difficulties for the implementation of an integrated eGovernment system. There is insufficient attention to security issues related to eGovernment provision.

Government websites are not well developed and are not yet in conformity with the general requirements defined in the State Government Act in 2003.

The share of Internet users among the population is still small when compared to the EU average. Maybe the most important reason is that Lithuania has one of the highest Internet access costs in Europe, while household incomes are still very low on average. There is also a strong rural-urban gap in Internet access.

The research "Digital Lithuania" made in 2002 found that 70% of all the respondents would like to access electronic public services at public access points like petrol stations, local authorities, cafes and similar. Respondents were interested in the possibilities to get the information about:

- job vacancies (54%)
- human rights and legal acts (53%)
- health (46%)
- education (42%)
- own account management and on-line tax payment (38%).

Trans-European actions

Amongst the desirable actions listed by the Lithuanian stakeholders was a suggestion to share knowledge and develop eServices that facilitated transnational employment. There was a desire to learn from good practice models to deliver eServices that were quick and easy to use and met the daily needs of citizens.

Stakeholders considered funding levels ranging from 50% to "as much as possible" to be desirable whilst the bottom up approach was the most popular.

Knowledge of eTEN varied between the stakeholders from "weak" to good (one stakeholder is currently involved in an eTEN project), however all agreed that general awareness in the population was low.

3.9 Malta

Europa website (Eurostat/ITU 2002)	National Expert Update
Area: 315.6 sq km	-
Population: 397,300	-
Average pay: 13,320 euros (per year, 2001)	-
Mobile phones: 70 per 100	-
Internet users: 21% (83,000)	75% (2004)
Ethnicity: Maltese are sometimes said to be descended from Sicilians and sometimes from ancient Carthaginians and Phoenicians	-
Inflation: 2.2%	-
Unemployment: 8.8% (2004)	5.5% (June 2004)
GDP per head: 69% of EU average (1999)	75% of EU average (2004)
Growth rate: 1.9%	-
Main exports: electronic components, men's clothes, aircraft	-

The Maltese archipelago includes the islands of Malta, Gozo, Comino, Comminotto and Filfla. Malta was the smallest of the 10 countries to join the EU in May 2004. Each year the population of Malta is tripled by an influx of tourists, the nation's main source of income.

Daily and weekly publications appear in both Maltese and English. Italian television and radio are also received, with some 28% of Maltese saying they watched Italian channels at the beginning of 2001.

Strengths

The Maltese government has taken a proactive roll in launching eServices. The current **eGovernment** programme boasts a large number of electronic services being launched across Government. eGovernment take-up has been very high. The services range from public registry certificates to the process of renewal and payment of trading licences, and the recently launched Electronic Identity. The Ministry for Investment, Industry and IT is determined to take forward e-Government and is constantly rolling out new initiatives to facilitate both citizen and business transactions. Government is aiming to have all Government services online by the end of 2006.

The Government portal, www.gov.mt is an interactive service that provides the first entry point for citizens and businesses to access a full suite of aggregated information and services. The Government Payment Gateway allows for the payment of government services on-line. The take-up of public eServices has been encouraging with a number of enterprises accessing and making use of the services, which include, the renewal of trade licenses, services related to corporate tax and VAT and payment of property rental.

The increasing importance of ICT in improving the social well-being of all citizens and in securing the competitiveness of the country, has led to the set-up of the Ministry for Investment, Industry and IT. One of the first challenging tasks of the Ministry was to draft a national ICT strategy which while building on past achievements, recognises the new developments in the dynamic ICT environment and considers the special characteristics of the Maltese islands. The strategy is based on two main broad thrusts:

1. The enhancement of the Maltese information society and economy, making the Maltese experience a best practice to be followed by other countries;
2. The strengthening of ICT in government, not only to improve service delivery but also as a tool of extending democracy, accountability and realise efficiency gains.

Malta's electronic policy is based on international developments which draw on best practice examples of countries who are leading in the transition towards knowledge based society and economy.

An eBusiness Action Plan, was drafted in order to raise awareness of eBusiness among the local business community, especially SMEs, and induces the private sector to consider technology as one of the main vehicles to improve their competitiveness.

Three types of projects are presented in the Action Plan:

- 'Capacity Building' projects seek to equip the local business community with the resources which allows them to gain the maximum benefit from the use of technology.
- 'Awareness and Training' projects seek to increase the awareness on the subject while providing the necessary e-business training to micro and small enterprises, in an accessible and affordable manner.
- 'Support' initiatives can be considered as soft measures which will indirectly contribute to the take-up of e-business

Various **eLearning** initiatives are being undertaken, including the 'My Web' course that introduced absolute beginners in ICT, the use of personal computers, the Internet and email.

The eradication of the digital divide has been a priority for Malta and various initiatives have been deployed to increase digital literacy and technology accessibility. The Ministry for Investment, Industry and IT (MIIT) has endeavoured to transform Malta into an island where IT is pervasive in every sector and sphere of economic and social activity and has also aimed to make IT services readily accessible by every citizen at any time and at any place.. The Ministry has joined forces with the Local Councils and set up Internet Centres in all localities in Malta and Gozo. These centres offer free Internet access to all local community members. Moreover, Public Internet Access Points have also been installed in all localities and other strategic places.

In order to sustain its mission to eradicate the digital divide, the Ministry for Investment, Industry & IT has drawn up a 20-hour programme available for free to all citizens that introduced absolute beginners in ICTs to the use of personal computers and Windows, Internet and e-mail. All successful participants are provided with free web enabled electronic mail and five hours of free Internet use, which they can use up from any public or private Internet access point. The 'My Web' course ensures that all Maltese citizens, irrespective of their social, economic and physical status are equipped with the basic ICT knowledge, which allows them to grab the opportunities of the networked society and economy, thus improving their quality of life. The 'My Web' course was very successful and also very well received by the general public. The offering of myWeb coupled with other projects aimed at increasing digital literacy and technology accessibility has led to a stark increase in the percentage of digitally literate population in Malta.

The Ministry will also be setting up of a number of 'Community Technology and Learning Centres (CLTCs) which will reach to sections within our society who to date have had limited or no participation both in the information society and/or the economy. CLTCs will be technology-enabled centres which harbour learning and collaboration, where the most disadvantaged groups in society gather to gain skills, share information and use technology, thus aiding them to return or access the labour market

Policies have been put in place to address the issues of **trust and security** on the Internet. An important objective of the National ICT Strategy is to make the Internet a secure place, build confidence, trust and security in the use of ICTs. In the coming years the Maltese Government will embark on a number of projects which will:

- enhance security to avoid risks of disruption of networks and business discontinuity
- develop secure electronic communications with other public services in the EU
- enter into security programmes with major software vendors to access source codes for security purposes
- engage into a national fight against spamming
- set up the national and international fight against illegal content on the Internet and deploy programmes against child abuse over the Internet

- develop consumer trust in electronic commerce by deploying a national e-Trust scheme providing trust-marks to online retailers which meet the established standards

Furthermore, the Ministry for Investment, Industry & IT is currently in the process of setting up an eCrime Working Group in order to discuss current measures taken by the various stakeholders and ensure the best possible protection against cyber-crime attacks. The Ministry is also in the process of drafting a Grooming Green Paper with the objective of proposing a recommendation to include the act of grooming in as a criminal offence in local legislation.

Malta has introduced free access to the Internet through a PPP in Malta and Gozo, and also coordinated the setting up of PIAPs in all major locations.

Malta has adapted an electronic identity system from Microsoft that may be suitable for replication in other member states.

Weaknesses

There is some resistance to change amongst government officials. There is a shortage of IT professionals and the local IT sector is fragmented. **eHealth** and **eLearning** have not developed as fast as **eGovernment**. The eHealth problems currently focus on the issue of patient-physician trust, whilst eLearning can be held back by bureaucracy and difficulties in coordinating the various players.

Trans-European actions

Support for **SMEs** was seen as a priority by the stakeholders together with eProcurement, eEnvironment and employment opportunities. All the stakeholders felt that eTEN funding levels were too low with a consensus around the 50% - 75% level.

All the stakeholders were aware of eTEN prior to interview and felt that awareness amongst relevant actors was adequate. They did, however, all request that more information about successful projects be made available to the general public

3.10 Poland

Europa website (Eurostat/ITU 2002)
Area: 312,685 sq km
Population: 38.2 million
Average pay: 7,509 euros (per year, 2001)
Mobile phones: 36 per 100
Internet users: 23% (3,360,000)
Main ethnic groups (2002 census): Poles, 96.7%; Silesians 0.45%; Germans, 0.39%; Belarusians, 0.12%; Ukrainians, 0.07%
Inflation: 0.7% (2003)
Unemployment: 19.1% (2004)
GDP per head: 41% of EU average
Growth rate: 3.9% (2002 to 2003)
Main exports: furniture, ships, engines

Poland is a nation with a proud cultural heritage, which can trace its roots back over thousands of years. Positioned at the centre of Europe, Poland has achieved some success in creating a market economy and attracting foreign investment but unemployment is high while incomes and growth are low. The huge farming sector is unwieldy and very inefficient.

Up to a quarter of Poles watch foreign TV channels. There are more than 300 newspapers, most of them local or regional. However, fewer than 30% of Poles read any kind of newspaper. Newspaper publishing is almost completely privatised and foreign ownership is high.

Strengths

Poland has a large base of Internet users (over 3.4 million in 2004) and a surplus of qualified IT specialists. 72% of doctors have Internet access in their surgeries. The information provided by government websites is generally agreed to be of "good" quality.

Poland has introduced a central register of criminal information (KCIK) and the e-Gmina programme, the objective of which is to create internet websites for every community in Poland. Fundamental public services which are accessible through Internet for private persons include income tax, employment agency, social insurance, obtaining identity cards, vehicles register, obtaining permissions for constructions, submitting applications to the police, public libraries resources, issuing copies of acts of birth, submitting applications to universities, changes of residence, and health service; for business subjects: ZUS (social care), income tax, VAT, business activity register, statistic resources, customs declaration, licences and certifications, procurements. Contacts with Social Care Offices can be performed entirely via Internet.

The fastest development of public eServices concerns: Social Care Services, presentation of Statistical Data, declarations and duties, registration for universities, information about address changes, condition acts, etc.

Poland has probably the third most developed **eGovernment** systems amongst the NMS, offering the possibility of downloading and uploading official government forms over the Internet.

Weaknesses

The Polish government is currently prioritising social and economic issues, whilst strategies and policies are largely in place, implementation is dependant on very limited finances.

Another weakness is the low skill levels of administration clerks and officers. Only 12% of local administration units organised ICT training for their officers in 2004. Another barrier is a lack of leaders at central, regional and local level with the relevant experience. Limited understanding of eGovernment issues by politicians is also a hindrance.

A concern for the future is the "brain drain" of qualified IT specialists whose skills will be required for the future development of eServices.

eHealth is the weakest part of eServices, but strategies are being worked on currently. At present the method for re-imburement for eHealth services is unclear.

eLearning services are growing slowly. There is however only small demand for these services. Cisco and Microsoft certified courses are popular (hence the surplus of qualified IT specialists), but for other courses there is need for a recognised certificate systems as the quality is variable.

Trust in Poland is higher than in other European countries, as evidenced by the very fast growth of eBanking.

There are currently no eServices for minority groups.

Trans-European actions

Stakeholders identified services for entrepreneurs, medical, library and tax eServices to be the most wanted by Poles, but a common request was to reduce the possibility of fraud and improve general Internet safety. Most of the stakeholders felt that international trade and job mobility should be the main targets for developing transnational eServices. They also felt that NGOs

should be more closely involved, particularly as the current government had other priorities. Young people were also seen as a suitable target group.

It was felt by a number of stakeholders that eLearning and eHealth, rather than eGovernment, should be the main eServices to develop in Poland, at least until clearer eGovernment strategies and political willingness appear. The SME sector was also seen as worthy of investment, particularly with regard to security. Culture and tourism (particularly if addressed to the needs of the young) were seen as suitable for transnational development.

Suggestions for supporting take-up included setting up a council of experts, raising awareness in schools and linking more closely to the EC's research and technology development programmes.

Most of the Polish stakeholders disliked the current two phase structure of eTEN. Responses varied from combining the two phases (validation and deployment) to scrapping the validation phase altogether. All agreed that funding should be higher considering that eTEN is concerned with public services. The average funding level was 50%. Two stakeholders specifically requested greater transparency in the eTEN bidding process to include details of project progression through the system, this was presumably in order to help potential project applicants avoid pitfalls and learn from the experience of others.

Only one stakeholder was not aware of the eTEN programme before being contacted, but all stakeholders agreed that general awareness of the programme is too low. Suggestions for improving awareness included combining information with other programmes and using traditional (paper) media.

3.11 Romania

Europa website (Eurostat/ITU 2002)	National Expert Update
Area: 238,391 sq km	-
Population: 21,795,000	-
Average pay: 2,001 euros (per year, 2001)	-
Mobile phones: 23 per 100	32% (2003)
Internet users: 9% (1,306,000)	5,280,000
Main ethnic groups (2001): Romanians, 89.5%; Hungarian, 6.6%; Roma, 2.5%	-
Inflation: 22.5%	-
Unemployment: 7%	7.2% (2003)
GDP per head: 25% of EU average	-
Growth rate: 4.9% (2001 to 2002)	-

Romania has one of the most dynamic media markets in south-eastern Europe. Most households in Bucharest have cable TV. There are hundreds of cable distributors offering access to Romanian, European and other stations.

Strengths

Romania is an emerging market with a stable economy and a government interested in developing eServices.

There is a well trained labour force available to help build eService applications.

Some services, such as eTenders, are already available and a number of pilot projects have been started. The Romanian Chamber of Commerce is involved in an eTEN project.

Availability of EU funds to aid developments.

Weaknesses

Romania has a reputation as 'hacker country', whilst this may be seen as a weakness, it is also a strength as it implies that the country has the skills and experience required to develop safer systems if ways can be found to convert these destructive skills into constructive solutions.

Romania is a largely rural country with a poor infrastructure. There is still resistance to change amongst many government officials which can slow development and appropriate legislation can take a long time to come into force. Paper based invoicing is still mandatory.

There are no **eHealth** services available in Romania, though Romania is currently involved in two eTEN projects on eHealth. There is limited of co-ordination between National and EU fund actions.

Trans-European actions

Most of the stakeholders identified reducing bureaucracy and corruption as being essential elements for the development of eServices

All stakeholders identified the need to improve and promote **trust and security** for Internet based services. These structural services were seen as vital to encourage business take-up and create a critical mass of users to 'kick-start' the eService concept amongst ordinary citizens.

More than half the stakeholders believed that ways should be found to use the pool of young, IT skilled, labour in Romania within eTEN projects, even if those projects were not aimed at Romania.

Most stakeholders agreed that deployment should receive a higher priority with all agreeing that the level of funding was inadequate. However concern was expressed that the primary focus of eTEN should be maintained and not allowed to become confused if working in conjunction with other funds. They also all felt that a combination of top-down and bottom up proposals was most appropriate.

Most of the stakeholders were well aware of eTEN prior to interview; one had gained his knowledge from Italian sources. They all felt that general awareness was low.

3.12 Slovakia

Europa website (Eurostat/ITU 2002)	National Expert Update
Area: 49,034 sq km	-
Population: 5,379,000	-
Average pay: 3,837 euros (per year, 2001)	-
Mobile phones: 54 per 100	-
Internet users: 22% (1,183,000)	-
Main ethnic groups (2001): Slovaks, 85.8%; Hungarians, 9.7%; Roma, 1.7%	-
Inflation: 8.8% (2003)	-
Unemployment: 16.6% (2004)	13.1% (Q3 2004)
GDP per head: 47% of EU average	-
Growth rate: 4.2% (2002 to 2003)	-
Main exports: Cars, refined oil products, flat rolled iron and steel	-

Right at the heart of Europe and with a history intertwined with that of its neighbours, Slovakia has proudly preserved its own language and distinct cultural traditions.

The introduction of commercial TV in the 1990s transformed the broadcasting market and brought foreign media groups into the media landscape. Channels from neighbouring countries, in particular the Czech Republic and Hungary, have a sizeable audience.

Strengths

Slovakia has made considerable strides in developing ICT over the past few years. The information services provided by government are considered to be "good". There is also a high mobile phone penetration. Most schools have Internet access and there has been a large increase in the number of qualified IT specialists, mainly due to the Introduction of Microsoft and CISCO Academies.

There are several eGovernment applications (like www.obcan.sk, www.mesto.sk, www.government.gov.sk, www.rokovania.sk, www.notar.sk etc.), but added value for citizens is still limited. The most successful application in **eLearning** is probably the Cisco Networking Academy Program. Some universities have also started eLearning programs; practical impact at this stage of development is still rather limited

The government Road Map (2005) outlines tasks for development and there is an added incentive to achieve results as 2006 is an election year.

The position of the Commissioner for Information Society has been recently (November 2004) filled.

Weaknesses

A monopoly telecoms provider means there is less pressure to reduce connection charges. The lack of IT employment opportunities for young people means that there is currently a 'brain drain' of the talent that will be required to develop eServices.

eServices for **SMEs** are very limited. There is general awareness of **eInclusion**, but **trust and security** is also rather low.

Public Administration institutions are rather bureaucratic, rigid organisations. There is low interest of some officials in online public procurement (which could reduce corruption). In this case only legislative pressure and/or support of top management is needed (mayors, presidents of regional government etc.). Unlike the Czech Republic, there is a low awareness of the benefits of eServices amongst local mayors and regional officials.

General awareness and concern about privacy issues are in general low. The electronic signature act has not yet been applied.

A 'citizen-centred' approach to policy-making in the area of eServices has been officially declared, but is not yet being applied in practice.

Trans-European actions

The Slovak stakeholders all agreed that there was still much to be done in the field of eServices and felt that any service would be worth promoting merely in order to build capacity and experience. A few stakeholders felt that effort should be concentrated at local level in order to bypass the national bureaucracy or at a trans-national/regional level to obtain outside support. They were also most keen to be able to replicate eServices that had been developed elsewhere. Raising general awareness of the benefits of eServices by any means was seen as a priority.

Most of the stakeholders agreed that deployment should be better funded and that overall eTEN budgets should be increased to between 30% and 50%. The majority also felt that a combination of top-down and bottom-up approaches to eTEN initiatives was best and requested

closer co-operation between all EU funding initiatives. One suggestion was to develop an eService to act as a 'Clearing House' to help match demand or desire with available and appropriate funds.

Half of the Slovak stakeholders were not really conversant with eTEN prior to interview, and all agreed that awareness amongst appropriate actors in Slovakia was low. Better promotion, and possibly the involvement of the Chambers of Commerce were suggested as ways to increase awareness.

3.13 Slovenia

Europa website (Eurostat/ITU 2002)
Area: 20,273 sq km
Population: 1,996,000
Average pay: 10,850 euros (per year, 2001)
Mobile phones: 77 per 100
Internet users: 38% (758,000)
Main ethnic groups: Slovenes, 83%; Serbs, 2%; Croats, 1.8%; Bosnians, 1.1%
Inflation: 5.7% (2003)
Unemployment: 6.4% (2004)
GDP per head: 69% of EU average
Growth rate: 2.3% (2002 to 2003)
Main exports: cars, furniture, household electrical

A country with spectacular mountains, thick forests and a short Adriatic coastline, Slovenia also enjoys substantial economic and political stability.

The media scene is diverse and free. The main papers are privately owned and support themselves through advertising. The broadcasting sector is a mix of public and private ownership. About two thirds of TV households are connected to cable or satellite.

Strengths

Slovenia is a small country with a relatively large number of Internet subscribers. Although ICT is not top of the political agenda, the country has made considerable advances in developing eServices during the last two years.

Studies have been carried out, which showed that the state could save up to 70% of costs with the introduction of electronic services in comparison with the usual way of operation. This has spurred the government towards developing efficient, cheap and user-friendly public eServices in Slovenia. Actions of the Slovenian Ministry of Information Society, which was established in 2001, brought an important impetus for the development of **eGovernment** services. In 2002 the Slovenian Government adopted an Action Plan eGovernment up to 2004. Slovenia has thus made great progress in the last two years and is rapidly catching up with Estonia in the field of eGovernment services.

There is a high level of interest in IST usage amongst citizens. The government has taken a proactive approach by running a computer literacy education programme, setting up Public Internet Access Points and running an "e-schools" project.

According to some studies, Slovenian Internet users are less concerned with online security than other users in the EU. The digital certificate authorities-SIGOV-CA and SIGEN-CA have been set up. The use of digital certificates by administrative units is being introduced.

There is a good legal structure and political willingness to develop and use eServices. Most services are available in the Slovenian language and some cross border services have been developed such as eConsulting, eMarketplace and eShopping.

Slovenia has already implemented a health insurance smart card in line with some other EU members and is making progress on introducing more **eHealth** services.

Weaknesses

There has been some slow deregulation of the telecoms market which has kept Internet costs high. Some of the problems with the development of **eGovernment** services arise from the past absence of a more proactive governmental policy. During the latter part of the 1990s ICT issues were rarely among top governmental priorities. There was a disintegrated governmental web presence, a limited offer of G2C services, insufficient support for ICT in schools and the absence of stimulating measures.

There is a very strong digital divide according to education and age. The non-educated segments show a particularly low interest for PC and Internet usage. The low share of the population with a tertiary education is a barrier for the higher usage of eGovernment services in Slovenia.

There is a general lack of eContent and eServices in the Slovenian language attractive to different segments of users. **eHealth** information services are currently limited

Trans-European actions

Slovenia is already working with Italy, Croatia and Hungary for joint cooperation on some eServices.

The stakeholders were varied in their suggestions for services to promote, which included services to help access EU funds, eProcurement services as well as the standard eTEN domain services. All agreed that there was still a need to achieve a critical mass of users and a number suggested that services to SMEs would achieve this goal more quickly than services to individual citizens. However two stakeholders were keen to promote the value of small projects to help existing services move into viability.

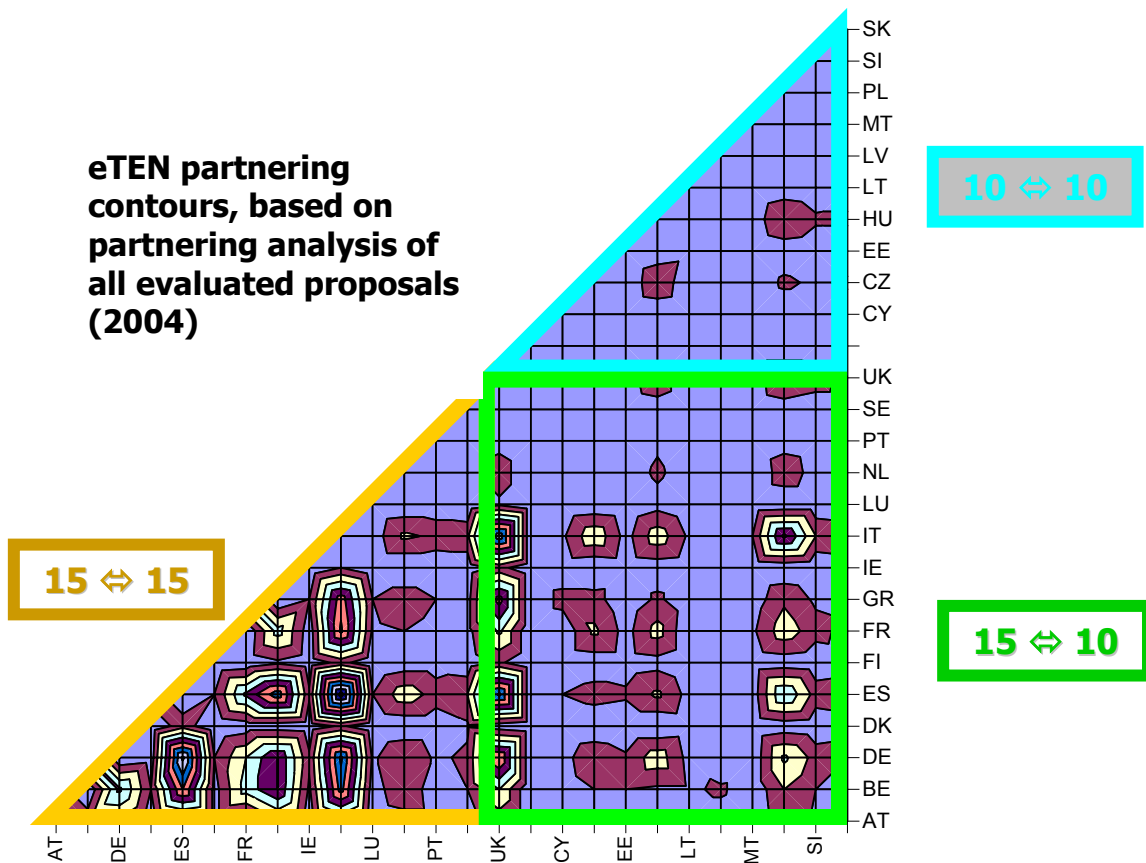
Responses to the best focus for eTEN were also more varied than any other group of stakeholders with one requesting more emphasis on validation (this was the only one to do so in the whole survey). All agreed that funding should increase.

Half the stakeholder were "well aware" of eTEN prior to interview, and they also thought that awareness amongst potential actors was "quite good".

4 The impact and implications of enlargement on eTEN

The eTEN 2004 work programme was the first opportunity the NMS had to participate. However, this has been highly successful with 11% of budget and 16% of partners accounted for by the NMS. On average the financial return per NMS was about 2.5 times their investment in the programme.

In addition, there is already very good mixing between the NMS10 and the older EU15 in forming eTEN project consortia, as can be seen in the diagram below. In fact, the average partner in the EU15 was only 1.2 times more likely to find a partner in another EU15 country as compared with one in a NMS. On the other hand, mixing between NMS10 partners themselves was relatively low; the average partner in the NMS was 3.6 times more likely to find a partner in the EU15 than in another NMS.⁶ This could be explained by the desire of NMS partners to seek 'experienced' EU15 partners when making proposals, but also points to a potential for greater cooperation in the future between NMS partners to exploit the potential for cross-border services.



Clearly, however, one year is insufficient to make a real judgement, particularly when the first year will, by definition, be characterised by 'learning the ropes'. Indeed, one of the major differences already noted between NMS and EU15 participation in eTEN is that the former lack the experience in applying for EU funding compared to the latter, but that this distinction is likely to disappear quite quickly. This also needs to be set against the fact that the current legal basis and funding for eTEN terminates at the end of 2006, and that, from 2007, a new financial,

⁶ Information and data obtained from the eTEN Unit of DG Information Society.

operational and policy framework is likely to replace it. At that time, it can be expected that any differences in experience and participation between the NMS and EU15 will completely disappear as every MS will be confronted with the same programme new to all.

However, the implications of enlargement on eTEN, and the value of eTEN to the NMS, are not captured by such developments. Enlargement has brought with it fundamental changes to the way the EU works, and this applies to its funding and support programmes and policies as well. The purpose of this section is to examine the evidence collected as to how eTEN has been used in the NMS and how eTEN has been affected by enlargement. An understanding of these issues can be expected to improve the future working and focus of the programme and contribute to the on-going discussions around the enlargement agenda. It will demonstrate one aspect of how the EU dynamic is changed as a result of enlargement, for example new opportunities in terms of actors, markets and investments, etc.

The section starts with summary tables of individual NMS which provide an overview of eService strengths and weaknesses, potential benefits for eTEN, national priorities, drivers and barriers, actions eTEN should promote and recommended methods, and awareness of eTEN and suggestions for improvement. These tables can be used as a point of reference for the more detailed analysis given in section 3 at individual NMS level and in the rest of this section 4 across all NMS.

Next, an overview is given of whether and in which ways there are general differences in the ways in which the eService environment is seen by the various stakeholders surveyed across all the NMS. Third, the challenges and opportunities posed by eServices in the NMS are considered. And, finally, there is a review of NMS needs for, and contribution to, the eTEN Programme.

4.1 NMS summary tables

The following four tables provide summary overviews of some of the main features of eServices and eTEN implications in individual NMS as seen by the NMS stakeholders interviewed during this study.

Table 1: eService strengths and weaknesses, plus potential benefits for eTEN

Table 2: National responsibilities and priorities, with drivers and barriers

Table 3: Actions eTEN should promote and recommended methods

Table 4: Awareness of eTEN and suggestions for improvement

To avoid repetition, the tables do not duplicate the issues common to all, i.e. the need to:

- develop content in national languages
- improve interoperability
- provide examples of good practice
- increase funding levels

The tables only specify the specific additional responses made by stakeholders in each country.

The information and data in these tables have been compiled from the stakeholder survey, the information collected in Phase 1 of the study, interviews with experts, plus other background sources, and are not exhaustive. More detailed, independent, audits would be required before developing any specific actions based on these tables. These summary tables can also be used as a point of reference to the country profiles in section 3, and if more information is required, to this study's Phase 1 report (published in October 2004) which includes a comprehensive review of each NMS covering all aspects of eServices, as well as references to other sources.

4.1.1 Table 1: eService strengths and weaknesses, plus potential benefits for eTEN

The following table identifies some of the major strengths and weaknesses of the individual NMS in relation to eServices, and suggests some supporting roles that they may take within eTEN.

Country	eService strengths	eService weaknesses ⁷	Potential benefits for eTEN
Bulgaria	<ul style="list-style-type: none"> • Telecom liberalisation & Political will • eSignature & ePayment systems in place • Tradition of ICT at University level • Using American learning packages. • Most GPs using electronic patient records 	<ul style="list-style-type: none"> • Poor infrastructure • Brain Drain • Shortage of resources for disabled people 	<ul style="list-style-type: none"> • Supplying ICT specialists • Software development skills.
Cyprus	<ul style="list-style-type: none"> • Integrated healthcare information system • eGovernment, Automated system in Government departments • eTourism. • Digital signature adopted 	<ul style="list-style-type: none"> • Lack of IT skills in general population • Heavy focus on technology rather than usability 	<ul style="list-style-type: none"> • Experience with some health services coming on-stream • Automated government offices
Czech Republic	<ul style="list-style-type: none"> • Dynamic regional authorities • ETourism (17 language portal for visitors) • Public Administration Portal • eInclusion - portal for people with special needs. • ETaxes • National Digital Literacy Programme 	<ul style="list-style-type: none"> • Less dynamic national authorities • Low computer literacy in population. • Shortage of administrative capacity managing EU funds 	<ul style="list-style-type: none"> • Supplying IT specialists • Methods of supporting local initiatives • Experience with WiFi hotspots • Experience with portal for people with special needs.
Estonia	<ul style="list-style-type: none"> • eGovernment, eVoting • ID cards, digital signature • eInclusion, (Look@World), PIAPs • eLearning (Tiger Leap) • SMEs (eTaxation, eCustoms) • Strong NGO sector involvement 	<ul style="list-style-type: none"> • Shortage of skilled workers, • Organisational structure & change management • Unfriendly legislation 	<ul style="list-style-type: none"> • Demonstration of eGovernment and eVoting services • Sharing good practices • Demonstrating cost-effective development • Working with NGOs • Integrating services
Hungary	<ul style="list-style-type: none"> • Support for PC procurement • eEntrance and eExam for Universities. • PIAP roll out • Programming skills (Sulinet) • eInclusion - voice library for visually impaired children. 	<ul style="list-style-type: none"> • Divided government responsibility • Low Internet penetration • Dislike of registration on-line • Lack of interest by public 	<ul style="list-style-type: none"> • How to increase ICT skills by supplying cheap computers • Software programming skills • Experience digitising science and culture materials • Experience providing internet services for the blind • Experience with digital evaluation of students.

⁷ Note that the following weakness are not included in this table as they are common across all the NMS: weak health and eHealth services, limited infrastructure development, and limited financial resources.

Country	eService strengths	eService weaknesses ⁷	Potential benefits for eTEN
Latvia	<ul style="list-style-type: none"> Private sector led development Non-governmental initiatives in eBanking, eLibraries Policy writing Activities at Municipal level Willingness to replicate 	<ul style="list-style-type: none"> Least ICT developed country Decreasing public sector investment. Public Administration lacks IT skills and awareness 	<ul style="list-style-type: none"> Experience of private sector and NGO drivers Private sector and NGO initiatives Working without a digital signature Experience of replicating another state's initiative.
Lithuania	<ul style="list-style-type: none"> Policy writing Mobile phone signature initiative eInclusion - rural access points, service for ethnic minorities. eServices in minority language 	<ul style="list-style-type: none"> Lack of competition in providing internet access High Internet charges Limited range of ehealth services 	<ul style="list-style-type: none"> Expanding its Russian language service Experience implementing "m-signature" technology.
Malta	<ul style="list-style-type: none"> Using Public-Private-Partnership (PPP) to deliver cheap (free) Internet access eGovernment & m-government Overcoming digital divide High standard of living 	<ul style="list-style-type: none"> Slow deregulation Shortage of IT professionals 	<ul style="list-style-type: none"> Interactive eGovernment portal Experience of PPP to increase access How to adapt the Microsoft e-identity system Using mobile phone technology
Poland	<ul style="list-style-type: none"> eGovernment information and forms on-line Criminal register Social care services Large market for eServices Using imported eLearning modules 	<ul style="list-style-type: none"> Large rural economy Brain Drain Shortage of IT experienced clerks and administrators No e-service for minority groups 	<ul style="list-style-type: none"> Supplying ICT specialists Demonstrating university registration system – could become an EU wide service ? Criminal register.
Romania	<ul style="list-style-type: none"> Excellent programming skills eProcurement and eTendering in operation Large potential market 	<ul style="list-style-type: none"> Using old software and ICT platforms Brain Drain 	<ul style="list-style-type: none"> Supplying ICT specialists Experience of eProcurement
Slovakia	<ul style="list-style-type: none"> Policy writing Using imported eLearning modules Qualified IT experts New IS Commissioner appointed (Nov 2004) 	<ul style="list-style-type: none"> Little ICT development No ICT champion Brain Drain Insufficient legislation 	<ul style="list-style-type: none"> Supplying ICT specialists Examples of by-passing national bureaucracy. Experience with US eLearning programmes.
Slovenia	<ul style="list-style-type: none"> eGovernment, eTax, eEmployment, eInformation, eLearning Mobile phone used for 'm-payment' systems Health Insurance smart card Experience of transnational projects and cross border services (eConsulting) Secure intra-government communications, cost saving analysis Low Internet costs 	<ul style="list-style-type: none"> Under-qualified workforce Weak service promotion Shortage of quality and eContent 	<ul style="list-style-type: none"> Demonstrating cost-effective development cost/benefit model Cross border experience eConsulting eMarketplace Further deployment of health card Demonstrate how to improve unusable systems Invigorate politicians Work with EU partners.

4.1.2 Table 2: National responsibilities and priorities, with drivers and barriers

Country	Status of Information Society policies and plans ⁸	Responsibility for Information Society development ⁹	NMS specific priorities	Drivers	Barriers ¹⁰
Bulgaria	Starting to implement	Ministry of State Administration, Ministry of Transport and Communications	eBusiness, eSecurity, anti-spam	Surplus of IT specialists, efficiency gains, involvement in EU projects, political will	Digital divide, poor infrastructure, low ICT skills in government
Cyprus	Policy awaiting adoption	Ministry of Finance, Department of Information Technology Services (DITS)	Transnational interoperability, eHealth, tourism	Service quality improvements, efficiency gains, political will	New health system not implemented, shortage of IT specialists
Czech Republic	Starting to implement	Ministry of Informatics	Tourism, eGovernment,	Well educated public, good infrastructure, young people, surplus IT specialists	Lack of political will, mostly narrow band access
Estonia	Implementation well advanced	Department of State Information Systems (RISO), prepared by the Ministry of Economic Affairs and Communications	Improved mobility, regional cooperation, ID cards, eVoting	Political will, good infrastructure, some good examples running, eBanking, small country, positive economy	Shortage of IT specialists, bureaucracy, small country
Hungary	Starting to implement	Ministry of Informatics and Communications, Prime Ministers Office (eGovernment Centre), Ministry of the Interior (Citizen services), Ministry of Health, Ministry of Education, IT Information Society Public Company	Expatriated community	Young people, ICT in schools, PIAPs, well developed GSM	Lack of political will, legal framework
Latvia	Developing policies	Information Society Bureau at the State Chancellery, Secretariat of Special Assignments Minister of Electronic Affairs	Tourism, education, employment, Russian language services	National policy, public demand, political will, telecoms deregulation	Shortage of IT specialists, lack of ICT skills in general, public sector requirements
Lithuania	Developing policies	Ministry of Transport and Communications	Employment, Russian language services. Government,	National policy and investment.	Lack of competition, high prices Few teachers or civil servants with IT skills

⁸ The notes made in this column do not include the latest developments but represent the situation in early 2004. They are included in order to provide the background to the current roll-out of eServices.

⁹ The notes made in this column do not include the latest developments but represent the situation in early 2004. They are included in order to provide the background to the current roll-out of eServices.

¹⁰ All the NMS include as barriers lack of financial resources and shortage of suitable eContent in the native language.

Country	Status of Information Society policies and plans ⁸	Responsibility for Information Society development ⁹	NMS specific priorities	Drivers	Barriers ¹⁰
Malta	Implementation well underway	Ministry for Information Technology and Investment	Electronic identification, eGovernment, eProcurement, job search, eLearning	Interest in IT, efficiency gains, web-phone service, political will	Resistance to change
Poland	Starting to implement	Ministry of Scientific Research and Information Technology	Cross border trade, mobility of workers, public procurement	Surplus of IT specialists, EU membership, young people	Lack of political will, bureaucracy, large rural areas.
Romania	Starting to implement	Ministry of Communications and Information Technology. Also Group for the Promotion of Information Technology (Chaired by Prime Minister)	eProcurement, mobility of workers	Surplus of IT specialists, political will, EU funds, business sector	Poor infrastructure, large rural areas, no secure payment (SSL) modules.
Slovakia	Developing policies	Ministry of Transport, Post and Telecommunications, was transferred to Statistical Bureau, then Ministry of Education, now back with Ministry of Transport.	Standard interfaces, services for minorities, eHealth	Business sector, young people.	Lack of political will, low awareness amongst local officials, poor infrastructure, low IT skills amongst civil servants.
Slovenia	Implementation well advanced	Ministry of Information and Government Centre for Infomatics until November 2004, now Ministry of Economy and Ministry of Public Administration and Ministry of Education	eGovernment, eTourism, eHealth, mobility of workers	Political will, good infrastructure, small country, need for cross-border collaboration, efficiency gains	Shortage of IT specialists, lack of competition

4.1.3 Table 3: Actions eTEN should promote and recommended methods

Country	eTEN should promote	How
Bulgaria	Cross-border trade, Learning, Accessibility, all services	Employ Bulgarian experts, involve private companies
Cyprus	Health, Democracy, all services	Train managers, raise awareness amongst doctors and citizens, promote interoperability
Czech Republic	Local or Regional actions, Culture & Tourism, Government	Use our young experts, motivate regional development
Estonia	Wide field, add value to existing services, SMEs, Health, Learning, Government, Environment	Continue to support development
Hungary	Local or regional services, Health, Learning, Inclusion, Competitiveness.	Promote local services, address project focussed organisations, develop services in Hungarian
Latvia	Existing services, Government and Inclusion	Encourage replication, joint co-financing (public funds or private investment/sponsorship)
Lithuania	Services for daily life, Government, job search	Involve business, influence government
Malta	Business, Health, Tourism, Learning	Fund eBusiness and B2B services
Poland	SMEs, Health, Culture, Learning, cross border communications and trade (ignore government until situation changes)	Political and media lobbying, establish council of experts, raise awareness in schools, closer ties with other EU programmes
Romania	Trust & Security, Health, Commerce, Learning, Job mobility, Environment, Justice,	Use our young experts. Political lobbying, improve dissemination
Slovakia	The current range, Business, Government, Research	Build networks of actors, concentrate on regional services, allow co-financing with other funds, create regional portals for smaller states
Slovenia	The current range, SMEs, Payments, Health, Learning, Government	Concentrate on small initiatives, support existing services

4.1.4 Table 4: Awareness of eTEN and suggestions for improvement

Country	Stakeholder awareness	General Awareness	Ways to increase awareness
Bulgaria	Adequate	Minimal	Business participation, info days
Cyprus	Adequate	Minimal	More active role for NCP, national press
Czech Republic	Good	Weak	Workshops, handouts, address mayors and regional key actors, eTEN conference
Estonia	Excellent	Adequate	Info days, increase funding levels
Hungary	Weak	Minimal	Paper based information, target both SMEs and multi-nationals.
Latvia	Good	Weak	Seminars, national portals, more active role for NCP,
Lithuania	Good	Weak	Use local contacts, promote alongside other EU programmes
Malta	Good	Weak	Public briefings quarterly, seminars
Poland	Adequate	Minimal	Use Structure Fund network, simplify conditions and procedures, use 'every-day' language.
Romania	Good	Weak	Conferences, media campaigns, good practice examples
Slovakia	Weak	Minimal	Involve Chambers of Commerce, info days, publications, town/region twinning, create regional portals
Slovenia	Good	Adequate	Workshops, publications

Range = Excellent – Good – Adequate – Weak – Minimal - None

4.2 Stakeholder responses

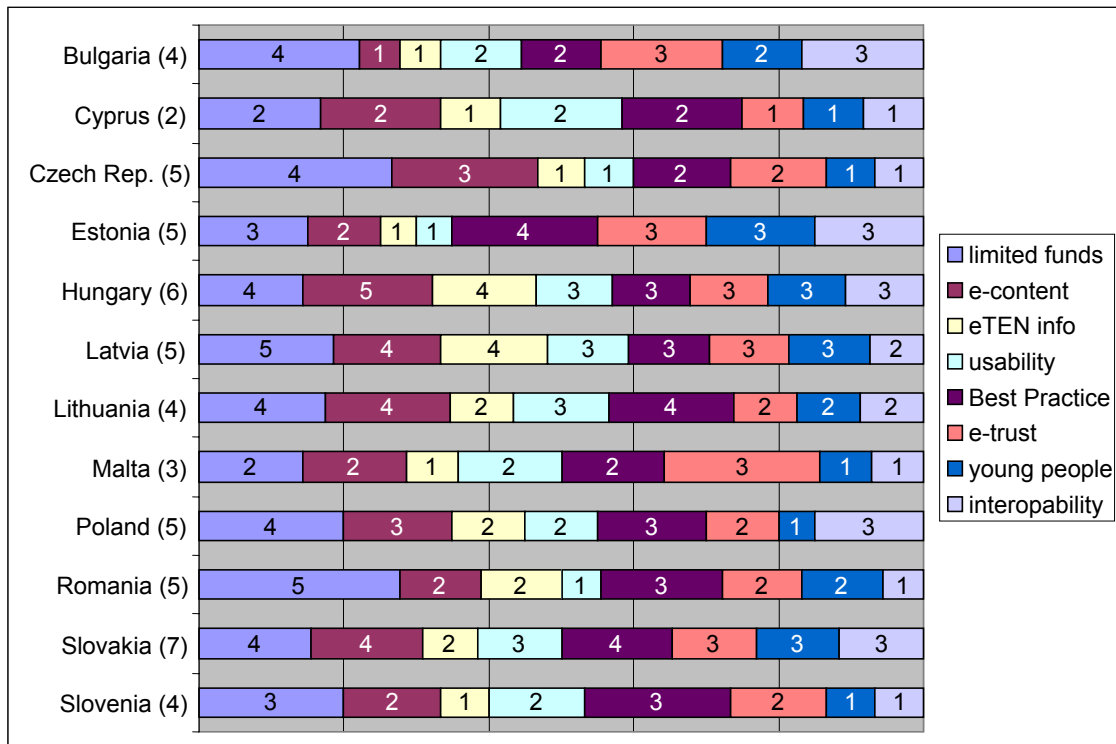
4.2.1 By country

As mentioned in section 3.1 above, at least one stakeholder in each country surveyed raised the following issues concerning eService delivery in their country. In most NMS more than one stakeholder mentioned each of these issues:

- shortage of funds to invest in new technology
- shortage of e-content in the national language
- shortage of eTEN information in their native language
- the need for eService applications to be designed to be user-friendly
- the need for 'real world' practical examples to act as role models and examples of good practice
- methods for enabling trust in the provider (by the user) and trust in the user (by the provider) are not in place
- young people are the most viable market for eServices to be targeted initially
- the lack of interoperability between systems and administrations.

The table below shows a breakdown of the number of stakeholders in each country that specifically mentioned the relevant issue. The number in each data bar is the number of stakeholders in that country mentioning the issue directly. Given the small scale of the survey no significant implications should be drawn from this figure other than that the issue is of concern. Many stakeholders implied concern within the general text of their responses, but these are not included because it was felt that such qualitative measure would merely show 100% of stakeholders concerned about every issue.

A much larger survey would be required to accurately calculate the relative depth of concern within a particular NMS. However, it can be assumed that, because these concerns were specifically expressed in all NMS, addressing them as a priority would have the greatest beneficial effect within the NMS as a whole.

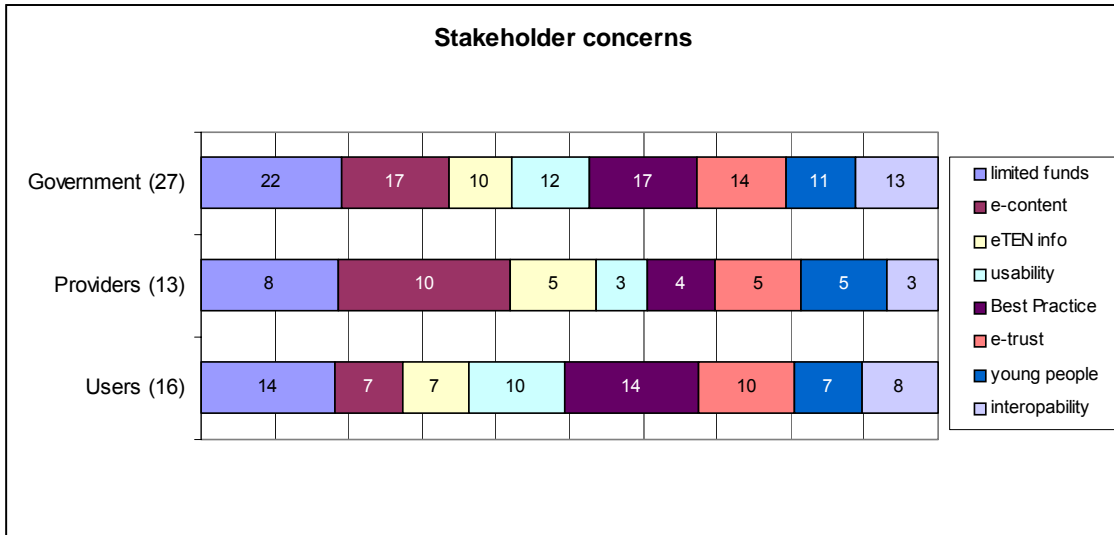


4.2.2 By category

Three broad categories of stakeholder were interviewed in each country. These were

1. Government Officials
2. Service Providers
3. Users

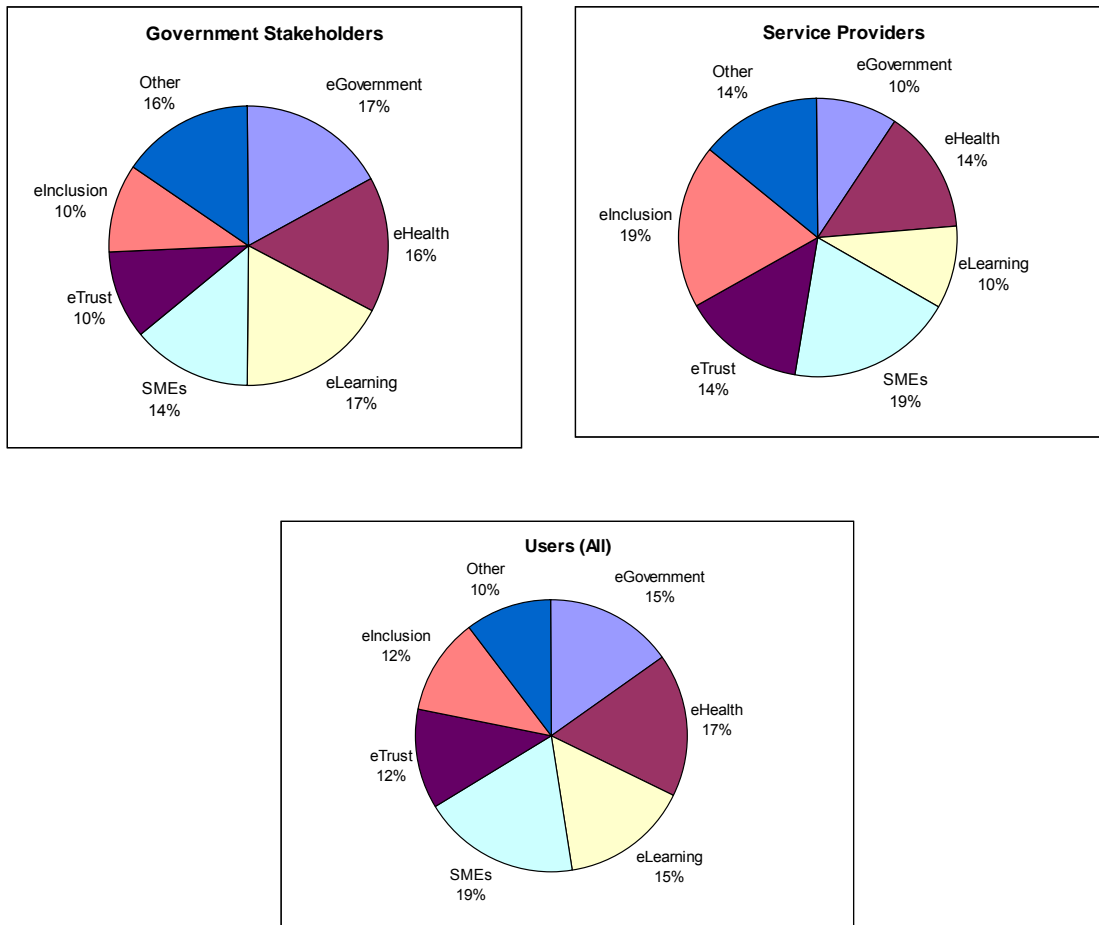
Analysis of the responses by stakeholder category, rather than by country, showed very little difference between the three categories. The table below shows how the three categories responded to issues of common concern. Given the size of the survey it would be unsafe to draw any firm conclusions as to the relative importance of each issue from the following chart. Whilst it is not surprising that the proportion of providers asking for more content in local languages, it is surprising that so few mentioned interoperability issues. For users, the number requesting local language content is relatively small, probably because they were competent with the English language. The high number of users requesting best practice examples is probably due to the inclusion of “real world, practical applications” within our definition of “best practice”.



The most interesting and most diverse stakeholder responses came when they were asked for their opinion as to which eServices eTEN should prioritise. The response to this is shown in the charts below.

Understandably, governments are most interested in eGovernment, eHealth and eLearning services, whilst providers (often from the private sector) are least interested, probably because there is not much direct market benefit in such services. Users tend to agree with governments on this. Service providers, on the other hand, prioritised SMEs (to the same extent as users), but also inclusion much more than either governments or users.

On the face of it, this is perhaps a surprising result, but can possibly be explained by providers’ recognition of the potential market which could result from the large and widespread differences in demographics and geography in the NMS. Most NMS Governments are still struggling with basic eService provision and have not yet confronted inclusion issues, whilst users seem not to be so aware as yet, given that those interviewed tended to be in the larger cities and are anyway a rather mixed category. Providers also prioritised eTrust more than governments and users.

Figure: Stakeholder views on which eServices should be prioritised by eTEN

It should not be forgotten of course, that these results are relative only, and the low interest of providers in government type eServices automatically, and perhaps artificially, pushes up their relative interest in other eServices such as eInclusion. Given the size of the survey (56 respondents), however, these differences are not statistically significant.

The implications are, therefore, that differences in approach, objective and priority are more determined by country or local environment than the sector from which the stakeholder comes.

4.3 eService status, challenges and opportunities in the NMS

This sub-section provides an overview of NMS characteristics in terms of the status of eServices as well as both to the challenges (or potential barriers) and opportunities (or potential advantages) facing the NMS.

4.3.1 Status of eServices

The table in section 4.1.2 shows that the status, implementation and strength of IS programmes, and how responsibility for the IS is handled in respective NMS, seem to be important. Those

leading in eServices tend to drive the IS through strong programmes already being implemented and often backed by a centralised ministry or unit. This supports the conclusion that top level commitment and priority given to IS strategies can result in the faster roll-out of eServices.

4.3.2 Challenges posed by enlargement

First, some of the background challenges faced by the NMS in comparison with EU15 are considered. This also provides a point of reference concerning the new dynamic posed to eTEN by enlargement. These are summarised as follows:

- The urban-rural divide is greater than in EU15, and regional disparities are increasing, including unemployment rates and levels of foreign direct investments (FDI) which is important as this impacts on the use and level of ICT, eSkills, etc.
- Higher general unemployment, especially long-term and structural unemployment, and lower social mobility.
- Low investments in R&D, inefficient university-industry cooperation, for example in relation to technology and knowledge transfer, and relatively poor dissemination and exploitation activities of (national) R&D projects.
- Lack of project management skills (including proposal writing), and weak strategy management skills and political leadership.
- The position of the incumbent national telecom operator is often too dominant, and this power is sometimes misused.
- Lower awareness of eInclusion issues in relation to disabled users than in the EU15.
- The health sector is typically in transformation, and partly in some cases privatized, and faces the issues of cost-efficiency, quality of service provision, etc., thus eHealth services are generally underdeveloped.
- There are significant minorities in many NMS, but few if any eServices for them.
- The physical and built environment is generally in much worse shape than in EU15.

Barriers and challenges specifically impacting eService development in the NMS, which were strongly highlighted by the stakeholder survey and which thus need to be considered by eTEN include:

- Shortage of funds to invest in new technology. For example, ICT infrastructures are relatively underdeveloped, although gradually improving, especially in rural areas. To reap the benefits of eServices requires initial investment, not just in the infrastructure, but also in training suppliers and users as well as promoting the service to the target audience. It should be remembered that as the concept of eServices is still relatively new, and awareness is low, promotional costs would be higher than for established services.
- There is a severe shortage of eContent in the national language. The smaller the country the more acute this problem is. But even Poland, with an Internet base of 3.4 million users (more than the entire population of most other NMS), is concerned at the shortage of suitable eContent.
- The need for eService applications to be designed to be much more user-friendly was expressed by stakeholders in each NMS. This was not just a case of technical accessibility, but more importantly that the services need to use 'common' language (not bureaucratic terminology) and have reliable, consistent and logical navigation styles.
- Methods for enabling trust in the provider (by the user) and trust in the user (by the provider) are not in place but are vital if eServices are to become accepted by the majority of citizens. Recognisable certification of services such as training courses and health advice were particularly important. For young people there was also a need for international recognition of their qualifications in order to help their employment prospects.

- Many Public Administrations (PAs) are relatively inefficient, and some are “Kafka-like”, and typically not attractive for educated or skilled personnel who are often poorly paid, and with low or inefficient use of ICT.¹¹ There is also widespread lack of interoperability between systems and administrations, this was constantly quoted as a barrier to deploying and using eServices.
- Effective strategies for Information society development (at national, regional, local and institutional levels) are often missing, and sometimes where a strategy exists it is only a “piece of paper” which lacks political will and follow up.

The above can be seen as barriers which, although generally shared with EU15, tend to be much more severe in most NMS. They thus pose additional challenges to eTEN as a result of enlargement.

4.3.3 Opportunities offered by enlargement

The NMS also offer a series of opportunities to eTEN in the context of eServices. These include:

- The NMS bring a massive increase in personnel skilled in all levels of ICT innovation and use, and typically at lower wage rates than in EU15. Although this poses some problems in terms of the operation of labour markets, it does provide an important potential boost to economic efficiency and growth.
- The NMS tend to have an advantage over the EU15 as their systems are based upon a recent common structure and they have, as a group, received recent funding through Phare, Tacis and similar EU programmes for joint projects. For example, there was a Phare programme for distance learning which most NMS have used to develop similar services. This EU support prior to accession also strongly developed the mutual exchange of good practices across the NMS, which amongst many decision makers and practitioners also generated positive attitudes to cross border cooperation and awareness.
- As well as these common traits, the NMS are very diverse and these differences can be used to help reduce the negative aspects of such diversity. For example, most NMS do ‘specialise’ to a greater or lesser extent and there is the potential for this to benefit other NMS across borders and through mutual trading and cooperation. Table 1 in section 4.1.1 above provides an overview of many of these possibilities.
- It has been possible to radically change government more or less from scratch after the collapse of communism, and although this effect has had some negative aspects because of lack of continuity and uncertainty and is anyway fast losing importance, many aspects of public sector operation have been modernised and have taken account of the potential of ICT.
- The NMS tend to have a younger age profile than in EU15, and young people in the NMS are the most viable eServices market for initial targeting. Part of the reason for this is the higher level of ICT skills amongst the young, but an equally valid (and more telling) reason is that more young people can manage to work in the English language and so actually gain Internet experience from a much wider selection of services.
- Many of the challenges considered earlier can, of course, also be seen as opportunities for investment and for expanding eServices and infrastructures across borders, thereby

¹¹ See also the country competitiveness index 2004, the report of the World Economic Forum (where there are also indicators reflecting the use of ICT by PAs – “government success in ICT promotion”, “government prioritisation of ICT” - e.g. for Slovakia see www.weforum.org/pdf/Europe/Slovak_Republic.pdf, or other competitiveness rankings (“government efficiency” is one criterion) – www02.imd.ch/wcy/) ... but also existing corruption levels referred to in the country corruption index).

providing 'sales' opportunities for the providers and increased economies of scale and scope for the EU as a whole and the NMS in particular. There is a greatly increased diversity in the EU because of enlargement which brings many new and potentially large opportunities for all MS in terms of actors, markets and investments. As standards of living and incomes rise in the NMS, demand for ICT and eServices will increase dramatically. Good examples of this would be opportunities to extend eHealth and eInclusion services to the NMS, as well as between the NMS from the NMS leaders in these fields (see section 4.1.1 above), but many other possibilities exist.

4.4 NMS needs and contribution to eTEN

In this sub-section we review and draw together the main NMS needs for, and contribution to, the eTEN Programme.

4.4.1 Cross-border benefits

The NMS bring a new dynamic to the eTEN programme with their need, at least initially, for effective local cross border services, rather than the pan-European eServices that many in the EU15 are aiming at. Historical border changes and forced or voluntary displacements have left the eight ex-communist states with a larger assortment of ethnic minorities from neighbouring countries than is found in the EU15. Hungarians are probably the most dispersed with nearly five million living in a variety of neighbouring states. There are Germans and Poles living in the Czech Republic, Poles and Russians in Lithuania, Germans in Poland, and so on. Most of these minorities still speak their original languages and maintain many original cultural values and ties to the country of origin. There is thus a real and urgent need to develop practical cross-border services within the NMS for sound social, economic and political reasons. Whilst similar local cross border eServices can often also be valuable within the original EU15, they are likely to be much more viable and able to deliver relatively rapid positive benefits within the ex-communist states.

4.4.2 Language

Most of the NMS are small and have more than one language in everyday use. Whilst many young people are becoming familiar with English, the majority of the population are not. If eTEN is to continue targeting public eServices, it must find ways to make these services available in a number of different languages that may each have less than one million users. Strict translations are expensive, but cooperation between the NMS could help reduce these costs by facilitating a shared or bartered service. Thus, for example, an NMS with a national group in another country could provide the required translation services for that group in exchange for a similar service addressed to the needs of the other country's nationals within their own borders. As it is unlikely that there would be exact matches throughout the region, some form of common 'currency' could be designed to allow virtual balancing of accounts.

Many of the NMS also bring a common legacy *lingua franca* with them, i.e. Russian. The three Baltic states have large Russian minorities. During the Soviet period, most people learnt Russian in schools. Though it is not such a popular language today, the sizeable Russian communities in the Baltic States make it viable for many cross border eServices with the side effect that many older, non-Russian, citizens within the region could also access them. Support for the Russian minorities (provision of eServices developed expressly for them) needs to be consistent with national government policies, but almost certainly requires funding and co-ordinating at a pan-European level. It would be unrealistic to expect individual MS to fund a service supporting such a large population living beyond its borders. Developing such services,

however, might have the additional benefit of helping to develop economic ties with the Russian Federation.

The two Mediterranean states are different in that Malta does not have any large ethnic minority, whilst Cyprus has a significant Turkish community within the Greek Cypriot borders, in addition to the Turks living in the northern part of the island. As both islands are popular tourist destinations they receive large influxes of foreign nationals during most of the year, so opportunities for cross-border eTourist and SME services exist.

4.4.3 eService credibility

The NMS have highlighted a shared issue of credibility when it comes to providing eServices. It is difficult for citizens in other MS to make an informed decision as to the reliability or true worth of any service that an organisation in an NMS (or other MS) may offer. This lack of credibility is particularly acute in the virtual world of eServices. With no officially agreed 'stamp of approval', a normal citizen will have no way of telling if a service is valid. This not only makes it difficult for organisations in the NMS to establish viable services, it also leaves the door wide open for fraud and deception. Some, internationally recognised system of accreditation is required if the NMS are to be fully involved in establishing and running transnational eServices. The signals that this is a genuine problem are already evident in the field of eLearning where IT students are using the American Microsoft and Cisco certification schemes to prove their skills and obtain employment in other countries, in a context where no equivalent European system exists.

The problem of standardising qualifications and evidencing quality is common throughout the EU. Some EU level work has already been undertaken to harmonise qualifications and the terminology associated with education, quality assurance procedures and job descriptions. At the university level, some harmonisation has been achieved through close cooperation and peer review. This might work as a role model for future development in other fields, but it is a slow process and the need is for something effective in the short term. A useful "rapid" solution for the certification of service quality might be to encourage one or more existing national quality councils or certification bodies to extend their services to be available to other states, perhaps in conjunction with a local service provider or group of providers. For example the UK has a government grant aided Open & Distance Learning Quality Council (ODL QC) that has nearly 30 years experience accrediting providers of distance learning courses. Leveraging that experience to benefit non-English language courses and have European credibility should be possible with the transnational co-operation that eTEN can support administratively and financially. It may also be possible to support the development of a Pan-European University Clearing House benefiting all EU universities by encouraging greater mobility of EU students between EU universities, as well as more non-EU students to enrol in Europe.

4.4.4 'Leap Frogging'

The question of whether the NMS could be helped to 'leapfrog' the older MS and become champions in selected areas, has been asked on many occasions. In many ways, Estonia and Slovenia are already good examples of 'leapfrogging', as they are both at, or above, the EU average for delivering eGovernment services. In fact, this example probably says as much about how slowly some EU15 MS have been developing eServices as about the excellence of Estonia and Slovenia. Whilst these two states could be held up as examples of what can be achieved with limited resources, it is this limit on resources that makes it hard for them to become proactively involved in any actions that do not bring a direct benefit to themselves. Support from eTEN could be the only way of ensuring that the benefits are shared, especially as most NMS are small and cannot afford the cost of developing new eServices on their own. Cooperation, as well as competition is thus vital.

4.4.5 Learning from each other

At a general level the NMS fall into several types, ranging from those that see their current strengths through implemented strategies and those that see the mere creation of strategies as strengths. The former camp is clearly led by Estonia with Slovenia a close second, the Czech Republic, Bulgaria and, possibly Poland, are moving into implementation but face real financial and administrative problems. Slovakia, Latvia and Lithuania also face these problems but still tend only to be looking at policies. These differences, as well as the different strengths and weakness highlighted in section 4.1.1 and the status of and responsibilities for Information Society policies sketched in section 4.1.2, point strongly to the conclusion that pro-active efforts should be made to increase cooperation and mutual support through the eTEN Programme. The two leading states in terms of deploying eServices have already established strong working relationships with existing member states (Estonia/Finland, and Slovenia/Italy). This cooperation should be both between the NMS themselves, where geography, history and circumstances make it easier to find complementary partners and expertise, but also across the EU as a whole.

To improve the quality and impact of projects it is important that easy access is provided to the 'how and why' of good practice and the relevant supporting background information in order to provide a wide range of 'learning experiences'. These experiences need not be limited to successful implementation (though they would, hopefully, be in the majority) but could include documented examples of practices that failed to achieve their goals by way of illustrating what to avoid and how to draw lessons from mistakes.

4.4.6 Conclusion

Many of the challenges, opportunities and recommendations considered in this section are not unique to the NMS, but enlargement has significantly increased their importance and fundamentally changed the dynamic. Similarly many of the issues which eTEN needs to confront as a result are not unique to eTEN alone but also impinge much more widely on other programmes and policies and on the operation of the EC and the EU as a whole. Understanding these issues in the contexts described here will enable the NMS as well as the original MS to obtain more benefit from involvement in eTEN. They will also help the eTEN Programme to be better targeted and operated.

If eTEN is to respond positively to the inclusion of the NMS, it will need to place a greater emphasis on cross-border eServices, trust in the virtual space, the harmonisation of standards, delivery to small language groups and supporting change management at various levels of government. If eTEN had not already existed, something like it would probably have had to be invented specifically for the NMS which joined the EU in 2004.

5 Scope and focus of eTEN

The overall goal and vision of eTEN is to support the real deployment of eServices in the public interest which demonstrate and facilitate a European dimension.

Feedback from this and other studies reveals considerable uncertainty about which type of eServices and eService conditions eTEN supports, and also to what extent the potential impact of eTEN in relation to the above goal is optimised by the current focus on the six themes.

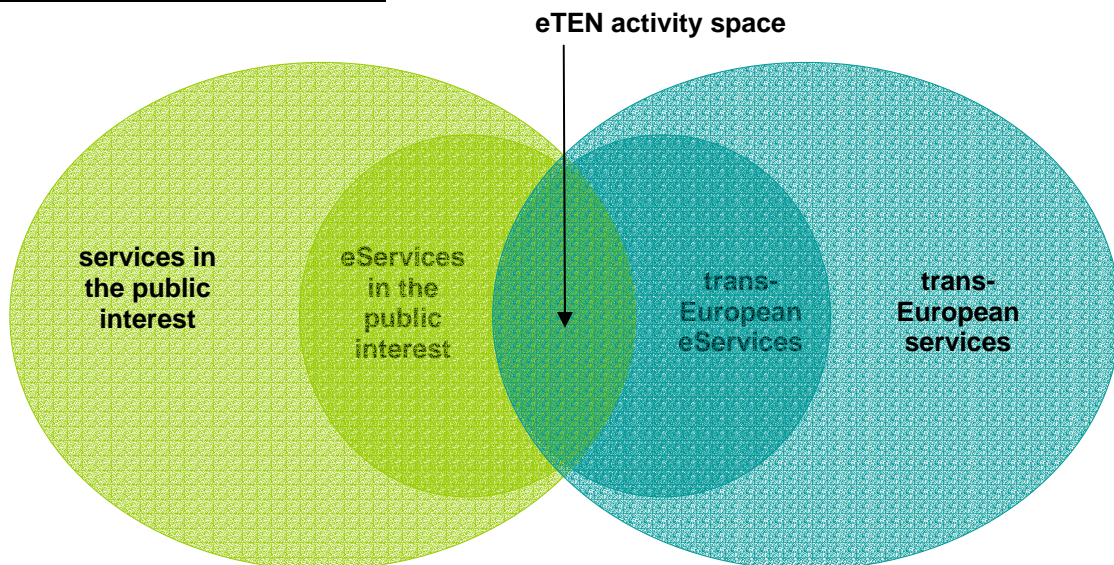
Based on the study's research and feedback, this section examines in some detail the potential scope and focus of eTEN, and makes recommendations concerning these issues for the future design and positioning of the programme.

5.1 The eTEN activity space

Exploring the eTEN activity space as the potential scope of the programme's area of operation in relation to its overall goal, will provide a clearer but, at the same time, a more flexible and open approach to the types of eServices eTEN should support.

5.1.1 Defining the eTEN activity space

Figure: Activity space of eTEN



The eTEN activity space, i.e. the area which is potentially relevant for eTEN support given the programme's objectives and experience to date, is circumscribed by two broad defining principles:

1. (e)services in the public interest. In eTEN, the terminology "eServices with a common interest" is normally interpreted as "eServices in the public interest", i.e. services having an impact on citizens as citizens, but also on SMEs, as supporting these can facilitate community development and has an important cohesion as well as economic dimension.
2. trans-European (e)services, i.e. eServices which support the 'European dimension'. The legal basis for the European dimension of eTEN is that an eService "can be implemented in one MS as long as it has a wider European base."

These definitions are explored in more detail in the following.

1. eServices in the public interest

eServices in the public interest comprise the electronic channel subset of services in the public interest, which can be broadly defined as services which the private (profit-seeking) sector either cannot or will not provide on its own, but which are deemed to be necessary or useful either politically or by users or user representatives. Thus, eTEN eServices must not interfere in any way with competition policy, nor distort the market. (See also section 7.2 below in relation to this.) Present themes and their main current focus and concerns are given in the following:

1 Vertical themes:

i) eGovernment

- Present key issues are:
 - a broad focus
 - a platform for “bright ideas”, e.g. optimising parking spaces in cities and replicating such good practice elsewhere
 - a mix of both a top-down and a bottom-up focus to encourage such bright ideas.
- It will be important to increase cooperation with other units and DGs.
- The back-office issue is also important, i.e. increasing the effectiveness and efficiency of government which is seen as a means to the ends of better outward-looking services, as well as cost and efficiency savings.
- In terms of the trans-European aspect, there are only a few cross-border projects but many more projects exploiting replication, i.e. looking at taking existing eServices to other markets, etc
- In the last eTEN call, eGovernment had good coverage except for the eParticipation issue. It is difficult to enthuse Public Administrations about the latter, so a European perspective could be important, especially in providing a platform for public debate, e.g. including web-casts of local council meetings.

ii) eHealth

- Present key issues are:
 - interoperability until 2006 (everything, technology, organisational, legal, etc.), i.e. systems capable of talking to each other, Lisbon-based mobility of citizens, getting medical help wherever they are in Europe, access to e.g. medical (patient) records anywhere with the patient’s consent
 - interoperability on medical records is the most critical, but there are also other aspects such as re-imburement of medical expenses incurred abroad (e.g. the eTEN Netcard, health insurance project does this)
 - a Common Electronic Health Card for the whole of Europe, e.g. in 2008-2010, is the goal, but there are still many problems, such as coding of data (the standard number of bits used is different in each MS)
 - also important is common generic naming (using the active molecule) of all medications and drugs, rather than commercial names which are often unfamiliar to medical staff outside their country of use..
 - a support action on interoperability issues
 - others include telemedicine (remote surgery), home care, etc.
- The main MS interests in eHealth are rapidity and savings.
- The eTEN eHealth theme is thus moving strongly towards a top-down focus because there are a small number of critical issues on the agenda which most MS agree to, including the NMS.

iii) eLearning:

- Present key issues are:
 - deployment of lifelong learning
 - electronic campus

- (re)skilling of the workforce.
 - eLearning will probably increase in importance in future especially in the context of the Kok Report¹², e.g. twinning of schools, virtual services for universities, (re)skilling of the workforce in the context of lifelong learning.
 - In relation to the OMC option, many practitioners are wary of benchmarking but are beginning to see the value of learning from each other.
 - The role of PPPs is important: the public sector ensures sustainability, the private sector can develop and implement a sound business plan, but there can be suspicion between the two and the different cultures have to be taken into account.
 - Cooperation between DGs needs to be strengthened and dissemination needs to be increased.
- iv) eServices for SMEs
- Present key issues are:
 - networks of SMEs
 - access to eGovernment services
 - cross-border services and international trade
 - industrial districts and growth nodes
 - patenting
 - ‘customer intimacy’ and ‘preserving identity’, as e.g. Greek and Finnish SMEs have huge cultural differences
 - extended enterprises, enterprises within a ‘business ecosystem’ and virtual enterprises (in some MS the latter do not legally exist).
 - The SME theme is included in eTEN because they often represent aspects of inclusion as they are often disadvantaged and the economies of many rural and peripheral are largely dependent on SMEs.
 - Examples include:
 - CareerSpace which is developing online career profiles, initially just for large companies but now also for SMEs
 - eSkills Forum, supporting the (re)skilling of the workforce which is becoming increasingly important (there is overlap here with the eInclusion theme).
 - In the future, the SME theme could increase in importance in the context of the Kok Report’s emphasis on competition, innovation and employment.

2 Horizontal themes:

- v) eInclusion
- Present key issues are:
 - accessibility
 - usability
 - segments of society, different minorities, etc., including the disabled, the elderly, etc.
 - There is an important distinction between eHealth and eInclusion:
 - eHealth is interventionist, point-based and “punctual”
 - eInclusion is long-term and on-going care, e.g. eServices to support chronic disease and illness, and provides support for independent living using assistive technologies, and which bridges the digital divide.
 - The big problem of meeting eInclusion needs through commercial mechanisms is that the market appears limited. Thus, support to eInclusion projects can be very beneficial, so that by such intervention, and putting regional and national systems together, the market can become more trans-European and thus potentially bigger.
 - eInclusion is also about ‘unlocking the creativity of difference’ which sees diversity as an asset. Public intervention is often needed to kick-start this.

¹² Kok, Wim et al (2004) “Facing the Challenge: The Lisbon strategy for growth and employment, Report from the High Level Group chaired by Wim Kok, November 2004, European Commission.

- There are not many eTEN eInclusion projects at present, possibly because of the general immaturity of services and the lack of PA involvement.
 - In the eTEN 2005 workplan, there is a strong suggestion that eInclusion should be a requirement across all other themes, e.g. through a focus on accessibility and usability.
- vi) eTrust and eSecurity (including ePayment)
- Present key issues are:
 - as a 'horizontal' theme, should be incorporated into every eTEN project, or at least taken into account, e.g. eGovernment services should ensure data privacy and confidentiality
 - 'vertical' aspects, such projects could directly address anti-hacking, spam, security governance and management, anonymous or mobile payment systems, etc.
 - Overall, the theme is not addressed very well, so there is a significant problem.
 - There is also a psychological problem as it is easier to convince PAs to invest in a service area (such as health) than invest in trust and security.
 - Trust and security certification is an important aspect, e.g. what is needed to obtain 'trust', as trust in health has a different meaning from trust in money, which means that how trust and security are dealt with needs to vary.

Other eServices in the public interest are possible in future within the broad definition above. Some examples are given below.

The participation of public administrations (PAs) is essential in eTEN. PAs are here defined as national, regional and local public authorities, other public organisations (such as hospitals, educational establishments, public museums, public agencies in tourism or commerce), NGOs and other civic society associations, and similar. Other actors can also be involved in eTEN projects, both from the civic and private sectors.

There are potentially four main types of stakeholder directly involved in the eService supply chain:

1. the implementer: e.g. library, hospital, Public Administration (PA), etc., which provides the incentive and the resources
2. the actual service provider (either in- or out-house) which may be different from 1, e.g. in a Public-Private-Partnership (PPP) or partnership with a civic sector actor
3. the technology supplier, whether infrastructure, hardware, software, etc., and could be the same as 2
4. the user, which again could be described as in-house (i.e. G2G) or out-house (e.g. G2C and G2B).

In an eTEN context, stakeholder 2 is often still in a state of development and this normally hinders stakeholder 1 from making the investment.

2. Trans-European eServices

Trans-European eServices comprise the electronic channel subset of trans-European services, which can be broadly defined as services which MS either cannot or will not provide on their own (and which are also not subject to the subsidiarity principle), but which are deemed to be necessary or useful either politically or by users or user representatives. Present types of trans-European eServices tend to fall into one of four categories:

1. pan-European: are relevant for, and can be used from, anywhere in EU25+2, such as services provided by European-wide institutions or networks (the IDA Programme focuses on such eServices where these involve G2G and are based on treaty obligations)
2. cross border: are relevant for, and can be used by minorities, business networks, civic networks, etc., straddling one or more borders

3. multi-national: serving two or more (parts of) MS not necessarily adjacent, such as cooperation between two cities in two different MS to jointly develop and/or provide an eService for use by their own citizens, e.g. economies of scale or scope are created and needs in more than one MS are satisfied
4. replication, good practice, knowledge transfer, i.e. one or more (parts of) MS replicate, or learn from, the eServices of others by adapting to their own conditions and culture. This may be part of an Open Method of Coordination framework and may include peer review, actions within a common framework, benchmarking, good practice exchange, etc., but it may also be the more informal and bottom-up collaboration between two or more MS to learn from or assist each other.

Other trans-European eServices are possible in future within the broad definition above. Some examples are given below.

It is also useful to identify different levels of cooperation in developing trans-European eServices, but where in each case active cooperation between at least two MS is necessary in providing the eService. At least four such levels can be identified, though clearly there could be examples in practice which are mixes of two or more levels:

- 1 Simple replication, good practice exchange and/or knowledge transfer, where the eService in question is only used in one MS, for example:
 - a MS provides direct "consultancy" to another MS to assist the latter in developing its own eService
 - a MS replicates and localises one or more aspects of an eService from another MS without direct consultancy as a wider replication and good practice framework has been used
- 2 Existing national eServices remain essentially national but provide information/facilities specifically designed for users in other MS who have an interest in the MS in question, for example:
 - ex-patriots who still need to use the services of their MS of origin and where this information/facility is dependent upon which specific MS they are resident in
 - nationals in another MS who wish to be visitors, tourists or obtain work in the MS in question, and where this information/facility is dependent upon which specific MS they are resident in
- 3 Existing national eServices specifically replicated or adapted to be relevant and used in the context of other MS, where:
 - only the 'back-office' is trans-European, i.e. the same/similar infrastructure and/or application is used in more than one MS, but which each design their own specific 'front-office', i.e. user interface (design, facilities, information, etc.)
 - both 'back-' and 'front-office' are trans-European, i.e. the same/similar infrastructure/application and user interface (design, facilities, information, etc.) are used in more than one MS
- 4 'New' eServices for use in more than one MS, but still based on existing mature technology as eTEN does not support RTD or technology research or testing:
 - only the 'back-office' is trans-European, i.e. the same/similar infrastructure and/or application is used in more than one MS, but which each design their own specific 'front-office', i.e. user interface (design, facilities, information, etc.)
 - both 'back-' and 'front-office' are trans-European, i.e. the same/similar infrastructure/application and user interface (design, facilities, information, etc.) are used in more than one MS.

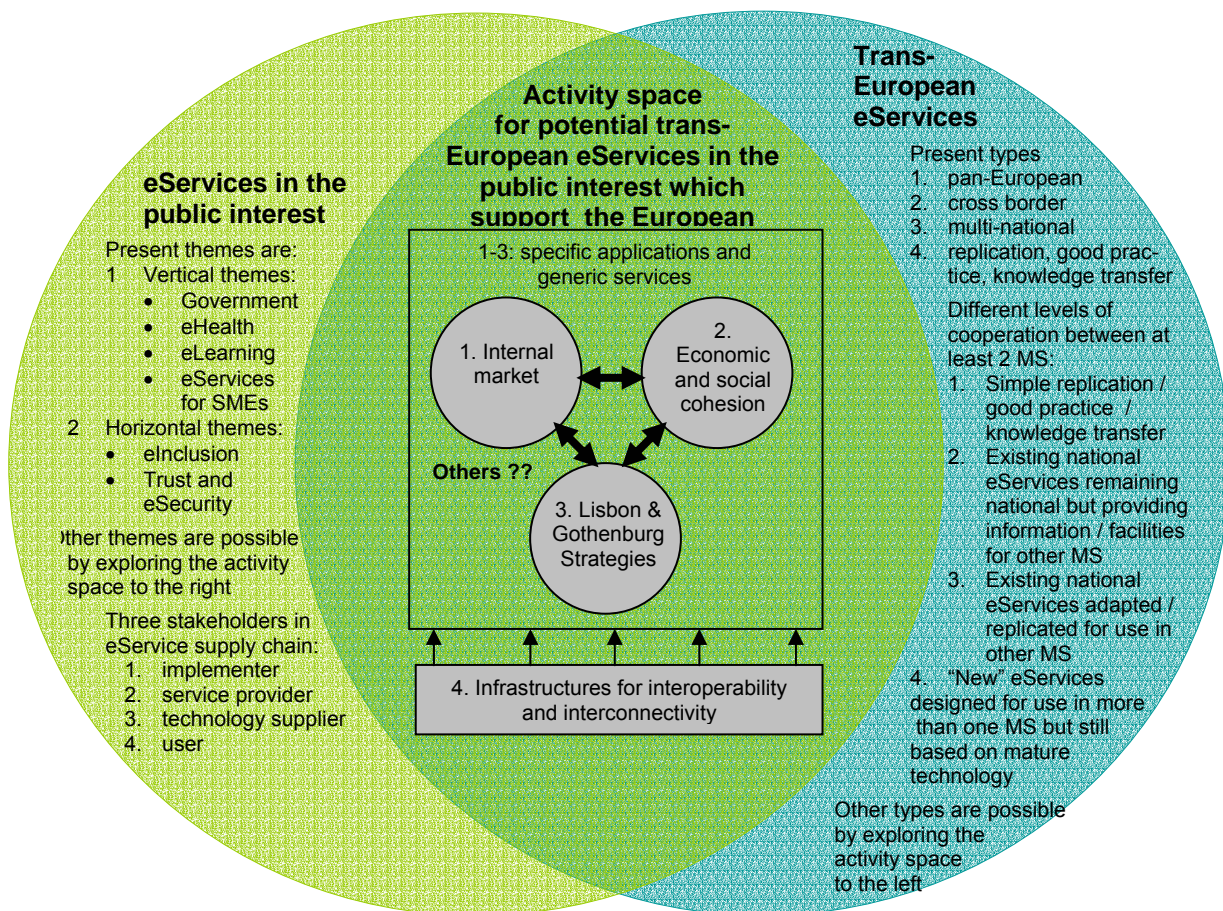
5.1.2 Components of the eTEN activity space

Trans-European eServices in the public interest must directly address and support the **European dimension**. In order to explore the full potential of this dimension, it is necessary to better articulate and understand the eTEN activity space as defined above.

The European dimension can be articulated both formally through Treaty requirements (i.e. politically) or informally through the needs of users or user representatives. The Treaty itself has three pillars: the Internal Market, common foreign and security policies, and common criminal affairs and legal provisions. Of these, it is mainly the Internal Market which is relevant in the eTEN context.

In order to better define what is needed and what can be expected, there seem to be four main areas which can assist in realising the European dimension for eServices in the public interest, and which are thus of potential interest to eTEN. The first three cover examples of theme-specific generic services and specific applications (the ‘front-office’). The fourth is the infrastructure for interoperability and interconnectivity which supports the generic eServices and specific applications (the ‘back-office’).

Figure : Components of the eTEN activity space



1. The Internal Market

The **internal market** is based on two concepts, competitiveness and citizenship:

- Competitiveness, based on the four freedoms of mobility of persons, goods, services and capital, thus:
 - job and residential mobility, e.g. passport, driving licence, social security, pension,
 - education and training, health, and other ‘public services’

- research, innovation, transfer of knowledge
- visitors, tourism, recreation
- transport
- environmental services
- etc.

Note, in the competitiveness context, there is currently a draft directive, not yet approved by Council, covering pan-European services (i.e. covering all MS), some of which could have implications for eTEN, for example:

- Single Point of Contact, i.e. providing all necessary information and support, e.g. so a company in one MS can set up and/or sell good/services in another MS (rather than having to separately contact company registration, regulations for tax, employment, social security, environment, etc.)
- eProcurement, so that a company in one MS can tender for goods/services in another MS through one portal.

2. Citizenship:

- security
- justice
- democracy
- participation
- digital rights
- civic sector, interest groups, culture, quality of life, content, etc.
- etc.

For example, one could envisage a “single market for eServices in the public interest”.

2. Economic and social cohesion

Economic and social cohesion – according to the Treaty governing eTEN, the programme should take account in particular of the need to link island, land-locked and peripheral regions to the central regions of the Community, and accelerate the development of new growth-area activities leading to job creation. This could include “weaker” areas benefiting from the public eServices provided in “stronger” areas, for example:

1. making best use of resources (e.g. not leaving employment resources idle in lagging regions through high unemployment)
2. developing so-called Euro-Regions across borders where the cohesive factor is either physical (e.g. a river catchment area, water basin, natural resource, mountain range, etc.) or human (e.g. ethnic groups, civic interests, SME networks).

3. The Lisbon and Gothenburg Strategies

The Lisbon and Gothenburg Strategies support the Internal Market and economic and social cohesion through a specific focus on four main objectives to be achieved by all MS and the EU through the Open Method of Coordination:

1. the transition to a knowledge-based economy and society by better policies for the information society and R&D, as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the Internal Market
2. to modernise the European social model, invest in people and combat social exclusion
3. to sustain a healthy economic outlook and favourable growth prospects by applying an appropriate macro-economic policy mix
4. to develop a strategy for sustainable development, based on the principle that the economic, social and environmental effects of all policies should be examined in a coordinated way and taken into account in decision-making.

Note, that the recent Kok Report¹³ has criticised current progress towards the 2010 Lisbon goals and suggested a short-term re-focus on competition, innovation and employment, with an important role for the Knowledge Society and ICT, and with social and environmental issues as part of the longer term sustainable development initiative. This does not mean, however, that social and environmental issues are no longer important nor that competition and employment can be divorced from quality of life and citizen issues. Kok also points to the need for renewed focus on technology deployment and its productive use, which eTEN is eminently suited to support. The 2005 Spring Council Summit will consider how to re-configure the Lisbon and Gothenburg Strategies in the light of the Kok Report.

4. Infrastructures for interoperability and interconnectivity

Infrastructures for interoperability and interconnectivity for supporting the generic eServices in the public interest and their specific applications as part of harmonisation efforts where this does not conflict with any necessary subsidiarity rights, for example the following levels of interoperability where standards or interoperability frameworks need to be agreed at European level:

- i) technical level, i.e. enterprise architecture, infrastructure, etc.
- ii) semantics level, i.e. the ability to exchange and process data in a meaningful manner, essentially based on standardised data models and elements, common protocols for exchanging data and metadata standards, a prerequisite for which is the use of a uniform syntax, today mostly XML.
- iii) information assurance, incorporating identity management, authentication, trust, security, data protection, etc.
- iv) organisational, i.e. all aspects of organisational and human resource structures, plus political and legal conditions which are relevant for developing and using interoperable applications, including institutional arrangements for specific service themes such as health and education.

5.2 Applications and services

In considering the future focus of eTEN applications and services it is important both to take account of on-going policy and strategic thinking within the European Commission, but also not to be constrained by traditional ways of meeting such policies and strategies. The EC has recently proposed a number of issues that it considers relevant for the development of a coherent and forward-looking European Information Society Policy beyond 2005¹⁴: content and services, eInclusion and citizenship, public services, skills and work, ICT as a key industrial sector, interoperability, trust and dependability, and the exploitation of ICT by business.

Also there are important trends in DG Information Society thinking which bear on eTEN, including:

- first, a stronger citizen centric approach, focused on eCitizenship and quality of life, should be given to the IS policy implying more visible actions from the EC
- second, cultural and social factors such as media pluralism and cultural diversity are likely to become more important in the deployment of IS policy
- thirdly, the EC is likely to propose a platform to help resolve issues such copyright and privacy rights on which the economic competitiveness of Europe depends.

Drawing on this thinking, as well as the potential scope of applications and services mapped out in section 5.1, there is a need to get away from solutions which are too narrowly constrained by the present six eTEN themes. There is a need to think much more broadly across and between themes, driven explicitly by both EU and MS level policy and interests where these overlap. (See also sections 6.3 and 6.4 below). This is despite the fact that the existing arrangements reflect complementary programmes within the EC which should of course continue as much as

¹³ The Kok Report, *op cit*

¹⁴ COM (2004) 757 final, "Challenges for the European Information Society beyond 2005".

possible, but should not in itself constrain the potential impact of eTEN. This study has revealed a large area of such potential overlap. In addition to the existing six themes, new possible areas of focus are highlighted in the following:

- Civic society services comprising community and voluntary groups which could and often do exhibit a cross-border dimension. These are not formal PA eServices, which are themselves often constrained by legal, institutional and organisational frameworks in each MS and may need formal sanction, neither are they eServices provided only by business as the market should be providing these. There is, however, a potentially huge area between these purely public and private examples of civic society eServices provided by NGOs, non-profit organisations, charities, voluntary organisations, clubs, societies, interest groups, sport and leisure activities, and the like. Such services focus squarely on citizen and quality of life issues which are likely to be reinforced in future DG Information Society activities.
- eEnvironment has a clear public interest and trans-European relevance given that environmental issues are not constrained by MS borders but tend to be physical, such as involving a river catchment area, a water basin, natural resources, a mountain range, and similar. Examples here could include public alert systems to natural disasters via mobile phones
- Within living memory there have been some tremendous upheavals in Europe with citizens widely displaced and national borders, particular in the territories covered by the NMS, redrawn. Many of these displaced persons are still alive and they and their offspring typically live as 'minorities' in other countries, retaining strong bonds to their original territories and cultures. With care to avoid demands for border changes or repatriation moves, eTEN projects could provide support to such minorities particularly where they located in trans-border areas, and help provide them with a better sense of identity and pride, within an evolving multi-cultural Europe.
- Young people, especially in the context of tertiary education, job seeking and migration flows generally (the young are always the most mobile) could benefit from cross border, even pan-European, eServices providing them with real time information on educational opportunities, prices, travel, accommodation, certification and transfer, etc.
- The above examples of minorities, education and migration are, strictly speaking, MS issues and subject to EU treaties, but eTEN projects could do more to support and, perhaps more significantly, demonstrate the value of eServices in supporting these important issues.
- eServices at a European governance, not national governance, level, for example supporting the establishment of a European Economic Interest Group (EEIG) or services to act as intermediaries for the citizen when dealing with European Institutions, such as the European Court, European Commission, European Parliament and MEPs.
- eServices aimed at helping the traveller and tourist when moving across borders, which would have a particular value when supporting SME networks in more remote and rural regions, such as local hotels, restaurants, shops, tour companies, cultural organisations, and similar.
- The Kok Report mentions regional disparities¹⁵ where there could be a potential eTEN contribution by providing solutions supporting some kind of flex-work (or eWork) initiatives for less developed regions. This could comprise, for example, an agency of temporary or cross-border work, such as in the construction industry or agriculture, or integrated cross-border job search portals. Better work opportunities for older people, through flex-work could also be supported.

¹⁵ The Kok Report, *op cit*, page 31.

- In the context of SMEs, reinforcing the current moves to establishing a Single Point of Contact and eProcurement, as a one-stop-shop for companies could be supported or demonstrated by eTEN. This would assist in reducing the time and costs involved in setting up a company in another MS¹⁶.

There is also a strong argument for giving priority to project proposals based on services, applications or infrastructures which have already been successfully deployed in a national or regional context and which have trans-European potential, whilst giving less prominence to bottom-up innovative ideas which have yet to prove themselves. In this context, it could be interesting to surmise what sort of services, applications and infrastructures national governments would be willing to fund on a trans-European level in their own interests and have perhaps already supported by their own programmes. These could include:

- eServices for foreign business investing/locating in the country/region (cf. the Single Point of Contact and eProcurement directives waiting for approval by the Council and thus likely to be governed by Treaty)
- tourism
- disasters and emergencies
- environment

5.3 Supporting infrastructures

eTEN must support not just trans-European applications and services but also the mainly non-technical infrastructures for interoperability and interconnectivity upon which they rest. These must be part of harmonisation efforts where this does not conflict with any necessary subsidiarity rights, for example by developing standards or interoperability frameworks at European level or between MS.

In this context, it is important to understand the globalisation trends in the ICT market and in the management of networks. The EU regulatory framework for electronic communications, in place since 2003 still needs to be fully and effectively implemented. This includes the identification and implementation of regulatory issues, like the protection of copyright, the protection of privacy, and the needs of law enforcement agencies, as well as helping to dismantle sectoral boundaries and reinforce existing European networks. It must also contribute to on-going efforts in developing a comprehensive approach to exploit the potential of ICTs in the public sector, particularly in addressing common MS problems like identifying citizens on-line and improving the efficiency of back-office operations, whilst tailoring on-line services to the needs of citizens and businesses¹⁷.

We also need to consider the benefits and barriers to developing and using transnational services. Clearly, if there was an easily tapped demand for transnational services, the private sector on its own, or in partnership with the public sector, would have exploited the opportunities. However, we know from other studies¹⁸ that services beneficial to the public, or societal, good cannot all be met within a free market competitive context. This is due to various factors, including market failure which results in either under-supply or over-supply of a good or service because the market price mechanism works imperfectly and leads to an inefficient allocation of resources from the perspective of society. There are also negative externalities resulting from over concentration of market power by suppliers or consumers which call for regulatory intervention. Neither does the market itself address all positive externalities, whether seen from the perspective of the market itself or from the public good, such as knowledge spillovers, productive government spending on infrastructures of different types, including human capital. We also know that inequality is harmful for overall economic growth because, for

¹⁶ The Kok Report, *op cit*, page 27.

¹⁷ COM (2004) 757 final, 19 November 2004, "Challenges for the European Information Society beyond 2005".

¹⁸ Such as the study "Thematic Evaluation of the Structural Funds' Contributions to the Lisbon Strategy" prepared for DG Regional Development by the Danish Technological Institute, 2005.

example, of the under use of available employment resources when the unemployed need to be supported by public sector expenditure.

We can also consider that, in principle, it is more cost-effective to develop one trans-national service at European level than 25+2 individual services. The problem often is, however, it can be difficult to see precisely where the savings can be made and the barriers on the supply side can be immense. This is mainly because of lack of standards resulting from widespread legacy systems, whether technological, legal, institutional or cultural. Other barriers to using trans-national services exist on the demand side, particularly perceived lack of actual need (though this is decreasing as the Internal Market develops and people are more mobile) and because of lack of trust. Indeed, this study has shown that lack of trust is possibly the most important inhibitor, apart from lack of standards and interoperability, in deploying and using trans-national eServices.

In the context of supporting infrastructures, this study has revealed much potential overlap between EU and MS level policy and interests, which in addition to those already tackled by eTEN could include:

- The importance of the trust issue means, for example, that it would be particularly difficult for an NMS provider to break into the EU 25+2 market without some form of external validation. Within the MS there are already good examples of organisations dedicated to validating quality, for example in the UK the Open and Distance Learning Quality Council (ODL QC) which is a government sponsored organisation and has been approving distance learning courses since 1968 (35 years). Examples in other MS include the National Centre of Distant Education in the Czech Republic and ZARIS in Slovakia. It may also be possible to support the development of a Pan-European University Clearing House benefiting all EU universities by encouraging greater mobility of EU students between EU universities, as well as more non-EU students to enrol in Europe.

eTEN could encourage organisations like this to form partnerships with similar organisations in other MS to provide transnational (eventually pan-European) quality validation services for eLearning programmes. Across many eServices, eTEN could help the development of the non-physical infrastructure as well as, or instead of, the individual eServices as delivered to the citizen. This would help develop trust, access and comparability as people move around Europe or look to the wider European market to satisfy their needs.

- However, we must also be aware that there are different approaches to trust and security and eTEN should support both types:
 - top-down: accreditation, agency requirements (as above)
 - bottom-up: human life based on history, relationships and personal references between people, e.g. the use of a service because recommended by a friend which can only be developed through usage and familiarity.
- The Kok Report criticises the general lack of national programmes directly supporting the Lisbon agenda¹⁹. Such national programmes often overlap and thus could be useful for cross-border areas. eTEN could support the development of these, for example, strategy development studies, scenario planning, mapping existing related legislative acts, interoperability studies (such as the recently launched I2-Health interoperability initiative for a European e-health Area), etc. (See also sections 6.3 and 6.4 below).
- One important aspect of the infrastructure issue is the need to support the knowledge base of Europe through for example high speed networking, for example by rolling out something similar to the existing GEANT initiative (a protected high speed network for academics) to schools, hospitals, etc., thus stimulating skills development, employment and competition, as well as supporting public services.

¹⁹ The Kok Report, *op cit*, page 40.

- eTEN could also, for example by working with eContent, assist in regaining Europe's world leadership in digital publishing as a contribution to developing the knowledge base of Europe, for the benefit of both citizens and SMEs.
- It is also important not to be constrained by thinking of eServices as only Internet based. For example, bringing Lisbon closer to people can be done through mobile eServices, particularly as 3G is rolled out. Such services are starting to touch everybody, and, in the mobile example, is also the result of European level collaboration and deployment which supports European industry in global competition. From a user's perspective, if an eService is worthwhile, the method of delivery will not be too important as long as it is accessible, cheap and delivers real fulfilment (i.e. the eService actually gives the user what she or he needs easily and quickly). Mobile services are also particularly relevant to the NMS, given the lack of fixed infrastructures compared with the older MS.
- Although eTEN must not interfere with competition policy, there is scope for infrastructure projects, for example, to channel investment and other capital to recognised opportunities through the networking of funds, companies, universities, etc. This could be assisted by a brokering platform connecting all the stakeholders. In fact, it is important not to be too narrow in interpreting what competition is. It is not just loosening up the labour market and cutting costs, but can also be supported by community and SME networking which improves the quality of everyday and working lives and thus creates value as well as innovation opportunities. (See also section 8.2 below).

6 Operational policy options

The eTEN programme presently operates on the basis of a largely bottom-up process by issuing calls for proposals within the framework of the six themes described in section 5. However, a number of other operational policy options exist and are being discussed, and much feedback has been collected by the present study to enable specific recommendations about the future configuration of the eTEN programme to be given. These are discussed in the following sub-sections.

6.1 Bottom-up innovation

As described above, the bottom-up call for proposals approach provides an important channel for innovation through the existing four vertical and two horizontal themes (see section 5).

This approach has clear benefits in encouraging innovation and providing opportunities for initiatives important for specific networks and communities which may not have been recognised by the MS or at European level. However, there are also clearly recognised disadvantages and shortcoming to such an approach, particularly when it is the only mechanism pursued for eliciting and selecting eTEN projects. These include the difficulties of matching eTEN impacts directly with EU or national level priorities, except as when expressed through common issues within the six existing eTEN themes, and that no practical encouragement is given to innovative ideas which may fall between the existing themes, thus engendering too narrow a type of thinking. Also, given the current size of the programme, it is difficult to achieve any real impact when this is spread across six themes, and although the resources allocated to eTEN could increase considerably in the future, the potential scope of each of the existing themes is so great as to virtually nullify real impact in all six simultaneously.

It is thus recommended that the bottom-up approach be very significantly reduced in future eTEN operations in favour of the other approaches described below.

6.2 Replication, knowledge transfer and good practice

The employment of good practices examples, replication of successful applications or ideas elsewhere, as well as knowledge transfer projects, are included in the current eTEN framework. However, the evidence seems to show that the successful use of such approaches is limited, particularly when operating across themes where there is also very significant learning and replication potential.

There is therefore a good case to be made for increasing even more the emphasis on replication and knowledge transfer approaches in the future, particularly if this were to operate within the context of the strategic priorities approach, for example by considering the many possibilities explored in section 5. Clearly, in the case of replication or transfer both the donor and the receiver should be eligible for funding.

It is also possible to encourage individual eTEN projects to explicitly work towards the multiplication and dissemination of their results and experiences by holding events and providing materials specifically designed for such a purpose: Such an approach is currently becoming embedded into the contract negotiations for new projects resulting from the 2004 eTEN workplan, e.g. through a post-project workshop. Some projects show some reluctance to do this, perhaps because it is seen as an extra chore, but there is good reason to make it more mainstream in the future. Building on this, it would seem to make sense to group successful projects based on themes, types of MS, types of applications, or on other suitable issues, in order that they can learn and develop together, as well as establish potentially influential networks which also draw in other partners and MS on a more long term basis. Indeed, such

networks could start to develop into 'communities of practice', or link into suitable existing communities of practice (see also below).

Projects always have difficulty finding time and resources to undertake such "extra" concertation and dissemination activities. Thus, because this would be so important if done well, it is recommended to provide additional funding for each suitable project, over and above what they have budgeted for in their proposals – unless of course such activities are explicitly including in call terms of reference, so that each proposal does make allowances for significant activities of this type. Indeed, for successful projects, such activities and the associated funding they should attract, are arguably more important and would have greater potential European impact than the project's own specific deployment activities on their own.

Replication, knowledge transfer and frameworks of good practice exchange and learning can also help to stimulate multiplier and demonstration effects in a more top-down and directive manner by systematically drawing on the whole of eTEN activities. For example, where appropriate, all eTEN knowledge transfer efforts should be coordinated across the programme, maybe with the assistance of a specific support action. Further, proactive links to other similar initiatives should be sought and maintained in order to maximise synergy and achieve more coherent and scaled-up impacts across all Information Society activities. For example, direct and active links should be established with the eGovernment good practice framework presently being built²⁰. A similar link should be made with the Beep (Best eEurope Practices) knowledge base which already offers about 350 good practice case studies, plus a large number of good practice syntheses and guidelines covering the domains of works and skills, the digital SME, social inclusion, regional development and eGovernment, across the whole of the EU 25+2²¹. Another useful current source for good practice and knowledge transfer is the eEurope Awards Programme which has implemented two calls and ministerial conferences for eHealth good practices, and one call and ministerial conference for eGovernment good practices. A second call and conference for eGovernment is due later in 2005.²²

The Beep project, which presents about 150 good practice case studies from the NMS, and the present study both demonstrate quite clearly that good practices should be exchanged in both directions between the older 15 MS and the NMS. (See also sections 3 and 4 above).

When developing good practice exchange frameworks supporting knowledge transfer and replication, it is important to understand that it is usually not possible, or indeed desirable, to try to objectively measure good practice. Indeed, this can be very political, so it is important to be as transparent as possible and make it clear that the purpose is to provide either useful applications which normally need to be adapted or localised for use elsewhere, or simply good ideas and dialogue between stakeholders. In both cases, the onus is on the receiver, or user, of the good practice or the application to judge its value for their own purposes, and this cannot be done by some outside agency except to provide a framework for accessing and learning from a well presented and potentially rich set of examples and ideas. In the case of good practice, this actually leads to an approach called 'learning practice' which focuses on 'good practice', loosely defined as 'practices which are good for learning', i.e. practices which achieve their own objectives and/or have a beneficial impact on their environment, and which provide useful learning experiences likely to stimulate creativity, ingenuity and self reflexivity on the part of the user of the example. Thus, good practice can and should include examples which made mistakes (maybe even 'bad practice'), and do not score high on conventional benchmarks, as long as the example has learnt useful lessons which are carefully described and presented so that others can learn from their experiences. Valuable learning also depends upon a clear

²⁰ http://europa.eu.int/information_society/programmes/egov_rd/index_en.htm. This is being currently being developed as part of the Modinis Programme.

²¹ <http://www.beepknowledgesystem.org>. Beep was originally built as part of the Fifth Framework IST Programme, 2001-2003.

²² <http://www.e-europeawards.org/>. The eEurope Awards programme is part of the Fifth Framework IST Programme, 2002-2005.

understanding of the context and assumptions surrounding a particular example, as well as a clear description of what happened and the results obtained.²³

Learning practice is the basis of 'communities of practice'²⁴, i.e. networks of practitioners with similar aims or problems who come together to share experiences and develop common solutions but which can be adapted to specific contexts. The concept of community of practice builds on the fact that whenever people, as part of organisations, communities or networks, accumulate collective and organisational learning into social practices of any kind, the benefits are far greater than when undertaken individually and in isolation. Organisations, to compete and meet rising demands for quality and innovation, must today become more intentional and systematic about 'managing knowledge' in a context in which effective learning has become a key issue for success, however the latter is defined. A focus on such communities of practice has been shown to be a useful basis for the systematic redesign of activities, strategies and knowledge management skills. Successful communities of practice develop scenarios for implementation, support 'learning from within', i.e. not trying to replicate what others have done (because there are no panaceas and no two places or situations are the same), but replicate creativity, ingenuity and reflexivity in order to develop and implement new ideas to reduce the risk of failure. This approach provides more robust tools for applying 'foresight with hindsight'.

There is widespread evidence, plus much feedback collected by the present study, which suggests that the learning process could well be more important than the direct replication of a particular application or technical-organisation solution. In fact, showcasing and demonstrating 'successful' projects (where the term 'successful' also includes projects which may have failed in traditional terms but which learnt from their 'mistakes' and thus possess much valuable knowledge) is probably better and cheaper than attempting to fund catch-up projects from scratch.

eTEN has already taken some initiatives to support knowledge transfer and good practice, including organising an eTEN conference, setting up project 'multiplication' groups of MS and projects, promoting an eTEN project of the month, looking at ways in which to examine impact assessment and developing future eTEN scenarios. These are welcomed and fit well with the recommendations made by this study. All these issues should indeed be addressed by the proposed central eTEN service described in section 7.3 below.

The good practice approach has often been associated in eTEN, as in other programmes, with the Open Method of Coordination (OMC). The OMC was introduced as a mechanism within the Lisbon Strategy in 2000 in which common European goals are followed up by the development of quantitative indicators (benchmarks), annual evaluation rounds, peer review, and possibly also good practice exchange, in which MS progress towards the stated objectives is assessed and compared. Although the OMC has not been a specific objective of analysis in the current study, there is much evidence²⁵ that it has not been very successful, particularly because it does not endow any legitimacy and because direct comparison across the whole of EU 15 and now EU 25+2 maybe stretching credibility too far. However, it has probably also come under criticism because of the disappointing preliminary results of the Lisbon process itself with which it is associated.²⁶

There is thus a strong argument to be made that, although the OMC is a useful mechanism, it needs to be rethought and to change its role somewhat in the post Kok climate, so that it operates within the context of greater commitment and buy-in from MS as part of the strategic priority approach suggested in this study (see next sub-section). Its somewhat rigid

²³ All these are standard elements in the Beep knowledge system, and the term 'learning practice' was first proposed and described by Beep: <http://www.beepknowledgesystem.org/LearningSystem.asp>

²⁴ See for example Etienne Wenger's web-site <http://www.ewenger.com/>

²⁵ For example, the study evaluation "Delivering Lisbon through the Information Society: the contribution DG Information policies and programmes", being undertaken for DG Information Society and due to report in early 2005, the study "Thematic Evaluation of the Structural Funds' Contributions to the Lisbon Strategy", *op cit.*, and the study "eEurope 2010: Improving the Open Method of Coordination in the Development of the Information Society in Europe", being prepared for DG Information Society by The Tavistock Institute, 2005.

²⁶ The Kok Report, *op cit.*

benchmarking against European norms could also usefully be adjusted in favour of the norms, or agreed targets, of groups of MS, whilst reference to notional EU-wide norms could be retained in cases where leverage is needed to obtain political support or funding in specific cases.

6.3 Top-down strategic priorities

At present, eTEN is not strategically driven but is bottom-up and implemented largely by calls for proposals, although calls for tender are employed for eTEN support actions.

However, much evidence and feedback collated by this study points overwhelmingly to the need to change this approach and concentrate much of the eTEN effort and resource onto a more decidedly top-down, directive approach reflecting EU and, where they overlap, also MS level priorities and policies. This clear message emanates both from the practical experience of eTEN as well as from the context provided by the Lisbon Strategy and the eEurope Action Plans. In particular, it also results from the significant change in emphasis called for by the Kok Report, and other EC initiatives²⁷, for much greater focus of EU effort and resources on specific policies and priorities as well as much greater synergy between these.

Of specific relevance for eTEN, these developments are complemented by what can only be described as a decisive sea-change in thinking which appears to be taking place for an overall DG Information Society approach focused increasingly on the demand-side, on user-, community- and citizen-centric needs, and thereby on deployment, take-up and the productive use of eServices. The eTEN programme is well suited to meet such needs and can therefore justifiably expect to be given considerably greater attention and resources in the 2007-2013 period.

To do so, however, eTEN needs to think now about the sort of changes it must enact to deliver such an agenda. Results from the ex-post and preliminary ex-ante evaluation of eTEN²⁸, plus the evidence collected by this study and from on-going discussions and activities within DG Information Society²⁹, appear to show that the real impacts of eTEN so far are limited and that some of the reasons for this are that:

- the programme as a whole too small
- there is limited finance for individual projects (caused both by the small size of the programme and the low percentage funding support provided to individual projects)
- there are too many themes and not enough flexibility between them, so that the present themes do not easily encourage cross-thematic solutions, which would continue to result in limited impact even in a larger programme
- this is all confounded by the largely bottom-up nature of the programme.

The above all point to the pressing and urgent need in the future for a more strategic approach. Too many of the present resources are “letting one thousand flowers bloom”, whilst many if not most projects wither after a short season of success, in the sense that their multiplication effects and overall impacts are very limited.

Such a ‘strategic priority’ approach should be implemented through calls for tender by specifying what is needed and using the process of the financial rules expected as part of the upcoming “ICT Adoption and Policy Support Fund”. Strategic priority themes should be selected from the types of applications, services and infrastructures explored in section 5, and should be agreed between the EC and all, or specific groups of, MS depending on need and circumstances. (The issue of groups of MS is addressed in section 6.4 below.)

²⁷ Such as the study “Delivering Lisbon through the Information Society: the contribution DG Information policies and programmes”, *op cit*.

²⁸ The study “Intermediate evaluation of the eTEN Programme” for DG Information Society, December 2004.

²⁹ For example, the recently started ex-ante evaluation study “A dynamic framework for ex ante evaluation and assessment of new IS policies” for DG Information Society, which will provide guidance, tools and an evidence base for the ex-ante evaluation in 2005 of future Lisbon, eEurope, eTEN and Modinis strategies.

At the EU level, the types of eTEN strategic priority themes selected should be governed by on-going policy, such as developed in the context of the renewed Lisbon and eEurope initiatives, and result in highly coordinated and synergistic goals both within DG Information Society and across the EC as a whole. At the MS level, selected priorities will need to reflect the overlap of MS national goals and policies related to ICT, the Information Society and the public sector, but this and other studies have shown that such an overlap is extensive and as yet largely untapped. In fact, the NMS are particularly suitable in this respect as they are currently orienting themselves to EU membership and to participating in larger programmes, such as the Structural Funds, which could provide significant synergistic effects for eTEN (see also section 8 below). In this context, there could also be scope for specifically regional level priorities and policies to input in strategic priority selection.

Importantly, each of these levels will need to work together in order to maximise impact, and the number and scope of each strategic priority needs to be small enough to allow the allocated resources to have a large impact, but not too small as to reduce the overall visibility and impact of eTEN and related deployment programmes on society, on citizens and on SMEs. To achieve this, it may be desirable for eTEN to work closely, or indeed merge, with such related programmes. Whether or not this happens, it is of utmost importance that the overall goals of eTEN remain intact, whatever name is given to it, and that much greater funding overall is allocated to real deployment support.

All this constitutes a set of highly challenging tasks, but is one shared with other EU initiatives, which is itself of significance. Also, there is much evidence, particularly in the aftermath of the Kok Report and the conjuncture of a large number of initiatives needing renewal during the 2005-2006 period, that both the EC and the MS themselves are operationally and psychologically prepared for this sea change. This is particularly so in the case of the NMS as these are still finding their feet as full MS, and thus not yet fully mired in the mud of traditional thinking. There will undoubtedly be a myriad of operational, administrative, legal and other obstacles, but the test will be clear and decisive political will, despite the complexity of both numbers and systems to coordinate as a result of enlargement. This political will does, indeed, now appear to be emerging. It is very important in the year 2005 to exploit this cusp of opportunities and promising conjuncture of events.

Some themes already part of eTEN have indeed already made considerable progress in identifying strategic European level priorities. For example in the eHealth theme there is already an EU-wide agreed specific focus for the next ten years, so the theme will anyway need to become more and more top-down in order to achieve this agenda. This includes a focus on interoperability until 2006 (everything, technology, organisational, legal, etc.), i.e. systems capable of talking to each other, Lisbon-based mobility of citizens, getting medical help wherever they are in Europe, and access to, for example, medical (patient) records anywhere with the patient's consent. Most MS 25+2 agree to this, although there remain problems given that most MS also have their own agendas to reach this, so interoperability at trans-European level is lower down their list of priorities. However, despite this, eHealth in eTEN is making already considerable progress.

Similarly, in the eGovernment theme, the Cobra Recommendations³⁰, agreed by representatives from each MS, emphasise that now is the time to define targets and consider examples such as 25% administrative burden reduction for citizens and business, essential interoperability and enablers such as identity for pan-European services until 2010, paperless administration, society-wide take-up of key eServices, etc. Coupled with this are commitments to a concrete agenda for pan-European services, interoperability, identification and authentication, a shared European resource of building blocks, and a coherent strategy for EU-wide support for eGovernment, including through the alignment of programmes. One aim here is to start to move

³⁰ "eGovernment beyond 2005 – modern and innovative public administrations in the 2010 time horizon; the Cobra recommendations to the eEurope Advisory Group", third eEurope eGovernment subgroup meeting, Amsterdam, 27-28 September 2004.

towards a single eGovernment market (not 25+2 markets), given the importance of this both to the mobility of citizens and to European industry.

6.4 Linking EU with national policies and with groups of Member States

In order to achieve high impact results the EC must work closely with the MS and assist them find mutually acceptable policies, priorities and solutions. One recent example in the context of the Lisbon Strategy is the OMC approach, but as described in section 6.2, this probably needs adapting in the post-Kok climate.

Much evidence from the study and elsewhere points to the conclusion that, in eTEN as in other programmes, it is not necessary to have exactly the same approaches or services across all MS, but rather in groups of countries, thereby achieving a lot more differentiation. For example, and this is even more the case after enlargement, direct comparisons, such as benchmarking across the whole of EU 15 and now EU 25+2, are maybe stretching credibility too far. Benchmarking all MS against a single European target and ranking them on this basis is highly dubious, both because internal MS opportunities and challenges are so different (though probably converging in the longer term) and because it does not take account of the dynamism of change. A more differentiated approach is thus needed so that much of the eTEN (as well arguably of the Lisbon and eEurope) approaches should be re-designed in terms of national or regional (groups of MS) targets. After all, 90% of EU research is at national level and is often a hidden form of protectionism, especially language which is perhaps the most intractable example. This implies coordinating and sharing of strategic priorities and learning between MS or groups of MS. For example, national MS governments could form different small or large groups and develop cross-border services based on shared needs and policies. Such an approach would reflect the recognition that one size does not fit all.

However attractive and necessary such an approach would be, there is a danger in taking it to an extreme. As in most things in life and politics, a judicious balance is required. Such a balance must ensure that longer term requirements for interoperability, interconnectivity and necessary standards at a European (and in some instances at a global) level, are not compromised. We believe, however, that it will be possible, and indeed necessary, to find such a balance, even though its tipping point will change over time and circumstance, so that on-going flexibility will be necessary.

As part of the process described above, we anticipate that during the second phase of Lisbon, partially as a result of the Kok Report, there will be closer coherence of MS policies and programmes to the main Lisbon strategies. MS governments will become more active in adopting and implementing programmes which directly link into EU policies. eTEN should purposefully link into these developments and thus into existing and evolving national priorities, especially where there is overlap between MS, and particularly between adjacent or similar MS, and with EU-level policies.

Subsidiarity principles suggest that the European Commission (EC) should take the leading role in defining trans-European eService requirements for a set of strategic priorities limited to the resources available, so that funds are highly focused and not too thinly spread for maximum impact, in cooperation with the MS. In agreeing such strategic priorities, an assessment will need to be made of:

- where EC and MS policies and priorities overlap – potential is considerable here, including but not limited to the Internal Market and the Lisbon goals, and could also include overlap with the priorities of groups of MS, rather than them all, where acceptable, so that for example different groups operate to different time horizons with some perhaps joining an early adopters and some a late adopters group, and benchmarking themselves against group norms rather than Europe-wide norms
- how the EC can facilitate the cooperation between MS or groups of MS

- existing good practice evidence for replication, demonstration or learning
- specific trans-European and cross border eService needs
- the likely costs and benefits of providing a specific trans-European eService, i.e. comparing the resources needed, including those provided from public funds, with likely take-up and benefits.

In order to achieve this goal, greater cooperation is needed not just with and between MS but also within the EC and across different programmes. Realising this goal will probably require separating the identification of trans-European strategic priorities from their implementation within the new Directorate H of DG INFSO. A Cross Unit Strategy Group should be established to undertake the top-down identification of trans-European strategic priorities, which would liaise with other DGs, the MS, regional authorities and other interested stakeholders. Such an approach would also improve the buy-in by, and participation of, national governments and public administrations in eTEN.

This Strategy Group would undertake a thorough analysis of the need for eServices, as described above, together with funding requirements from eTEN as well as from additional sources such as venture capitalists and the EIB, where this is realistic. It would encompass, or be supported by, a service with a number of strategic functions, including an 'ideas factory', a 'clearing house', an on-line knowledge base of good practice, and a brokering service to link potential ideas, partners and funding sources. (See also section 7.3 below)

7 Project focus and implementation

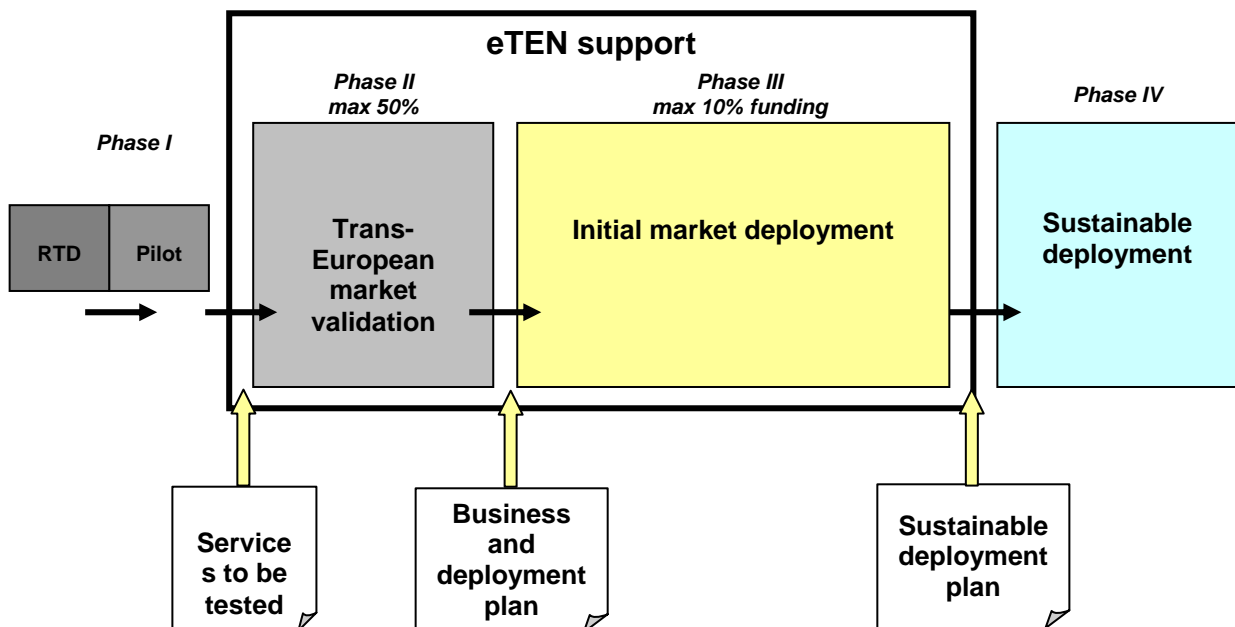
Despite significant and increasing success in recent years, eTEN still suffers from problems related to the quality and relevance of proposals, and an apparent lack of widespread deployment, as opposed to preparatory activities, directly supported by the programme. The study has examined these issues in some detail and has obtained useful feedback during the course of its investigations. This is discussed in the following sub-sections.

7.1 The eTEN value chain

At present eTEN employs a four phase approach, of which only two are supported. The question is, is this and the current balance between each phase appropriate? Further, are the resources devoted to each phase appropriate? These questions are pertinent in light of the fact that, at present, most eTEN projects do not proceed from the market validation phase to the initial market deployment phase (see below). Most evidence points to the fact that the 2003 and 2004 intake of projects has yet to achieve any impact, whilst the 2002 intake has had only limited deployment impact³¹. Increasing deployment and impact are thus vital future goals for eTEN.

The main reason for the little interest shown by eTEN projects in the initial market deployment phase seems to be that this phase only attracts 10% funding support, and it is reckoned that this is not much greater, and could even be lower, than the actual costs incurred by a project in applying for support for this phase and administering this support once received. Clearly, this is a highly unsatisfactory state of affairs which urgently needs tackling.

Figure: The current eTEN value chain model



³¹ The study "Intermediate evaluation of the eTEN Programme" for DG Information Society, *op cit*.

The current eTEN value chain model is based on the principle that finance is only available for Phases II and III. Finance is not available for existing infrastructure, existing applications/software, existing hardware, etc, (i.e. Phase I). Neither is it available for Phase IV, sustainable deployment. Phase II (market validation) attracts up to 50% funding, whereas Phase III (initial market deployment) attracts a maximum of only 10%. Thus, as explained above, all eTEN projects focus on Phase II with very few proceeding to Phase III. Given that, as argued in section 6, deployment must be the number one priority of eTEN, this is clearly an untenable position. And, because the most important aspect of deployment is 'sustainability', the complete exclusion of Phase IV from funding should also be re-considered for real trans-European eServices which are in the public or EU interest. This is considered in more detail in section 7.2 below.

Regarding the interface between 'research' and 'deployment' (i.e. between Phase I and later phases), the evidence³² indicates that many IST projects do apply for eTEN funding. This arrangement should of course be continued, as it provides a clear channel for successful IST projects to market and launch the products and services resulting from their research. However, this should not be on a preferential basis, and in fact the evidence from this study means that priority should be given to the top-down strategic approach (see section 6.3 above). Thus, if a successful IST project falls within the agreed strategic priority framework, it would clearly have a good chance of being accepted by eTEN. However, we should also remember that attempting to directly link specific research to final marketable products and services on a direct one-on-one basis can often be a pointless task. Much research is and will remain essentially a process which leads in many directions, some dead ends as well as some fruitful continuing lines. Many other innovations and factors typically are also needed in any process resulting in the deployment of services or infrastructures.

7.2 Moving from market validation to real deployment

There is a groundswell of opinion that, because eTEN in practice does not significantly support the actual deployment of eServices (probably mainly because of the 10% funding limit described above), the future focus should shift from one which is mainly on market validation (although this should remain important), to the real deployment and take-up phases.

We need to consider what 'market validation' is. It is not only 'proving' or demonstrating that a market exists or is likely to exist, but must also involve legal and other requirements, including security, information assurance, etc. Potentially, market validation could also involve an examination of the mainly non-technical infrastructures for interoperability and interconnectivity (see section 5.1 above), as well as evidence of a critical mass of demand. Many of these factors will be on-going concerns and, although an initial validation will be needed to determine whether or not all necessary outset assumptions are being met, it is often not possible or desirable, in a public interest eService context, to expend a large resource on a once and for all formal 'market validation' exercise. Aspects of market validation will need to continue through the initial deployment phase, so that the initial testing of outset assumptions could, in some cases, be undertaken relatively rapidly and at low cost. This would particularly be the case if the project consortium includes significant public sector actors with strong commitment, which anyway needs pursuing (see section 7.3 below).

We also need to consider what 'deployment' actually means. It means the roll-out of services (supply side), plus, and this is important, actual take-up and use by real end users (demand side). For maximum deployment impact, eTEN should also aim for beneficial and productive use, and as many users as possible, within the context of the strategic priorities and programme funding.

³² Both from this study and from the study "Intermediate evaluation of the eTEN Programme" for DG Information Society, *op cit*.

A number of conclusions follow from this:

- The aim of eTEN should not be to fund projects which only go for market validation, which is often the situation at present.
- Thus, in principle, a project should have the intention, the plans and the back-up to go for full deployment, including sponsorship, if earlier activities are successful. This means that project proposals should include full details of all phases II to IV, even though it is clear that aspects of the later phases will be less developed and more uncertain. Such an approach would view a project as a continuous whole from market validation to full deployment, with individual steps (no longer termed or formally separated into 'phases') on the way. It should be possible to achieve this in the context of more top-down strategic projects and greater on-going support and coordination by the EC.
- Clearly, there needs to be scope for independent review to stop a project at any time if it is badly run and/or is not likely to achieve full deployment or provide any other type of impact.
- Projects should also be encouraged to be flexible and adapt on the way to full deployment, for example by taking in or shedding new partners, by securing new sources of sponsorship, etc, in agreement where necessary with the EC and the reviewers, and the administrative procedures should be lightened as much as possible to enable this.
- Moving from market validation to full deployment is a highly fraught process which requires much flexibility and nimbleness on the part of project participants. If the EC wishes to secure as much full deployment impact as possible, it must provide an enabling administrative and financial process to facilitate this, including a significant increase of the 10% funding limit where warranted. The lack of such is, and could continue to be, a severe barrier to progress. Hopefully, the new financial modalities being worked out as part of the proposed 'ICT Adoption and Policy Support Fund' will deliver what is needed here.
- The main, and perhaps only, criterion for impact, and thus for the ex-ante and ex-post evaluation of eTEN projects, must therefore be full deployment, i.e. both supply and demand sides and productive and/or beneficial use by end users.
- The level of funding must be increased, especially for the initial and full deployment phases. The recommendation is up to 50% for all phases, thus signalling that deployment is at least as important as market validation, and also simplifying the administration and enabling a more seamless progression of steps, rather than, as now, a sequence of somewhat separate phases where it is difficult to proceed from one to the next. It could also be, of course, that eTEN financial support is not required for the full deployment step, if for example, a service does achieve full commercial backing and full market deployment at that time. But the assumption must be that also full deployment will need some eTEN support, at least for a limited period. One possibility for the full deployment phase, apart from limited period funding, is also that support would vary by negotiation depending upon a number of factors, including political desirability, available private or national finance and cost of deployment.
- Funding levels for projects thus need to be determined in direct relation to the interest to provide the service, for example by assessing the cost-effectiveness of potential eServices as described above. Generally, 10% support for deployment falls far short of what is required, and barely covers the administrative overhead. Flexible funding of all phases should be possible, including the sustainable deployment phase if this is in the EU and public interest.
- A call for tenders need not be based on 100% eTEN funding, and could also include a competitive element in which a business model is part of the proposal.

In order to understand and accept these proposals it is necessary to unpick the term 'market' as presently used in the eTEN Programme. This should not be seen in a free, private sector, market context, but in the context of eTEN with its focus on eServices in the public interest which means sustainable from the following perspectives:

- financial, i.e. during deployment and at the end of a project some continuous funding is likely to be necessary from the public sector, although this could (and should where possible) also come from the private and civic sectors, as part of a cost-benefit exercise comparing the resources needed with likely take up and public interest benefits
- institutional and organisational arrangements, particularly in the public sector, which facilitate sustainable deployment

- demand as expressed by (beneficial and productive) use by the target group(s) of users.

This would mean that the 'bottom line' of an eTEN project should be determined by a user focus and thus increasing 'public value', which is valued and thus supported by sponsors, as opposed to purely private sector profit.

It is clear that eTEN must not 'distort' the free, private sector market, but there should be no danger of this if eTEN support: is designed:

- not to favour individual firms at the expense of others
- to deploy eServices in the public interest which the private sector either cannot or will not provide on its own
- to create better conditions for market development in the medium to longer term, for example by supporting infrastructural elements, reducing barriers and bottlenecks, etc.

The use of 'market' terminology can thus be misleading in the eTEN context. As stated in section 5, eTEN should support services or infrastructures in situations where the free market alone either cannot or will not do so, but where such services or infrastructures are in the public interest. The bottom line in such cases should be seen as user or public value, rather than the purely pecuniary measures employed by the private sector. We also know that market failure, and a number of other important circumstances, require public intervention of some sort (see section 5.3). Of course, many services and infrastructures supported by eTEN could have private sector partners, and indeed this is highly desirable, as is the entry of further private sector actors later, as full deployment is reached, and if eTEN support improves the conditions which private sector companies in general need to operate successfully. As long as the above conditions are met, the use of eTEN resources as described can be considered as good use of public resources which does not distort the free market in favour of specific private actors. Keeping a level playing field is in the interests of all, but also providing a conducive playing field in the first instance, often using some sort of public intervention like eTEN, is also necessary.

For example, the 'market' for efficient government (i.e. back-office reorganisation) is more likely in practice to attract and stimulate purely private sector actors, whereas the 'market' for what users need (i.e. service deployment) is less clear cut. There thus may be a need to subsidise the latter, and eTEN should play a role in this.

7.3 Increasing the quality and relevance of proposals

Although the quality of eTEN proposals has increased in recent years, there are still concerns expressed about this issue. The evidence collected by this study clearly points to the need for a more pro-active approach to eliciting proposals, and even support for proposal preparation, to be taken. This would also improve the relevance of proposals in relation to whatever operational policy options are selected (see section 6).

A number of suggestions for such a pro-active approach already arise from the discussion in section 6:

- Most of eTEN's resources should be re-directed to a finite number of top-down 'strategic priorities', as part of the process of seeking as wide as possible agreement at EU level and with as many MS policies and programmes as possible, by looking for synergies and coherence across EU and national policies.
- As part of this process, key actors, stakeholders, institutions, networks, users, sponsors, etc., at EU, national, regional levels, will be identified, the aim being to secure as much political and financial support as possible in advance and thus enable two or more MS to work together to encourage and help form incipient project consortia.
- Better use should be made of more pro-active National Contact Points, and key staff of these should be encouraged to work as stagiaires (temporary assistants) in the Commission for a number of months, attend as observers at eTEN proposal evaluations, and maybe even at some relevant EU-level workshops. This will be designed to raise their knowledge and levels of activity, thereby providing a more pro-active service in their own country.

In addition to a more pro-active approach to encourage better project proposals, a multi-stage process should be adopted. There are different variations, each with their own strengths and weaknesses, on the basic theme which is suggested as follows:

1. Call for good ideas: issue a call for good ideas which could lead to full deployment to be described in maximum 10 pages, specifying, actors, support, finance, partners, users, etc.),
2. Initial selection of the best ideas: which also fit most closely within the top-down strategic priorities (if this is the operational policy option adopted)
3. Support for the preparation of a full proposal:
 - Hold a one-on-one workshop with each selected idea in order to support the development of a good proposal
 - this could be done either by EC staff or by a ‘panel of experts’ which hears presentations by the proposers and gives critical feedback to assist the proposers investigate the market better and prepare a full good quality proposal
 - this would need to be based on a strict checklist of “feedback criteria’ (rather like is often provided in a call for tender TOR) in order to ensure and unbiased equal treatment, as the biggest potential problem with this approach is the possibility that some proposers may later try to argue that they have been given unfair treatment/assistance and/or misleading/faulty advice
 - the personnel or remit of this panel must not overlap in any way with the full proposal evaluators
 - the panel should not give direct advice on how to write a proposal, only go through the checklist to critically comment on the proposer’s overall ideas and deployment approach
 - Alternatively, hold a workshop with each selected idea in order to support the development of a good proposal which includes an initial market validation – this can sometimes be done relatively easily and quickly, and some proposals may already be some way or completely down this road. Such proposals, if accepted, could start very quickly on initial deployment.
 - Alternatively again, as well as a workshop, provide the best ideas with some funding to undertake a short market validation as part of a good proposal, once satisfied that all other elements necessary for ultimate full deployment are in place. This could be, say, about 10,000 Euro, depending upon the scope, local costs, etc. Such an approach would place the proposal consortium under a contractual obligation to prepare a market validation which could be useful whether or not they proceed to a full proposal and, later, full deployment.
 - In addition to, or instead of, a workshop, allocate a ‘mentor’, for example from an already successful eTEN project, to each selected idea who then provides ‘preparation support’ to help the proposers submit a good detailed proposal. Again, such a mentor should not become involved in actual proposal writing, but rather assist with ideas and advice.
 - Perhaps (some of) this could be accomplished with a ‘brokerage’ system, e.g. with potential investors such as national/regional funds, the EIB, etc. (See also section 8 below).
 - Another possibility is to improve the ability of National Contact Points to provide proactive qualified support, for example in running workshops, providing feedback, etc.
4. Full proposal selection:
 - It would be expected that most of the good ideas selected above would proceed to a full proposal, which would then be evaluated in the normal way although with suitably adapted evaluation criteria.
5. Project implementation of selected proposals:
 - During project implementation greater support should be given by the ‘mentor’ and/or the EC Project Officer who takes a more pro-active role in on-going project activities. Many

MS request more of a 'partnership' approach with and between the EC and between projects when running projects (See also section 6.2 above where projects' dissemination and concertation activities are discussed.) Aspects of this system have already started to be implemented in eTEN.

Another possible approach to the above for the top-down strategic priority type projects, would be to issue a call for tenders and then select, not one 'winner', but as many for which there is budget and strategic requirement. Contract negotiations would then take place to make any adjustments where necessary to ensure the actual work is of an even higher quality than the original proposal, is focused as much as possible on real deployment, and/or to become even better coordinated with the other accepted proposals and in meeting the needs of the strategic priority. All proposers who accept any requested changes along these lines would thereby receive a contract for implementation, and could be asked to work in relative close collaboration with the EC, plus perhaps national/regional authorities and other stakeholders, as well as other projects, thus ensuring maximum deployment impact. Full deployment would normally be a contractual condition, unless circumstances outside the direct control of the project prevent this.

All the above ideas would need to work to strict deadlines in order not to drag project start dates out too long (ICT and deployment requirements change fast!).

There are, of course, some possible dangers of a more pro-active and multi-stage approach to proposal generation and evaluation, which need to be recognised and either accepted or countered:

- the EC will need more staff (or employ more external experts)
- the project consortium is more likely to blame the EC if the proposal is not funded, or in any way they feel they have received 'bad' or 'misleading' advice or other assistance, which also means that the proposal evaluation process must be kept completely separate, including in terms of individual experts, from any proposal preparation support aspects
- any proposal preparation support must be totally technically neutral.

Turning to the composition of proposal consortia, there appear to be four main players (or stakeholders) necessary for successful eTEN implementation:

1. the implementer: e.g. library, hospital, Public Administration (PA), etc., which provides the incentive and the resources
2. the actual service provider (either in- or out-house) which may be different from 1, e.g. in a Public-Private-Partnership (PPP) or partnership with a civic sector actor
3. the technology supplier, whether infrastructure, hardware, software, etc., and could be the same as 2
4. the user, which again could be described as in-house (i.e. G2G) or out-house (e.g. G2C and G2B).

This can be described as the eTEN supply chain. Feedback from the Commission suggests that the actual service provider is often still in a state of development and this often hinders the implementer from making the investment. In the 2004 call, only 30% of partners were 'implementers', and this needs to be increased as they are the critical players and also the potential good practice facilitators. The 'implementers' are typically the 'sponsors' of eTEN projects, both financially and organisationally, in both the short term period of the project and, crucially, in the longer term of sustainable deployment. Although 'implementers' will come primarily from the public sector, benefits derive from including as many private and civic sectors sponsors as well. Linking into existing national or regional programmes, with their own funding and organisational regimes, and thus increasing the buy-in by, and participation of, national governments and public administrations, could be very useful in this respect, especially where these overlap between two or more MS. (See also sections 6.3 and 6.4 above).

When partnerships in RTD projects fail and a partner withdraws, it is normal that the consortium seeks a new replacement partner. When the same happens in eTEN, the project normally carries on without a new partner. This may be understandable given that most eTEN projects are for the market validation phase only, but could be a weakness in the future if more emphasis

is placed on real deployment. Closer support by the EC Project Officer and/or 'mentor' would be needed to counter problems caused by partner loss without the addition of new partners. Indeed, partner turnover, involving the replacement of old by new partners, especially when the latter are involved in deployment, would be an advantage.

A specific recommendation, which could serve the needs of each of the operational policy options described in section 6 and support better project focus and implementation, is to set up a central eTEN service with five linked functions:

1. an 'ideas factory' to proactively identify both existing services that could be encouraged to use eTEN to develop at a trans-European level, and to generate original ideas for new services to meet perceived needs which would be further investigated by local partners
2. a central 'clearing house' of ideas, offers, needs, services, applications, infrastructures, etc., which could match requirements against solutions and experience.
3. an on-line knowledge base of good practice, sources, studies, etc., relevant to eTEN, which could be used both as a searching tool on an individual basis, to support replication and knowledge transfer activities, to undertake specific research, and to support learning activities between stakeholders, including running workshops both on-line and off-line
4. an active dissemination and animation function arranging conferences, workshops, supporting networks, 'multiplication' groups and communities of practice, identifying the need for and the commissioning of studies (such as eTEN impact assessment and future eTEN scenarios), and similar
5. a 'brokerage' service linking potential ideas, partners and funding sources (see also section 8.2 below).

Finally, a number of suggestions can be made regarding possibly useful eTEN support actions, i.e. calls for tenders involving 100% funding for specific support activities to:

- suggest ways to get better individual project proposals, as opposed to proposals in the correct strategic priority areas
- support information days during which good and successful projects are demonstrated and discussed, and with the intention of increasing the quality of proposals submitted
- judge whether and how eServices are useful for end users and for the public good by developing a robust set of criteria, not necessarily benchmarks, and suggest who will need to implement them (e.g. cost-benefit and stakeholder analysis)
- support the piloting and validation of platforms for interoperability and interconnectivity, based on common requirements of MS for some or all types of eTEN eServices.
- examine the potential mutually beneficial interrelations between eTEN (and maybe all ICT deployment instruments as a package) and the Structural Funds, focusing on MS and regional level. (See also section 8.1 below).
- examine potential links with the European Investment Bank (EIB), particularly in the context of the NMS, and the feasibility and desirability of setting up a brokerage service for matching potential investors or sponsors with eTEN projects. (See also section 8.2 below).

8 Relationship to other instruments, frameworks and funding sources

Even though the resources allocated to eTEN are expected to rise during the programming period 2007 to 2013, the impact the programme is able to have will undoubtedly be increased by identifying and exploiting potential synergies and complementarities with other instruments, frameworks and funding sources. Some trends and possibilities are discussed in this section.

8.1 Within the European Union framework

Within the EU framework, synergy of policies, strategies and initiatives is now a major focus through better coherence and integration efforts. In the context of the renewal process of the Lisbon and eEurope initiatives, there is likely to be a set of highly coordinated and synergistic goals, both within DG Information Society as well as across the EC as a whole. One driving force for this is the significant change in emphasis called for by the Kok Report³³, and other EC initiatives³⁴, for much greater focus of EU effort and resources on specific policies and priorities as well as much greater synergy between these.

This is accompanied by what can only be described as a decisive sea-change in thinking which appears to be taking place for an overall DG Information Society approach focused increasingly on the demand-side, on user-, community- and citizen-centric needs, and thereby on deployment, take-up and the productive use of eServices. The eTEN programme is well suited to meet such needs and can therefore expect to be given considerably greater attention and resources in the 2007-2013 period. At the MS level, most governments have or are developing national goals and policies related to ICT, the Information Society and the public sector in general (especially for eGovernment). As part of this process, there is likely to be an increasing coherence between these and EU level policies and programmes in the coming second term of the Lisbon implementation, and thus also in potential relevance of eTEN to MS and even regional interests.

It is important to understand that eTEN already has important relationships with other EC deployment instruments. First and foremost, the IDA (Inter-exchange of Data between Administrations) Programme complements eTEN in being only at pan-European level (i.e. it must cover all MS) and it must be concerned with the implementation of an EU measure in a G2G context, which often implies back-office reorganisation. eTEN, on the other hand, is 'trans-European', according to the definitions given in section 5, and can include pan-European, cross border and/or multi-national projects, and is therefore not limited to the implementation of EU treaty measures.

Secondly, the eContent Programme designed to encourage growth and development of the digital content industry in Europe. Activities focus on funding cooperative projects that have a short time to market, use available technology and aim to experiment with new business models. There are three action lines concerning: Public Sector Information (PSI), content production in a multilingual and multicultural environment, and increasing the dynamism of the digital content market.

Thirdly, it should be noted that eTEN, IDA and eContent are instruments of the eEurope 2005 Action Plan, for which discussions are currently underway for a continuation to 2010, particularly in the content of a revised second-term Lisbon Strategy, 2005 to 2010. eEurope also has a support programme entitled Modinis designed to undertake procured research into specific areas and provide specialised support services and tools.

³³ The Kok Report, *op cit*.

³⁴ Such as the study "Delivering Lisbon through the Information Society: the contribution DG Information policies and programmes", *op cit*.

These ICT deployment instruments are also complementary to the IST (Information Society Technology) Programme, presently part of the Sixth Framework Programme for Research and Technology Development (RTD), 2002 to 2006. There is in fact some discussion at present as to how to introduce new technologies into the market with the help of powerful deployment activities. There appears to be a strong case for arguing that EU funded RTD activity should focus more clearly on serving overall European policy goals, with a greater emphasis on underpinning technologies and basic research, and a stronger feed-back loop between research and deployment.

The eTEN Programme should also be seen in the context of the European Commission's Structural Funds administered by DG Regional Development. The latter are composed primarily of so-called Objectives I and II, the Cohesion Fund as well as the Community Initiatives Leader+, Urban II and Interreg. Each of these programmes has specific objectives and operating criteria but all are predominately focussed on providing support to specific types of region³⁵. The overall aim is to promote a European economy of territorially balanced economic growth by limiting inequality between regions, defined in terms of economic, demographic or geographic criteria.

Important potential complementarities exist between eTEN and the Structural Funds, but there is no 'trans-European' requirement in the latter and not all MS have Information Society as a priority (e.g. Slovakia does not). Thus, national and regional services would be supported by the Structural Funds but not trans-European services. However, the Structural Funds do dispose of very large resources (195 billion over the period 2000-06, excluding the Cohesion Fund). Effort is recommended to identify better the potential mutually beneficial interrelations between eTEN (and maybe all ICT deployment instruments as a package) and the Structural Funds. eTEN could coordinate its work much better with the Structural Funds, so that the two programmes can exploit common synergies without competing with each other. For example, eTEN can assist the Structural Funds by developing the international aspects of national services.

One possibility for maximising the deployment impact could be to allow project proposers to combine and mix funding from more than one EU programme. Clearly, strict rules would have to be followed to ensure that EU resources do not replace other potential resources, and that the project would not otherwise go ahead. Permitting such mixing of EU funds would encourage the integration of objectives from different programmes, and could significantly increase the volume of deployment activities. Many potentially good projects do not get off the ground at the present time because sufficient funding cannot be applied, even though individual fund holders approve the project. The expected "ICT Adoption and Policy Support Fund" from 2007 may go some way in meeting this objective.

All ICT deployment instruments, described above, may in the near future be integrated into a more coherent package, possibly with support measures for SMEs (in collaboration with DG Enterprise), for the environment (with DG Environment), as well as other cross EC links. To maximise impact, which must exploit all potential synergies, it is clear eTEN needs to work more closely across DG Information Society and other EC services and European initiatives, programmes and institutions, developing a common agenda and joint deployment strategies, for example in relation to:

- DG INFSO: all eTEN themes
- DG MARKT: all themes
- DG MARKT: al themes
- DG REGIO: all themes, especially eInclusion and the Structural Funds
- DG EAC: eLearning
- DG EMPL: eGovernment
- DG ENTR: SMEs
- DG SANCO: eHealth

³⁵ For a general introduction to the Structural Funds and their guiding principles, see <http://europa.eu.int/scadplus/leg/en/lvb/l60014.htm>.

Currently, such gearing between the different programmes is too low and needs to be considerably higher.

8.2 Outside the European Union framework

Given that eTEN is a EU public subsidy programme, albeit one that seeks, and indeed does, work closely with private and civic sector organisations on-the-ground, as well as with local PAs, scope for direct collaboration with non-EU entities appears limited. Indeed, apart from the project specific on-the-ground collaboration mentioned, this is generally the case.

However, there is good potential for eTEN to engage more directly and beneficially with non-EU entities in the future. This is particularly so in the context of the likely increase in eTEN funds, and/or its merging or very close collaboration with other EU ICT deployment instruments, which should result in a much more powerful, visible and active programme, likely to be noticed by, and be attractive to, other potential stakeholders in trans-European eService deployment.

Such stakeholders include, of course, MS governments and regions and their programmes (as already mentioned above), but could also encompass:

- The European Investment Bank (EIB) which is particularly relevant for the NMS. Discussions between eTEN and the EIB have taken place in the past but without practical outcomes, and it is recommended that these be taken up again once eTEN's future and funding over the 2007 to 2013 period are in place. The EIB could, for example, be interested in investment collaboration in public services in the NMS.
- Venture capital and other investment sources at MS, European or global level. There could be scope for joint activities at project level or groups of MS level (particularly groups of NMS), specifically in the later stages of eService or infrastructure deployment if, and when, such deployment results in market opportunities because of the conditions created by successful eTEN activities.
- eTEN could set up a brokerage service for matching potential investors or sponsors with eTEN projects at specific points during the latter's development and deployment activities. This would involve some investigation of likely investment sources and their modalities, and pro-active engagement with the market on behalf of eTEN.

It is recommended that an eTEN support activity be commissioned to investigate the feasibility and desirability of the above suggestions.

9 Conclusions and recommendations

In this final section, a review of the main recommendations and conclusions is given for each of the substantive sections of the Final Report. This is followed by some overall conclusions and observations concerning eTEN as a whole. The full background to these conclusions and recommendations is given in their respective sections earlier in this report.

9.1 The impact and implications of enlargement on eTEN

Conclusions and an overview of the main recommendations derived from the discussion in section 4 are given in the following. This is presented first in relation to the overall participation of the NMS in eTEN, then in terms of the types and contents of eTEN projects suitable for the NMS, and finally in relation to the operation and administration of eTEN. This is followed by some general conclusions.

9.1.1 NMS participation in eTEN

The eTEN 2004 work programme was the first opportunity the NMS had to participate. However, this has been highly successful with 11% of budget and 16% of partners accounted for by the NMS. On average the financial return per NMS was about 2.5 times their investment in the programme. Further, there is already very good mixing between the NMS and the older MS in forming eTEN project consortia. The average partner in the EU15 was only 1.2 times more likely to find a partner in another EU15 country than in a NMS, and the average partner in the NMS was 3.6 times more likely to find a partner in the EU15 than in another NMS.³⁶ This could be explained by the desire of NMS partners to seek 'experienced' EU15 partners when making proposals, but also points to a potential for greater cooperation in the future between NMS partners to exploit the potential for cross-border services.

Data from the Structural Funds reveals some correlation between national government commitment to Information Society (IS) issues and the state of development of eServices within the NMS. Thus, those NMS, like Estonia and Slovenia which are leading in terms of eServices, are also devoting a greater share of their Structural Funds to IS initiatives. Similarly the status, implementation and strength of IS programmes, and how responsibility for the IS is handled in respective NMS, seem to be important. Again, those leading in eServices tend to drive the IS through strong programmes already being implemented and often backed by a centralised ministry or unit. This again indicates the need for top level commitment and priority given to IS strategies.

9.1.2 eTEN content and projects

- The provision of cross-border ethnic eServices, including cooperation on minority languages and translations, plus the possibilities of providing some Russian language cross border services, should be encouraged.
- Trust is a huge issue and one of the biggest barriers which needs to be seriously tackled. For example, trust for the service provider about the user (who she is, what she knows, where she is, what she has). ISPs can validate this information, otherwise a central ID service could do so. Similarly, trust for the user about the service provider is needed, for example through recognisable certificates of competence.
- An example of the latter is needed for an internationally recognised system of accreditation if the NMS are to be fully involved in establishing and running transnational eServices. The signals that this is a genuine problem are already evident in the field of eLearning where IT

³⁶ Information and data obtained from the eTEN Unit of DG Information Society.

students are using the American Microsoft and Cisco certification schemes to improve their skills and obtain employment in other countries. The problem of standardising qualifications and evidencing quality is common throughout the EU. In the short term, a useful rapid solution for the certification of service quality might be to encourage an existing quality council or certification body to extend its services to be available to other MS, perhaps in conjunction with a local service provider or group of providers.

- The opportunities and benefits of mobile eServices, particularly in the NMS which have less robust or extensive fixed infrastructures compared with EU15, should be a top priority.
- Because of often quite severe regional disparities and geographical digital divides in the NMS, regions and municipalities need to be targeted quite specifically, especially where these can benefit from cross border networks, for example in relation to cultural groupings, environmental issues and SME trading groups. eTEN could offer the opportunity to bypass poorly performing central governments or national agencies.
- Overall, involvement in eTEN could be one way of ensuring that the benefits are shared, especially as most NMS are small and cannot afford the cost of developing new eServices on their own. Cooperation, as well as competition is thus vital. Just one example could be to pair up Slovenia and Estonia to lead in eService development assisted by, for instance, Polish, Czech, Bulgarian and Hungarian technical support. Other NMS could also be found specific roles suiting their strengths depending on the task in hand.

9.1.3 eTEN operation and administration

- The vast majority of NMS stakeholders call for a clear switch of focus and resources from market validation to deployment in eTEN. Many, in fact, suggest that projects should receive 50% financing, and some more, for both validation and deployment activities.
- Some prefer the existing bottom-up approach, but similar numbers also suggest a mixed bottom-up, top-down strategy. There is, of course, little experience in the NMS with a top-down mechanism for EU funding.
- Most NMS stakeholders can see the benefits of good practices, demonstrators and learning from others, either directly or as part of collaborative initiatives and networks. There is a clear need for 'real world' practical examples to act as role models and examples of good practice. This is a particularly severe problem for those NMS where the political climate is less enthusiastic with regard to new technology. The common response from officials is to wait and see what others are doing. This delaying approach acts as a significant barrier when taken in the context of very limited resources available in the NMS.
- All stakeholders felt that there should be better coordination and complementarity between eTEN and other EU funding initiatives.
- There is a desperate need to provide eTEN documentation in native NMS languages. Many stakeholders complain that they have significant problems understanding documentation anyway, and the lack of local language translations adds to this disadvantage. This should be part of better marketing, particularly through national contact points and national administrations.
- Benefits could be realised by better training of the eTEN administrators and contact points in each NMS. This would encourage improved understanding both of opportunities and procedures and a more proactive approach to national involvement in proposals.
- Many stakeholders suggest that eTEN proposal writing should be supported, some even suggesting that finance should be provided, for example by running special subsidised workshops in Brussels and through a more proactive and professional engagement of national contact points.
- Help with managing eTEN projects, once contracted, is also requested. For example, clear guidance on what to do and how to do it during the life of a project. Currently project proposals and project implementation takes place virtually in isolation. An active partnership philosophy needs to be built up between projects and each other, with national contact points and, most importantly, with the eTEN Unit in Brussels.
- The NMS have a different type of EU project experience compared with the EU15. Although many organisations in the NMS have had experience delivering projects under EU

programmes such as Phare, the experience they gained is very different to running projects directly handled by Brussels, such as eTEN. EU Programmes like Phare and Tacis are traditionally set up and managed at a high level by national governments, thus providing an interface between the project itself and the Brussels administration. In programmes like eTEN this interface is absent, which is especially challenging for the NMS because of their lack of experience. Possible solutions would be a more proactive role for the National Contact Point or a register of locally available, but Brussels trained, independent consultants to act as 'mentors', or even part of the project management team. As the ten NMS are now full members of the EU, whatever solution is proposed should be available to all 25 countries.

- The NMS have a different and wider interpretation of eInclusion than EU15 which should be taken better into account when designing workplans and evaluating proposals. Given the different histories and demographic patterns in the NMS compared to the NMS, the notions of inclusion and exclusion used are often very different, though of course starting to converge. When asked to list 'excluded' sections of the community by order of priority, many in the NMS would place disabled people below rural dwellers, less educated, poor and (sometimes) women. In most of the EU 15 this order would be reversed. As this alternative view of priorities can affect the appreciation and scoring of a project proposal it can be an important issue.
- All NMS stakeholders strongly endorse the overall purpose and activities of eTEN and wish to see the programme expanded and given greater status and prominence.

Many of the challenges, opportunities and recommendations contained in this study are not unique to the NMS, but enlargement has significantly increased their importance and fundamentally changed the dynamic. Similarly, many of the issues which eTEN needs to confront as a result are not unique to eTEN alone but also impinge much more widely on other programmes and policies and on the operation of the EC and the EU as a whole. Nevertheless, understanding these issues in the contexts described here will enable the NMS to obtain more benefit from involvement in eTEN and the eTEN Programme to be better targeted and operated.

If eTEN is to respond positively to the inclusion of the NMS, it will need to place a greater emphasis on cross-border eServices, trust in the virtual space, the harmonisation of standards, delivery to small language groups and supporting change management at various levels of government.

The Information collected in this study shows the all NMS have national strengths and weaknesses. There are common problems, such as the quality of infrastructures (and thus access), the urban-rural divide, the need to develop trust in eServices, the lack of interoperability, and relatively under-developed eHealth services. However, these are not universal problems, and there is great potential to replicate, or learn from, good practices elsewhere, including between the NMS themselves. Although the resources available to the study did not allow a comprehensive assessment, there are also many strong points within each NMS, such as:

- Bulgaria: large pool of skilled IT professionals
- Cyprus: eTourism, creating 'paperless' organisations
- Czech Republic: experience with WiFi hotspots, portals for people with special needs
- Estonia: eGovernment, eVoting, sharing good practices, demonstrating cost-effective development
- Hungary: digital evaluation of students, services for the blind, software skills
- Latvia: private sector and NGO initiatives
- Lithuania: using 'm-signature' technology, providing Russian language services
- Malta: experience with public-private-partnerships, interactive eGovernment
- Poland: eGovernment, pool of IT specialists, university registration systems, criminal register
- Romania: programming skills, eProcurement and eTendering services
- Slovakia: IT skills, using/adapting imported eLearning tools
- Slovenia: development of health insurance smart card, cost-effective development models, 'm-payment' systems, improving usability.

9.2 Scope and focus of eTEN

Conclusions and an overview of the main recommendations derived from the discussion in section 5 are given in the following.

The overall goal and vision of eTEN is to support the real deployment of eServices in the public interest which demonstrate and facilitate a European dimension. However, feedback from this and other studies reveals considerable uncertainty about which type of eServices and eService conditions eTEN supports, and also to what extent the potential impact of eTEN in relation to this goal is optimised by the current focus on the six themes:

- 1 Vertical themes:
 - eGovernment
 - eHealth
 - eLearning
 - eServices for SMEs
- 2 Horizontal themes:
 - eInclusion
 - eTrust and eSecurity (including ePayment)

9.2.1 The eTEN activity space

The eTEN activity space, i.e. the area which is potentially relevant for eTEN support given the programme's objectives and experience to date, is circumscribed by two broad defining principles:

1. (e)services in the public interest. In eTEN, the terminology "eServices with a common interest" is normally interpreted as "eServices in the public interest", i.e. services having an impact on citizens as citizens, but also on SMEs as supporting these can facilitate community development and has an important cohesion as well as economic dimension.
2. trans-European (e)services, i.e. eServices which support the 'European dimension'. The legal basis for the European dimension of eTEN is that an eService "can be implemented in one MS as long as it has a wider European base."

An important question to resolve is whether this legal base formulation is strong or explicit enough. Related questions are should eTEN be constrained by the 'trans-European' requirement, and should it be constrained by 'eServices in the public interest'? This study has found that the answer to these questions is generally yes, given the need not to distort the market or encroach on the subsidiary rights of the MS. The legal basis is sufficient for the present purposes but it may need to be revised to accommodate the need for the much greater gearing of eTEN with other programmes and EU and MS level policies and strategies where these overlap, and the more determinedly top-down, strategic priorities approach which is required in the future.

Serious consideration thus needs to be given to which eService themes and infrastructures should be adopted in the future, as it is felt that the existing six themes may hamper a more flexible approach which can also respond to a top-down policy driven focus. In this context, fresh thinking can be facilitated by exploring the four main areas which can assist in realising the European dimension for eServices in the public interest, and which are thus of potential interest to eTEN. The first three can provide inspiration for theme-specific generic services and specific applications (the 'front-office').

1. the Internal Market based on competitiveness and citizenship
2. economic and social cohesion
3. the Lisbon and Gothenburg strategies: transition to a knowledge-based economy, modernise the Europe social model, a growth-oriented macro-economic policy mix, and sustainable development

4. infrastructures for interoperability and interconnectivity which support the generic eServices and specific applications (the 'back-office').

9.2.2 Applications and services

In considering the future focus of eTEN applications and services it is important both to take account of on-going policy and strategic thinking within the European Commission, but also not to be constrained by traditional ways of meeting such policies and strategies.

There is a need to get away from solutions which are too narrowly constrained by the present six eTEN themes. There is a need to think much more broadly across and between themes, driven explicitly by both EU and MS level policy and interests where these overlap. In this context, new possible areas of focus for eServices could include:

- a stronger citizen centric approach, focused on eCitizenship and quality of life
- cultural and social factors such as media pluralism and cultural diversity
- civic society services comprising community and voluntary groups which could and often do exhibit a cross-border dimension
- eEnvironment has a clear public interest and trans-European relevance given that environmental issues are not constrained by MS borders
- ethnic minorities living outside their original country of origin and often across borders could provide an important opportunity for eServices directed at them, but such services must be implemented in conformance with national policies. Supporting cross border minorities, such as ethnic Russians, could benefit relations with neighbouring states by opening up borders and improving trade and employment. There is a need to put aside old fears and build for the future.
- the trans-European educational, travel and mobility needs of young people
- eServices assisting the citizen when dealing with European Institutions, such as the European Court, European Commission, European Parliament and MEPs
- eServices aimed at helping the traveller and tourist when moving across borders
- eServices which counter regional disparities and support SMEs, for example in the area of flex- and e-work, an agency of temporary or cross-border work, integrated cross-border job search portals, etc.
- in the context of SMEs, reinforcing the current moves to establish a Single Point of Contact and eProcurement, as one-stop-shops for companies.

9.2.3 Infrastructures for interoperability and interconnectivity

eTEN must support not just trans-European applications and services but also the mainly non-technical infrastructures for interoperability and interconnectivity upon which they rest. These must be part of harmonisation efforts where this does not conflict with any necessary subsidiarity rights, for example by developing standards or interoperability frameworks at European level or between MS. New possible areas of focus could include:

- renewed focus on trust as a vital trans-European and user issue
- trust can be increased by national validation agencies forming partnerships across Europe
- cross-border infrastructures which directly support the Lisbon agenda, such as strategy development studies, scenario planning, mapping existing related legislative acts, interoperability studies, etc.
- supporting the knowledge base of Europe through for example high speed networking linking schools, hospitals, etc., thus stimulating skills development, employment and competition, as well as supporting public services.
- not being constrained by thinking of eServices as only Internet based and thus also focusing on mobile eServices, particularly as 3G is rolled out. Such services are starting to touch everybody, and, in the mobile example, is also the result of European level collaboration and deployment which supports European industry in global competition. Mobile services are

also particularly relevant to the NMS, given the lack of fixed infrastructures compared with the older MS.

- setting up brokering platforms connecting all relevant stakeholders in order to channel investment and other capital to recognised opportunities through the networking of funds, companies, universities, etc.

Some regulatory measures may be needed if all MS are to achieve a minimum standard to allow pan-European service provision.

9.3 Operational policy options

Conclusions and an overview of the main recommendations derived from the discussion in section 6 are given in the following. This is presented in relation to each of the main operational policy options in turn, and is followed by some general conclusions.

9.3.1 Bottom-up innovation

Weighing the advantages and disadvantages of the bottom-up approach, and considering the new climate of thinking in DG Information Society about the desirability of strengthening synergy across programmes and greater coherence with European policy, it is recommended that the bottom-up approach be very significantly reduced in future eTEN operations in favour of the other approaches described below. Bottom-up calls for proposals are valuable for facilitating innovation which cannot be orchestrated top-down by the EC or MS, and therefore should be retained on a limited basis, but on their own do not provide sufficient focus or impact.

9.3.2 Replication, knowledge transfer and good practices

In order to ensure projects undertake specific concertation and dissemination activities, such as holding events, producing reports, working together with other projects in themed or other specific networks, which also link to suitable external networks and communities of practice, it is recommended to provide specific funding for these purposes over and above what the project needs for its own activities. Indeed, for successful projects, such activities and the associated funding they should attract, are arguably more important and would have greater potential European impact than the project's own specific deployment activities on their own.

Where appropriate, all eTEN knowledge transfer efforts should be coordinated across the programme, maybe with the assistance of a specific support action. Further, proactive links to other similar initiatives should be sought and maintained in order to maximise synergy and achieve more coherent and scaled-up impacts across all Information Society activities. For example, links should be sought and maintained with the eGovernment good practice framework presently being developed by Modinis, with the Beep (Best eEurope Practices) knowledge system, and with the eEurope Awards programme for eGovernment and eHealth. However, much of this derives from national or regional examples. An evidence base for trans-European services urgently needs developing to support eTEN.

Most emphasis should be placed on learning with other projects and other initiatives, and thereby supporting external actors who need learning support, for example in the context of communities of practice. The exchange or replication of solutions needs to be localised and adapted to the receiving context, and the exchange of good ideas and promotion of dialogue between practitioners who wish to learn together or learn from those with practical knowledge, should be strongly promoted. Organisations, to compete and meet rising demands for quality and innovation, must today become more intentional and systematic about 'managing

knowledge' in a context in which effective learning has become a key issue for success, however the latter is defined.

There is much evidence that the learning process could well be more important than the direct replication of a particular application or technical-organisational solution. In fact, showcasing and demonstrating 'successful' projects is probably better and cheaper than attempting to fund catch-up projects from scratch.

9.3.3 Top-down strategic priorities

This study and other evidence point overwhelmingly to the need to concentrate much of the future eTEN effort and resource onto a more decidedly top-down, directive approach reflecting EU and, where they overlap, also MS level priorities and policies.

There seems to be a decisive sea-change taking place in DG Information Society, EC and even MS thinking about an ICT approach focused increasingly on the demand-side, on user-, community- and citizen-centric needs, and thereby on deployment, take-up and the productive use of eServices.

Similarly, there is now much greater awareness of the need to achieve synergy and coherence across all DG Information Society programmes, with the activities of other DGs, as well as with the priorities and policies of the MS and the regions where these overlap. The MS are now themselves beginning to look to the EC to facilitate their cooperation where their interests and requirements overlap, and where they can support each other with good practice, replication, common learning and common initiatives, both at pan-EU level and across smaller groupings of MS.

Drawing upon this convergence, a top-down 'strategic priority' approach should be implemented by eTEN through calls for tender by specifying what is needed and using the process of the financial rules expected as part of the upcoming "ICT Adoption and Policy Support Fund". Strategic priority themes should be selected from the types of applications, services and infrastructures agreed between the EC and all, or specific groups of, MS, and based on overarching and synergistic European policy and strategy objectives. These are likely to closely reflect the renewed Lisbon strategy and the next eEurope umbrella initiative expected to cover the period up to 2010, and provisionally termed i2010.

Determined political will is necessary to push through these changes, but this seems to be growing and also galvanising action at both EU and MS levels.

9.3.4 Linking EU with national policies and with groups of Member States

The need to link more directly and decisively to national policies, as well as to EU policies, is highly recommended in the future. However, the existing Open Method of Coordination (OMC), based on a loose method of comparative evaluation, is unlikely to be appropriate in the new eTEN context without some adjustment. In the future the OMC will need to operate within the context of greater commitment and buy-in from the MS as part of the strategic priority approach suggested in this study. Its use of a relatively rigid approach to benchmarking against European norms could also usefully be adjusted in favour of the norms, or agreed targets, of groups of MS. Reference to notional EU-wide norms could be retained in cases where leverage is needed to obtain political support or funding in specific cases.

In future, it will not be necessary or desirable to have exactly the same approaches or services across all MS. Instead, focusing on groups of countries where appropriate should be encouraged, thereby achieving a lot more differentiation. Internal MS opportunities and challenges are so different (though probably converging in the longer term), and the need to

take account of the dynamism of change is so important, that a more differentiated approach is needed. Much of the eTEN (as well as arguably of the Lisbon and eEurope) approaches should be re-designed in terms of national or regional (groups of MS) targets.

Following such an approach, however, must also be balanced against the need to ensure that longer term requirements for interoperability, interconnectivity and necessary standards at a European (and in some instances at a global) level, are not compromised.

As part of the process described above, we anticipate that during the second phase of Lisbon, partially as a result of the Kok Report, there will be closer coherence of MS policies and programmes to the main Lisbon strategies. MS governments will become more active in adopting and implementing programmes which directly link into EU policies. eTEN should purposefully link into these developments and thus into existing and evolving national priorities, especially where there is overlap between MS, and particularly between adjacent or similar MS, and with EU-level policies.

Subsidiarity principles suggest that the European Commission (EC) should take the leading role in defining trans-European eService requirements for a set of strategic priorities. This should be limited to the resources available, so that funds are highly focused and not too thinly spread for maximum impact, and undertaken in cooperation with the MS. In agreeing such strategic priorities, an assessment will need to be made of:

- where EC and MS policies and priorities overlap – potential is considerable here, including but not limited to the Internal Market and the Lisbon goals, and could also include overlap with the priorities of groups of MS, rather than them all, where acceptable, so that for example different groups operate to different time horizons with some perhaps joining an early adopters and some a late adopters group, and benchmarking themselves against group norms rather than Europe-wide norms
- how the EC can facilitate the cooperation between MS or groups of MS
- existing good practice evidence for replication, demonstration or learning
- specific trans-European and cross border eService needs
- the likely costs and benefits of providing a specific trans-European eService, i.e. comparing the resources needed, including those provided from public funds, with likely take-up and benefits.

In order to achieve this goal, greater cooperation is needed not just with and between MS but also within the EC and across different programmes. Realising this goal will probably require separating the identification of trans-European strategic priorities from their implementation within the new Directorate H of DG INFSO. A Cross Unit Strategy Group should be established to undertake the top-down identification of trans-European strategic priorities, which would liaise with other DGs, the MS, regional authorities and other interested stakeholders. Such an approach would also improve the buy-in from, and participation of, national governments and public administrations in eTEN.

This Strategy Group should undertake a thorough analysis of the need for eServices, as described above, together with funding requirements from eTEN as well as from additional sources such as venture capitalists and the EIB, where this is realistic. It would encompass, or be supported by, a service with a number of strategic functions, including an 'ideas factory', a 'clearing house', an on-line knowledge base of good practice, and a brokering service to link potential ideas, partners and funding sources.

Given the above, a recommendation can be made as to the most suitable spread of resources for different types of instruments:

- 15% bottom up (as of now)
- 20% top-down strategic priority areas supporting infrastructures for interoperability and interconnectivity (reducing barriers). This would include creating trust, human, organisational, technical and other necessary infrastructures for interoperability and interconnectivity, as well as the development of strategies, studies, brokerage mechanisms etc., including eTEN support measures.

- 40% top-down strategic priority service themes
- 25% good practice type support which could also be part of the top-down projects.

Whatever distribution of resources is adopted in practice, however, it is also important to retain flexibility in order to both respond to real results as these materialise and to maximise coherence and synergy with other programmes, whether at European, MS or regional levels.

It would be possible to create some direct mix of, for example, bottom-up and top-down approaches by continuing the dominance of the call for proposals approach but strengthening evaluation criteria in relation to agreed strategic priorities. However, it is felt that this would have the drawback of further diluting the pool of good quality and relevant proposals, which can already be a serious problem.

Selecting strategic priorities may also be supported by appropriate 'political headlines', for example, in relation to the benefits of competitiveness or social cohesion. This would contribute strongly to awareness, publicity, political support and funding.

9.4 Project focus and implementation

Conclusions and an overview of the main recommendations derived from the discussion in section 7 are given in the following. This is presented in relation to each of the main project focus and implementation issues in turn, and is followed by some general conclusions.

9.4.1 The eTEN value chain

At present, most eTEN projects do not proceed from the market validation phase to the initial market deployment phase (see below), and most evidence points to the fact that the 2003 and 2004 intake of projects has yet to achieve any impact, whilst the 2002 intake has had only limited deployment impact. Increasing deployment and impact are thus vital future goals for eTEN.

The main reason for the little interest shown by eTEN projects in the initial market deployment phase seems to be that this phase only attracts 10% funding support, and it is reckoned that this is not much greater, and could even be lower, than the actual costs incurred by a project in applying for support for this phase and administering this support once received. Clearly, this is a highly unsatisfactory state of affairs which urgently needs tackling. Further, because the most important aspect of deployment is 'sustainability', the complete exclusion of the sustainable deployment phase from funding should also be re-considered.

9.4.2 Moving from market validation to real deployment

There is a groundswell of opinion that, because eTEN in practice does not significantly support the actual deployment of eServices (probably mainly because of the 10% funding limit), the future focus should shift from one which is mainly on market validation (although this should remain important), to the real deployment and take-up phases.

There is a need to reconfigure the definition and operation of 'market validation' and 'initial deployment' within the specific eTEN context of trans-European eServices in the public interest, particularly if the project consortium includes significant public sector actors with strong commitment.

The aim of eTEN should not be to fund projects which only go for market validation, which often is the situation at present.

Thus, in principle, a project should have the intention, the plans and the back-up to go for full deployment, including sponsorship, if earlier activities are successful. This means that project proposals should include full details of all phases from market validation to sustainable deployment, even though it is clear that aspects of the later phases will be less developed and more uncertain. Such an approach would view a project as a continuous whole, with individual steps (no longer termed or formally separated into 'phases') on the way. It should be possible to achieve this in the context of more top-down strategic projects and greater on-going support and coordination by the EC.

Moving from market validation to full deployment is a highly fraught process which requires much flexibility and nimbleness on the part of project participants. If the EC wishes to secure as much full deployment impact as possible, it must provide an enabling administrative and financial process to facilitate this, including a significant increase of the 10% funding limit where warranted. The lack of this is, and could continue to be, a severe barrier to progress. Hopefully, the new financial modalities being worked out as part of the proposed 'ICT Adoption and Policy Support Fund' will deliver what is needed here.

The main, and perhaps only, criterion for impact, and thus for the ex-ante and ex-post evaluation of eTEN projects, must therefore be full deployment, i.e. both supply and demand sides and productive and/or beneficial use by end users.

The level of funding must be increased, especially for the initial and full deployment phases. The recommendation is up to 50% for all phases, thus signalling that deployment is at least as important as market validation. There is also a need to simplify the administration and enable a more seamless progression of steps, rather than, as now, a sequence of somewhat separate phases where it is difficult to proceed from one to the next. It could also be, of course, that eTEN financial support is not required for the full deployment step, if for example, a service does achieve full commercial backing and full market deployment at that time. But the assumption must be that also full deployment will need some eTEN support, at least for a limited period. Overall eTEN support should vary by negotiation on a project by project basis depending upon a number of factors, including political desirability, available private or national finance and cost of deployment.

Funding levels for projects thus need to be determined in direct relation to the interest to provide the service, for example by assessing the cost-effectiveness of potential eServices as described above. Generally, 10% support for deployment falls far short of what is required, and barely covers the administrative overhead. Flexible funding of all phases should be possible, including the sustainable deployment phase if this is in the EU and public interest. A call for tenders need not be based on 100% eTEN funding, and could also include a competitive element in which a business model is part of the proposal.

Efforts to avoid 'distorting the market' should be continued, but this is not seen as problematic as long as eTEN focuses on eServices in the public interest which the free market alone either cannot or will not provide. Bringing in appropriate private sector partners and sponsors should also continue to be prioritised, as long as this does not favour individual firms at the expense of others, and if eTEN support is used where appropriate to improve the conditions which private sector companies in general need to operate successfully.

9.4.3 Increasing the quality and relevance of proposals

In order to increase the quality and relevance of proposals, a much more pro-active approach to eliciting proposals, and even support for proposal preparation, should be taken.

Most of eTEN's resources should be re-directed to a finite number of top-down 'strategic priorities', as part of the process of seeking as wide as possible agreement at EU level and with as many MS policies and programmes as possible, by looking for synergies and coherence across EU and national policies.

As part of this process, key actors, stakeholders, institutions, networks, users, sponsors, etc., at EU, national and regional levels, should be identified. The aim would be to secure as much political and financial support as possible in advance and thus enable two or more MS to work together to encourage and help form incipient project consortia.

Better use should be made of more pro-active National Contact Points, and key staff of these should be encouraged to work as stagiaires (temporary assistants) in the Commission for a number of months, attend as observers at eTEN proposal evaluations, and maybe even at some relevant EU-level workshops. This will be designed to raise their knowledge and levels of activity, thereby providing a more pro-active service in their own country.

A multi-stage process to eliciting and nurturing suitable projects should also be adopted, for example:

1. Call for good ideas described in maximum 10 pages
2. Initial selection of the best ideas
3. Support for the preparation of a full proposal, using a number of variations (some of which are mutually exclusive) including:
 - holding a one-on-one workshop with each idea, either by EC staff or by a 'panel of experts' which hears presentations by the proposers and gives critical feedback to assist the proposers investigate the market better and prepare a full good quality proposal
 - alternatively, hold a workshop with each selected idea in order to support the development of a good proposal which includes an initial market validation
 - alternatively again, as well as a workshop, provide the best ideas with some funding to undertake a short market validation as part of a good proposal, once satisfied that all other elements necessary for ultimate full deployment are in place
 - in addition to, or instead of, a workshop, allocate a 'mentor', for example from an already successful eTEN project, to each selected idea who then provides 'preparation support'
 - perhaps (some of) this could be accomplished with a 'brokerage' system, e.g. with potential investors such as national/regional funds, the EIB, etc.
 - another possibility is to improve the ability of National Contact Points to provide proactive qualified support, for example in running workshops, providing feedback, etc.
4. Full proposal selection: evaluation in the normal way although with suitably adapted evaluation criteria
5. Project implementation of selected proposals: during which close support should be given by the 'mentor' and/or the EC Project Officer who takes a more pro-active role in on-going project activities.

Another possible approach for top-down strategic priority type projects, would be to issue a call for tenders and then select, not one 'winner', but as many for which there is budget. Contract negotiations would then take place to ensure full compliance with the strategic priority and synergy with other projects and initiatives, and incorporating real deployment as part of the contract to be fulfilled unless circumstances outside the direct control of the project prevent this.

Given that in the 2004 call only 30% of partners were implementers from the public sector, this needs to be increased as they are the critical players and also the potential good practice facilitators. Public sector actors are typically the 'sponsors' of eTEN projects, both financially and organisationally, in both the short term period of the project and, crucially, in the longer term of sustainable deployment. Linking into existing national or regional programmes, with their own funding and organisational regimes, and thus increasing the buy-in from, and participation of, national governments and public administrations, could be very useful in this respect, especially where these overlap between two or more MS.

A specific recommendation, which could serve the needs of each of the operational policy options described in section 9.3 and support better project focus and implementation, is to set up a central eTEN service with five linked functions:

1. an 'ideas factory' to proactively identify both existing services that could be encouraged to use eTEN to develop at a trans-European level, and to generate original ideas for new services to meet perceived needs which would be further investigated by local partners
2. a central 'clearing house' of ideas, offers, needs, services, applications, infrastructures, etc., which could match requirements against solutions and experience.
3. an on-line knowledge base of good practice, sources, studies, etc., relevant to eTEN, which could be used as a searching tool on a individual basis, to support replication and knowledge transfer activities, to undertake specific research, and to support learning activities between stakeholders, including running workshops both on-line and off-line
4. an active dissemination and animation function arranging conferences, workshops, supporting networks, 'multiplication' groups and communities of practice, identifying the need for and the commissioning of studies (such as eTEN impact assessment and future eTEN scenarios), and similar
5. a 'brokerage' service linking potential ideas, partners and funding sources.

Finally, a number of suggestions can be made regarding possibly useful eTEN support actions, i.e. calls for tenders involving 100% funding for specific support activities to:

- suggest ways to get better individual project proposals
- support information days during which good and successful projects are demonstrated and discussed, and with the intention of increasing the quality of proposals submitted
- judge whether and how eServices are useful for end users and for the public good by developing a robust set of criteria, not necessarily benchmarks, and suggest who will need to implement them (e.g. cost-benefit and stakeholder analysis)
- support the piloting and validation of platforms for interoperability and interconnectivity, based on common requirements of MS for some or all types of eTEN eServices
- examine the potential mutually beneficial interrelations between eTEN (and maybe all ICT deployment instruments as a package) and the Structural Funds, focusing on MS and regional level
- examine potential links with the European Investment Bank (EIB), particularly in the context of the NMS, and the feasibility and desirability of setting up a brokerage service for matching potential investors or sponsors with eTEN projects.

Given the above, it is clear that there is a very strong need to determine actual eTEN funding on a flexible basis in direct relation to the interest to provide the service, for example by assessing the cost-effectiveness of potential eServices from an EU and public interest perspective. Any danger of sustaining the unsustainable could be mitigated by having a strong review and 'mentor' process, as well as much closer pro-active involvement by the EC Project Officer. No market distortion need be incurred in so doing.

For eTEN service or infrastructure projects, a number of desirable principles also arise from the above:

- the aim should always be to actively achieve full deployment and use, and thus go further than the existing eTEN
- (beneficial) service use should be sustainable after eTEN funding
- all, if not most proposals, should cover all deployment phases and not just market validation which tends to be the situation now for the large majority of projects
- consideration can be given in appropriate cases to make market validation a shorter stage in project implementation, say maximum 3 months, after which a formal review is needed to decide whether or not to continue, but the assumption is it will continue, unless serious unforeseen problems have been encountered during the 3 months, as the original proposal included detailed ideas and plans for the deployment phase as well as appropriate sponsors and other actors
- alternatively, market validation could be seen as an on-going process, continuing after an initial rapid validation, during which the 'market' is being constantly tested and roll-out constantly being piloted in the context of actual use, perhaps with the use of 'action research' techniques.

Implementing suitable deployment projects, within the strategic priorities identified, should thus be undertaken using a flexible and differentiated approach in which a variety of identification and support methods are available. The portfolio of implementation measures thus needs to be revised. For example, a removal of existing theme barriers, a multi-stage process to elicit and assist good potential proposals, a service demonstration phase following RTD and prior to market validation, and a reduction or the removal of the break between market validation and initial deployment. Overall, the current supply driven approach needs to be complemented by a stronger demand driven approach.

It will also be important to accept that not all projects will (or should) succeed:

- some 'failures' are necessary for innovation and for learning.
- some risk must be accepted, the important thing is that 'failures' lead to learning and feed back into the programme as a whole. The central eTEN service described above, especially the knowledge base of good practices, would support such learning.

Finally, we support the proposal from the IDA Programme for a 'one-stop-shop' system for applying for any EU funding. This would ease and facilitate the work of both proposers and EC staff as a single simplified set of forms, rules and procedures would be used by all. Such a service should, of course, also be an eService, and would be eminently suitable to be supported by eTEN and IDA. It could perhaps become a showcase eTEN service.

9.5 Relationships to other instruments, frameworks and funding sources

Conclusions and an overview of the main recommendations derived from the discussion in section 8 is given in the following.

9.5.1 Within the European Union framework:

Within the EU framework, there is now great emphasis on maximising the overall synergy of policies, strategies and initiatives through better coherence and integration efforts. eTEN is inevitably a part of this and needs to proactively engage with the re-alignment process.

eTEN already has important relationships with other EU deployment instruments, such as IDA, eContent, eEurope and Modinis, as well as with the IST RTD Programme, the Structural Funds and the Lisbon and Gothenburg strategies.

In particular, important potential complementarities exist between eTEN and the Structural Funds, which dispose of very large resources but which do not have a trans-European component. Effort is recommended to identify better the potential mutually beneficial interrelations between eTEN and the Structural Funds. eTEN could coordinate its work much better with the Structural Funds, so that the two programmes can exploit common synergies without competing with each other. For example, eTEN can assist the Structural Funds by developing the international aspects of national services.

To maximise impact, which must exploit all potential synergies, it is clear eTEN needs to work more closely across DG Information Society and other EU services and European initiatives, programmes and institutions, developing a common agenda and joint deployment strategies, for example in relation to:

- DG INFSO: all eTEN themes
- DG MARKT: all themes
- DG MARKT: al themes
- DG REGIO: all themes, especially eInclusion and the Structural Funds
- DG EAC: eLearning
- DG EMPL: eGovernment

- DG ENTR: SMEs
- DG SANCO: eHealth

Currently, such gearing between the different programmes is too low and needs to be considerably higher.

9.5.2 Outside the European Union framework

There is good potential for eTEN to engage more directly and beneficially with non-EU entities in the future. This is particularly so in the context of the likely increase in eTEN funds, and/or its merging or very close collaboration with other EU ICT deployment instruments. A much more powerful, visible and active programme should be the result, which is likely to be noticed by, and be attractive to, other potential stakeholders in trans-European eService deployment.

Such stakeholders include, of course, MS governments and regions and their programmes, but could also encompass:

- the European Investment Bank (EIB)
- venture capital and other investment sources at MS, European or global level
- eTEN could set up a brokerage service for matching potential investors or sponsors with eTEN projects at specific points during the latter's development and deployment activities. This should be part of the central eTEN service described earlier.

9.6 Overall conclusions

9.6.1 Re-designing eTEN for the 2007-2013 period

The main goal of eTEN must be to maximise the deployment and impact of trans-European eServices in the public interest, both through the direct support of services and infrastructures, and indirectly by replication, demonstration and learning.

eTEN should continue to be 'trans-European' and thus support the European dimension, but it must also take account of whatever comes out of the planned 2005 Spring Council and its response to the Kok Report, as well as the emerging plans for the 'ICT Adoption and Policy Support Fund' from 2007, which is currently out to public consultation, as well as the review of other associated instruments like eEurope and IDA.

Of specific relevance for eTEN, these developments are complemented by what can only be described as a decisive sea-change in thinking which appears to be taking place for an overall DG Information Society approach focused increasingly on the demand-side, on user-, community- and citizen-centric needs, and thereby on deployment, take-up and the productive use of eServices. The eTEN programme is well suited to meet such needs and can therefore expect to be given considerably greater attention and resources in the 2007-2013 period.

eTEN could become a highly influential programme with high impact if the overall thrust of the recommendations presented in this report are implemented and eTEN collaborates closely with related instruments. DG Information Society is, in fact, currently considering the re-structuring of deployment focused instruments into one larger and more powerful programme.

Synergy across and between instruments and units is now a major focus through better coherence and integration of policies and initiatives. There is realisation of the need for an emphasis on the delivery of solutions, such as interoperability, common standards, a multi-channel approach, etc. A demand-driven approach is now needed which tackles barriers to usage and up-take.

It is clear that there is a need for a strong coherent deployment initiative fully within DG Information Society, but with strong links to other DGs and EC units within the context of a revised Lisbon Strategy for the second half of the 2000 to 2010 time frame. This should be aimed *inter alia* at realising benefits for ordinary people (citizens and SMEs), and prioritising real achievements with the citizen in the centre rather than the technology in the centre. There should thus be no technology-push, but a focus on what touches ordinary people in their social and working lives, i.e. services and infrastructure deployment rather than technology deployment. This also implies that organisational change, new skills, and other contextual conditions need to be strengthened. Impacts should be expected in the quality and range of services available to people, such as related to the Internal Market.

However, many programmes are still supply-driven, concentrating only on technology and applications. The mid-term review of eEurope 2005 highlighted that the delivery of solutions needs to be emphasised much more, through scaling up from success stories to a critical mass. Key messages include the need to:

- define a set of tangible pan-European public eServices
- increase the emphasis on reducing the data burden and understanding human impacts
- focus on a smaller number of key public services with clear impacts on the Lisbon goals
- re-focus interoperability activities and promote OSS as a key underlying enabler in this field
- establish likely demand patterns to avoid a technology-push approach.

Meeting these objectives requires mechanisms for stimulating demand, such as supporting market creation. For example, in the US the Disability Act created a states-wide market for assistive technology, something seriously lacking in Europe. A greater stress on learning, especially policy learning for example through evidence-based policy making, can help drive such innovations for creating conditions on the demand side to assist learning, innovation and entrepreneurship at the user and market interface. This requires engagement with public, private and civic stakeholders to determine where these users and 'markets' are. It also requires a greater commitment to socio-economic (including action and experimental) research to support the demand side, aspects downplayed in the Sixth Framework Programme, so that the current research and deployment potential is too narrowly focused on technology. This state of affairs needs turning around in the Seventh Framework Programme and in the context of the new drive for deployment spearheaded by a re-invigorated eTEN. DG Information Society does, in fact, combine research, regulation and deployment, which is rare, and thus has almost a unique opportunity to ensure coherence and synergy across each of these fronts simultaneously.

A framework like OMC, within which the MS are very much free agents, may no longer be appropriate and should be re-thought with a stronger structure so that programmes like eTEN can be more directive and help stimulate take-up, productive use and the removal of barriers to market exploitation. This can only be done by identifying areas of overlap of interest and policies between the EC and the MS, and will require strong political will, but current evidence shows that this is very possible given the mixed experiences of Lisbon and related instruments to date.

Overall, the general picture in the NMS is the same as in the old MS. Priority is given to national services and there is little consideration of trans-European issues, except where these have a clear and direct national or regional interest. No government is concentrating on trans-European service requirements. Trans-European aspects are weak and are often not self-sustainable without public funds for support, although there is much agreement that many are necessary and need much greater attention. eTEN is the vehicle to meet this need.

In this context, eTEN should be considerably strengthened and enlarged, especially given that it is at present the only legal basis DG Information Society has for deployment.

In conclusion, a programme directed specifically at the deployment of trans-European eServices in the public interest is essential, otherwise they will not be implemented. eTEN already constitutes an experience base, and it is clear that this must be led by the EC, but in full cooperation with the MS. However, a more realistic and expanded approach to such service

provision is needed. It should be designed as part of the structural, programme and policy changes currently taking place in the context of the second phase of the Lisbon Strategy, the Kok Report, proposals for i2010 to replace eEurope, and proposals for the ICT Policy Support Fund. Given the solid experience already possessed by eTEN, it is paramount that the programme develops into an expanded mechanism funding the approach described above.

9.6.2 Short-term recommendations

Most of the above recommendations, concerning both the NMS specifically and eTEN more generally, are longer term, i.e. aimed at the 2007 re-launch of eTEN and related instruments. However, some recommendations could be directly taken up in the remaining period of eTEN up to the end 2006. Some of these could consist of small scale pilots to test the ideas for longer term consideration, whilst some could be fully implemented quite quickly. In eTEN, as in other programmes, changes can take a long time to result in impacts, e.g. some projects from the 2001 call are still running, having taken two years to negotiate. Impacts can and should be speeded up, as well as increased.

- There is a desperate need to provide eTEN documentation in native NMS languages. Many stakeholders complain that they have significant problems understanding documentation anyway, and the lack of local language translations adds to this disadvantage. This should be part of better marketing, particularly through national contact points and national administrations.
- Many stakeholders suggest that eTEN proposal writing should be supported, some even suggesting that finance should be provided, for example by running special subsidised workshops in Brussels and through a more proactive and professional engagement of national contact points.
- Help with managing eTEN projects, once contracted, is also requested. For example, clear guidance on what to do and how to do it during the life of a project. Currently project proposals and project implementation takes place virtually in isolation.
- Most NMS stakeholders can see the benefits of good practices, demonstration examples and learning from others either directly or as part of collaborative initiatives. There is a clear need for 'real world' practical examples to act as role models and examples of good practice. This is a particularly severe problem for those NMS where the political climate is less enthusiastic with regard to new technology.
- Consider a more flexible approach to project content and focus not necessarily constrained by the six existing themes. For example, the types of projects considered in sections 9.1 and 9.2
- Consider also some limited experimentation with top-down projects, calls for tender, direct collaboration with selected NMS in order to find suitable projects and encourage and support their formation (especially seeking strong public administration involvement), and a two or more stage process for eliciting and nurturing suitable projects. Adjustments to proposal evaluation criteria and administrative procedures would of course also be necessary depending on precisely what is done.
- An essential longer term goal of eTEN is to set up a central service with the linked functions of an 'ideas factory', a central 'clearing house', an on-line knowledge base of good practice, an active dissemination and animation function, and a brokerage service. If the main contours of the 2007-2013 period are agreed during 2005, this could be launched as early as 2006 and thus help to ease the 2006-2007 transition and provide support to new eTEN proposals and projects from the outset.

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11 Annex 2 – Personnel and interviews

11.1 Study team

The following organisations and persons compose the Study Team

Danish Technological Institute, Denmark;

- Jeremy Millard, Senior Consultant, Centre for Competence, IT and Assessment
- Louise Thomasen, Consultant, Centre for Competence, IT and Assessment

Steppingstones Internet Ltd., UK

- Richard Warren, Director

Study ‘think tank’:

- Christine Leitner, Senior Lecturer, European Institute of Public Administration, the Netherlands
- Tomas Sabol, Associate Dean, Technical University of Košice, Slovakia
- Giuseppe Zilioli, Consultant, Belgium.

11.2 National Correspondents

The study employed twelve National Correspondents, one in each New Member State and in each of the two Candidate Countries, to carry out in-country survey work for both Phase 1 and Phase 2 of the study.

- Bulgaria: Rossitsa Chobanova, Bulgarian Academy of Sciences
- Cyprus: Eleni Christodoulou, University of Cyprus
- Czech Republic: Irina Zalisova, EPMA/BMI Association
- Estonia: Tarmo Kalvet, Praxis
- Hungary: Péter Kövesd, Trebag
- Latvia: Juris Jerums, NK Konsultāciju Birojs
- Lithuania: Rimantas Petrauskas, Knowledge society management Institute, Law University of Lithuania
- Malta: Gabriella Darmanin, Ministry of IT and Investment
- Poland: Marysia Góreczna, ASM
- Romania, Daniel Chindea, Centre for Urban and Regional Sociology
- Slovakia: Tomas Sabol, Technical University of Košice
- Slovenia: Davorin Rogina, ALP PECA

11.3 Interviews

- John Beale, Project Officer, eTEN Unit, DG INFSO
- David Broster, Head of Unit, eTEN Unit, DG INFSO
- Pascal Collottee, Theme Leader eHealth, eTEN Unit, DG INFSO
- Peter Diry, Theme Leader eGovernment, eTEN Unit, DG INFSO
- Achim Klabunde, Theme Leader Trust and Security, eTEN Unit, DG INFSO
- Marina Manzoni, Theme Leader eInclusion and Theme Leader SMEs, eTEN Unit, DG INFSO
- Emilie Normann, Theme Leader eLearning, eTEN Unit, DG INFSO

Numerous other informal interviews and consultations took place, both with European Commission staff and outside experts..

12 Annex 3 – Stakeholder interviews

In Phase 2 of the study, the National Correspondents undertook interviews with stakeholders in their own countries using a common questionnaire. The guide and template for the stakeholder interviews is attached as Annex 5. The following stakeholders were interviewed.

Country	Name	Position	Organisation	Type	Actions
Bulgaria	Alexander Ognyanov	Director	Ministry of Transport	Government Official	Co-ordinating a "One Stop Shop"
Bulgaria	Roumen Trifonov	Adviser	Council of Ministers	Government Official	Co-ordinating a "One Stop Shop" approach to eGovernment services
Bulgaria	Nelly Stoyanova	Head of Sector IS Development	Ministry of Transport	Government Official	Stimulating Supply and Demand for e-services
Bulgaria	Krassimir Simonski	Project Manager	UNDP & ICT Development Agency	Service Provider	Project Manager Telecentres Agency
Bulgaria	Rossitsa Chobanova	Correspondent	AED	Service User All	Monitoring development
Cyprus	Dr Minas Kyriades	ICT Co-ordinator	Ministry of Health	Government Official	Responsible for computerising the Ministry of Health
Cyprus	Christodoulou Eleni	Senior Scientist	University of Cyprus	Academic	co-ordinating e-government roll-out
Czech Republic	Martin Hirsal	Department Member	Ministry of Informatics	Government Official	
Czech Republic	Petr Pavlinec	IT Department Director	Reginaki Authority of Vysocina	Government Official	e-government actions
Czech Republic	Martin Hirsal	Policy Department Member	Ministry of Informatics	Government Official	Trust & security
Czech Republic	Tomas Rencin	Chairman	Union of Towns and Communities	Government Official	Advise Towns and communities and promote ICT
Czech Republic	Martin Cusak	Project Manager	EPMA	Service User All	Creating studies
Czech Republic	Jan Savicky	Director	Czech Publishing for Internet	SME	Provide websites
Estonia	Arvo Ott	Head of Department	Ministry of Economic Affairs	Government Official	Main co-ordinators for eGovernment, interest and co-ordination for learning and health
Estonia	Mait Heidelberg	Councillor to the Ministry	Ministry of Economic Affairs	Government Official	eGovernment adviser

Country	Name	Position	Organisation	Type	Actions
Estonia	Tarmo Pihl	eTEN Contact Point	Archimedes Foundation	Service Provider	eTEN consultant
Estonia	Ivar Tallo	Director	Estonian eGovernance Academy	Service User All	NGO supporting transfer of knowledge
Estonia	Tarmo Kalvet	Director	PRAXIS	Service User All	policy analysis
Hungary	Dezso Skoumal	Counsellor	Ministry of Interior	Government Official	responsible for introducing 20 public services (eEurope2005)
Hungary	Oskar Kovacs	Consultant	Ministry of Communications	Government Official	daily user
Hungary	Adam Horvath +	Education Officers	Ministry of Education	Government Official	eLearning and electronic administration systems
Hungary	Peter Kovessd	Managing Director	TREBAG	Service Provider	Web design and content creators
Hungary	Istvan Moldovan	Head of Department	Hungarian Electronic Library	Service Provider	Preserving national culture and academic materials in digital form
Hungary	Eva V Csorba	Managing Director	Strategic Research	Service Provider	ePublishing, employing teleworkers
Latvia	Ina Gudele	Director	Ministry of eGovernment affairs	Government Official	implementation of digital signature
Latvia	Inese Betega	Deputy Head of IS development	eGovernment Ministry	Government Official	Policy making
Latvia	Girts Berzins	Board Member	Hansabanka	Service Provider	supplier of banking services
Latvia	Andris Anspoks	Vice President	Latvian IT Association	Service User All	reducing digital divide
Latvia	Juris Jerums	Project Manager	NK Konsultaciju Ltd	SME	User - wanting more
Lithuania	Paulius Vaina	Senior Specialist	Ministry of Transport	Government Official	NCP for eTEN
Lithuania	Linus Pecuria +	Deputy Head of Information	IST Development Committee	Government Official	
Lithuania	Loreta Krizinauskiene	Director	Window to the Future	Service User All	providing free access to try
Lithuania	Prof. Rimantas Petrauskas	Head of Department	Law University of Lithuania	Academic	realisation of eservice plans
Malta	Damian Xuereb	Programme Manager	Ministry for Investment	Government Official	Ministry responsible for ICT
Malta	Gabriella Darmanin	NCP	Ministry of Investment	Government Official	Ministry responsible for ICT
Poland	Edward Seliga	Head of Division International IT	Ministry of Science	Government Official	Interested in eGovernment
Poland	Maria Sliwinska	Director	International Centre for Info Management	Government Official	Long term user, NGO representative
Poland	Artur Kolensinski	Director	European Centre of Enterprise	Service Provider	Observer and researcher
Poland	Jarslaw Malec	Business Manager	Medical Data Management Group	Service User eHealth	mainly eHealth, also eLearning

Country	Name	Position	Organisation	Type	Actions
Poland	Matia Gorenczna	Project Manager	ASM Centrum	User - Expert	Analysis of services
Romania	Mihai Bulkea	eTEN Expert	Ministry of Communications	Government Official	Consultancy Services
Romania	Julian Mirea	Councillor	Council for Hunedoara County	Government Official	e-Signature
Romania	Eduard Tric	General Manager	Axetel	Service Provider	Electronic signature specialist
Romania	Constantin Surdu	Business Analyst	Romanian Chamber of Commerce	Service Provider	cross-border projects
Romania	Daniel Chindea	National Correspondent		Academic	potential User
Slovakia	Zuzana Kazimirova	Managing Director	Dept Informatics - Interior Ministry	Government Official	integrating inter-government communications
Slovakia	Anton Lavrin	Delegate of Slovakia to DG IS	Technical University	Government Official	Participation in Leonard & 5FP Quality manager for Slovak Telecom (1988 - 2000) eBusiness support
Slovakia	Valentina Michalova	Department member	Ministry of Transport	Government Official	Preparing Road Map for Slovakia, introducing ECDL for civil servants, fighting SPAM and preparing National Strategy for Information Society
Slovakia	Milan Drobny	Chairman	eSlovakia Foundation	Service Provider	Regional government (www.mesto.sk) & (www.zlatyeb.sk), specially tourism
Slovakia	Jana Krutkova	Manager	Information Centre of EU in Zilina	Service Provider	Professional help
Slovakia	Milan Istvan	Director	Partnership for Prosperity	Service Provider	Promoting ITC topics & solutions
Slovakia	Tomas Sabol	Dean	Faculty of Economics - University of Kosice	Academic	Involved in projects at EU and National level
Slovenia	Andrej Tomsic	Counselor	Ministry of Information Society	Government Official	
Slovenia	Davorin Rogina	Director	ALP PECA	Service Provider	eServices for SMEs
Slovenia	Nina Novinec	Consultant	IPMIT	Service User All	Consulting and Strategic planning
Slovenia	Uros Hribar +	Researchers	University of Maribor	Service User eLearn	advanced user of eServices

13 Annex 4 – Analysis and validation of the data

This annex provides a brief note on data credibility, as well as the list of NMS Senior Experts and the members of the Steering Committee.

13.1 Credibility of the survey evidence and results

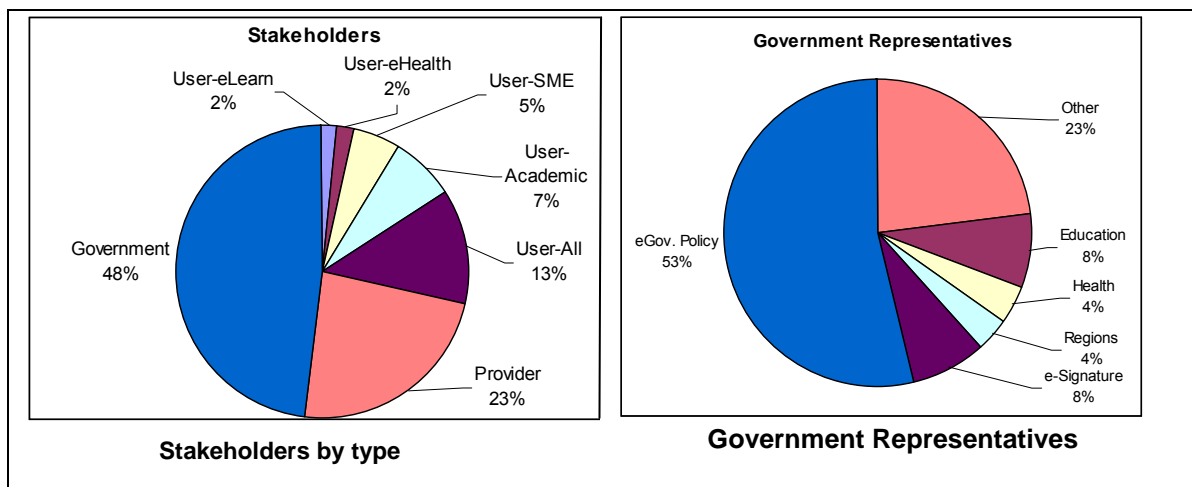
The survey size was relatively small (56 respondents from 12 states) but covered a representative sample of stakeholders as government officials, providers of eServices and user groups. This panel of stakeholders consisted of:

- 12 Stakeholders were National Experts appointed by their governments to the Expert Committee for the eTEN programme.
- 12 stakeholders were selected as National Correspondents for the study and were appointed as a result of their previous experiences with best practice in the use of ICT through the development of the BEEP knowledge base during FP5.
- The remaining 32 stakeholders were mostly recommended by the National Experts as being people involved in eServices as policy makers, suppliers or users. A few others (6) were recommended by the National Correspondents on the same basis

The consistency of responses made by stakeholders (see also sections 4.1 and 4.2 in the main report) indicates that a larger sample would not have produced a significantly different result. Furthermore, the results reflect those obtained in Phase 1 of the study (Danish Technological Institute, 2004), and are broadly in line with the conclusions being drawn from the eUser project (looking at ‘user-centric’ issues of eServices in the public interest), as well as results from the eEurope+ Progress Report (European Commission, 2004).

Given the limited size and duration of the study, this shows that the results can be considered as largely credible and robust, and that the methodology adopted was adequate to the task. Clearly, with more time and resources a larger sample of feedback and types of evidence could have been collected, but the consistency of the results which were obtained, and their correspondence to other studies, show that valuable and relevant conclusions are being drawn by this study.

The following charts illustrate the mix of stakeholders involved in the study. In the right hand chart, the government stakeholders are further divided in their respective areas of responsibility within their national government.



The table in Annex 3 lists the stakeholders surveyed, their position, organisation, type of responsibility and the type of activity they undertake.

The results of the study have also been validated by the NMS Senior Experts and the study's Steering Committee, the members of which are given in the following.

13.2 Senior Experts from New Member States

Validation of the NMS survey results, in both Phases 1 and 2 of the study, was undertaken by the following Senior Experts:

- Bulgaria: Nelly Stoyanova, Ministry of Transport and Communications
- Cyprus: Poly Papavassiliou, Planning Bureau
- Czech Republic: Martin Hirsal, Policy and International Cooperation Department, Ministry of Informatics of the Czech Republic
- Estonia, Arvo Ott, Ministry of Economic Affairs and Telecomms
- Hungary, Oszkar Kovacs, Ministry of Informatics and Communications
- Latvia: Inese Betaga, Information Society Bureau
- Lithuania: Paulius Vaina, Ministry of Transport and Communications
- Malta : Gabriella Darmanin, Ministry of IT and Investment
- Poland: Edward Seliga, Department of IT in Public Administration
- Romania: Mihia Bulea. Ministry of Communications and Information Technologies
- Slovakia: Valentina Michalkova, Ministry of Transport, Posts and Telecommunications
- Slovenia: Dimitri Skaza, Ministry of Information Society

13.3 Steering Committee members

The study Steering Committee members set-up by the eTEN Unit, DG INFSO was composed of the Senior Experts from the NMS plus the following persons:

- John S. Beale (Chairman), eTEN Unit, DG INFSO, European Commission
- Csaba Csapodi, IT and Telecomms Attaché, PermRep Hungary
- Alfred Ruzicka, Austria
- Marc Bogdanowicz, Institute for Prospective Technology Studies, EC Seville/IPTS
- Simon Bensasson, Head of Unit/ DG Infs/International Affairs, European Commission
- M Pettigrew, DG INFSO/Evaluation and Monitoring, European Commission.

14 Annex 5 – Guide and template for stakeholder interviews

The following is the guide and template provided to National Correspondents for undertaking interviews with NMS stakeholders.

Introduction

Stakeholder interviews should normally be conducted by telephone and normally take no more than 30 minutes maximum. You should go through the list of issues attached on the “stakeholder interview template” when interviewing each stakeholder. Please try to address each issue, only leaving an issue or sub-issue out if it’s not relevant, or the stakeholder has absolutely no knowledge, comments or views, in which case please indicate why left out. Please also add additional issues if they are important to understanding your country’s (and/or this particular stakeholder’s) position in relation to the present and future eTEN Programme.

When interviewing, you will of course need to take specific account of your country’s situation, the stakeholder you are talking to and your own knowledge of eTEN and this particular Study. You will probably need to explain important aspects of eTEN to the stakeholder as the interview proceeds, so it is important that you have a good understanding of it. To give you extra background on this, please quickly read the document attached: “the eTEN activity space.” This is an informal and confidential working document, internal to the Study, but should help you better understand eTEN and the Study. (If you have any comments or questions, please contact Jeremy or Richard).

Although the specific parts of the template attached have been spaced out to some extent in order to accommodate your notes, you may in practice need to add more space before you print out copies of the template.

Note: in the list of issues, when the phrases “you” or “your” are used, these refer to the stakeholder you are interviewing, not you as the interviewer. Please remember that we are looking for the opinion, knowledge and experience of the stakeholder.

Who to interview

We hope you can conduct at least five interviews, but more would also be great. A list of stakeholders recommended by the Senior National Experts is also sent to you. Please interview the following in this order if possible:

1. Yourself (!) – you are an expert and will have very valuable views. Please interview yourself first, as this helps you understand the template better! (When filling in the template yourself, please do not refer to the Phase 1 report you made, but try to summarise succinctly what is needed under each issue, even if this involves some repetition of what you reported before.)
2. The Senior Expert him/herself – they obviously know quite a lot about eTEN already. Please try to interview the Senior Expert second, as they may give you additional insights useful for interviewing the other stakeholders. Establishing a useful working relationship with your Senior Expert could be useful later if you have problems in contacting the stakeholders they have recommended.
3. The stakeholders recommended by the Senior Expert.
4. Any other relevant stakeholder contacts you have which are not included above.

Remember, we are trying to get a balance between the following types of stakeholder:

- i) government officials, policy makers, etc.
- ii) service providers (public mainly, also private, civic)
- iii) representatives of user citizen groups, and/or representatives of SMEs, and/or individual citizens and SMEs if you think they can contribute usefully to the Study.

Reporting:

For each interview we would like a report summarising the main points in clear English. Please also include your own comments if these differ from the views of the stakeholder, or if they help us better understand the views of the stakeholder. When doing this, please clearly mark your comments as “Interviewer comments”.

Stakeholder interview template

Country:	
Name of Stakeholder interviewed	Name of interviewer
Position	Organisation
Organisation	Date of interview
Type of stakeholder (tick one or more as relevant)	Government official, policy maker, etc. (please indicate)
	Service provider (public mainly, also private, civic – please indicate)
	User (please indicate which type)
	Other (specify)
	Other (specify)

Any relevant interviewer comments on the interview (such as the role of the stakeholder interviewed in the national situation), not elsewhere covered:

Issue 1: eServices

1a) Summarise the general situation (including strengths, weaknesses, opportunities and threats) of your country, including planned future development, in relation to the following eServices in the public interest (as understood by eTEN, ignoring the trans-European aspect until issue 2)

The services in the public interest are:

- i) eGovernment
- ii) eHealth
- iii) eLearning
- iv) eServices for SMEs
- v) eInclusion
- vi) Trust and security
- vii) which others could you suggest?

1b) Summarise your own activity/interest in these eServices, if any

1c) Summarise the need and desirability of these eServices

Issue 2: trans-European aspects**2a) Summarise the extent of present trans-European eServices in the public interest, including planned future development (as understood by eTEN)**

Trans-European aspects include:

- i) pan-European
- ii) cross-border
- iii) multi-national
- iv) replication, good practices, knowledge transfer
- v) others?

2b) Summarise your own activity/interest in such trans-European aspects, if any**2c) Summarise the need and desirability of such trans-European aspects**

For example:

- which eServices lend themselves to trans-European availability?
- which type of trans-European availability?
- should and how could links and cooperation be established in practice with other Member States (including other New Member States), and if so which Member States and in which eServices and types of trans-European aspects?

Issue 3: Drivers and barriers to eServices

3a) Summarise what you think are real drivers and barriers to eServices in your country (whether or not trans-European)

Both drivers and barriers could include: infrastructure, finance (including access to capital), legal and regulatory framework, institutional and organisational framework, policy, human resources and skills/training, digital divide, awareness, etc. (There could be many others)

3b) Summarise how these drivers could be exploited and/or how these barriers could be overcome

Issue 4: Relevant national/regional/sectoral programmes, initiatives and policies

4a) Summarise relevant programmes relating to trans-European eServices in the public interest, including planned future development (as understood by eTEN)

4b) Summarise your own activity/interest in such programmes, if any

Issue 5: In order to best suit your (or your country's needs) what should eTEN offer?

5a) Which eServices should it promote?

For example, those it does now, and/or others? If all or many, please prioritise.

5b) Which trans-European aspects should it promote?

For example, those it does now, and/or others? If all or many, please prioritise.

5c) How could eTEN exploit your country's drivers and overcome your country's barriers?

5d) How could eTEN support, and/or be supported by, your country's own programmes, initiatives and policies?

Issue 6: In order to best suit your (or your country's needs) how should eTEN operate?**6a) Should eTEN focus (only) on market validation and initial market deployment, or should it (also) focus on other parts of eService development?**

Don't forget, at present eTEN does not support development at research, technology development or pilot stages. The programme only supports projects covering the following two development phases:

- i) trans-European market validation, i.e. the assessment of the market potential of the proposed trans-European eService – up to 50% of costs can be contributed by the Commission
- ii) assuming market validation is successful, the initial market deployment and roll-out of the trans-European eService can receive a contribution from the Commission of up to 10%.

6b) What level of financing should eTEN provide to make it attractive, realistic and fair?**6c) How much freedom should eTEN give organisations making proposals?**

For example:

- complete freedom (so-called "bottom-up", as of now) to propose anything that meets the broad requirements of trans-European eServices in the public interest, thus stimulating innovation
- only a choice of very specific types of projects (so-called "top-down") thus directly supporting specific objectives agreed by two or more Member States or by the European Union
- a mix of bottom-up and top-down
- some other model?

6d) Should eTEN complement, support, or be supported by, other international programmes and funding? ? If so how could this happen?

For example:

- other EU Programmes, such as research funds, the Structural Funds, social funds, training funds, innovation funds, regional and sectoral funds, etc.
- other international programmes and funding, such as the European Investment Bank, private sector programmes and funding, funding from the US, etc.

6e) Are there any other ways in which eTEN should be designed, for example in relation to its?

- i) objectives
- ii) organisation
- iii) operation
- iv) impacts
- v) other

Issue 7: Knowledge and awareness of the eTEN Programme

7a) To what extent were you aware of the eTEN Programme before this interview?

7b) What is the extent of awareness of eTEN in your country?

7c) How could knowledge and awareness of eTEN been made more widespread?

Issue 8: Any other issues?

Are there any other issues which are important to understanding your country's (and/or this particular stakeholder's) position in relation to the present and future eTEN Programme?