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Mid-term review of the European Action for Growth - stocktaking on the progress on the implementation of the European Action for Growth

SUMMARY

1. BACKGROUND

The European Action for Growth (or European Growth Initiative), endorsed by the European Council in December 2003, aims at stimulating the long-term growth potential and the innovative capacity of the European Union by mobilising investment in transport, energy and electronic communication networks, and in research, development and innovation, with a particular focus on growth-enhancing technological areas.

At the European level, the initiative is supported by non-financial measures to improve the regulatory, administrative and financial environment for investment, as well as Community financial support, lending from the European Investment Bank (EIB) as well as venture capital from the European Investment Fund (EIF) part of the EIB group, and innovative financing tools to mobilise private investment. At the Member States level, it relies on supporting actions by the Member States to promote private investment, and on significantly redirecting public funding towards the areas of the initiative with a special emphasis on infrastructure investments.

In order to focus efforts on key investment projects of European interest, a list of TEN infrastructure projects and R&D technological areas, considered as sufficiently mature to be turned into action in the short run, was identified by the Commission, in close collaboration with the EIB, based on the explicit intentions of the Member States. The selection criteria included, in addition to project maturity, their trans-frontier dimension, the impact on growth and on innovation in an enlarged EU, and benefits for the environment. The 31 Quick Start projects in the area of transport and the 17 projects in the area of energy are key sections of the TEN-T and TEN-E priority projects whilst the 8 projects related to electronic communications and knowledge reflect R&D, innovation and eEurope and i2010 priorities within the Lisbon strategy for Growth and Jobs. The "Quick Start programme" was endorsed by the European Council in December 2003. It was foreseen that the list might be updated, in the framework of the annual cycle for reporting to the Spring European Council, if other projects fulfilled the same criteria.

In its conclusions of December 2003, the European Council invited Member States, the Commission and the EIB to play their role for the Action for Growth to succeed, and in particular to take the necessary steps to ensure implementation of the "Quick Start Programme".

The Commission and the EIB were asked to provide a mid-term evaluation of the initiative by the end of 2007, on the basis of the following criteria: (i) effects on growth; (ii) impact on the internal market and cohesion in the enlarged EU; (iii) mobilisation of private sector capital, (iv) acceleration of the implementation of TENs and innovation and R&D projects including environment projects; (v) progress in reducing regulatory barriers; (vi) the impact on the environment and employment. As requested by the ECOFIN Council in March 2004, the evaluation should also look at the implications of the initiative on the quality of public finances.

2. The improved framework for investment – Preliminary first results

2.1. Framework at European level

Almost all legislative measures identified by the Growth Initiative as necessary to improve the conditions for investment have been adopted and have entered into force (e.g. the TEN guidelines and financing rules, the Euro-vignette and cross-border mergers directives). They aim at facilitating investment in large-scale or complex cross-border infrastructure projects, and in research and innovation partnerships.

The Growth Initiative has given some initial impetus to set up new instruments and initiatives coordinating better funding from public sources and encouraging private investment in transport and energy networks as well as in R&D and innovation (e.g. nominating European coordinators for transport and energy priority projects, establishing Joint Technology Initiatives on nano-electronics and hydrogen and fuel cells).

The areas highlighted by the Initiative have benefited from significant funding over 2000-2006 and from increased budgets for the 2007-2013 period via the TEN-T and TEN-E programmes, the Structural and Cohesion funds, the 6th and 7th research framework programmes and the eTEN and Competitiveness and Innovation Programme.

The EIB has been actively engaged in supporting the Growth Initiative as well as the Lisbon reforms through increased lending facilities (e.g. the TEN investment facility and the Innovation i2010 Initiative), the strengthening and development of financial instruments, and the provision of technical expertise.

The EIB and the Commission have jointly developed new financial instruments, at least in part as a result of the commitments made in the Growth Initiative (e.g. the Loan Guarantee Instrument for TEN-transport LGTT, the Risk Sharing Finance Facility RSFF and the JEREMIE and JASPERS initiatives as complementary instruments supporting EU Cohesion policy). The Member States look forward to using these new instruments to leverage private investments and improve access to risk capital.

2.2. Framework at national level

More than two thirds of the Member States replied to the Commission information request on the Growth Initiative and related infrastructure investments (Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Lithuania, Luxembourg, Poland, Portugal, Slovak Republic, Spain, Sweden, and the UK). The information provided in the Technical Annex gives an insight – mostly qualitative - on the national investment context onto which the Growth Initiative has developed its effects. As public infrastructure spending is commonly included in long-term strategies, it was difficult to analyse the influence of the Growth Initiative with a limited hindsight.

Public investment in transport infrastructure has accelerated in recent years in most Member States. Investment in energy infrastructure is mainly market-driven. The need to modernise energy infrastructures and to better integrate national networks into the EU market is prompting investments in most Member States. The promotion of energy efficiency and renewable energies, a new priority in many countries, also steadily necessitates high investment level. Increased demand for mobile communication services enables the private sector to invest in upgrading the networks to provide innovative high speed mobile services. Investment into ICT networks serving scientific needs presenting important public good characteristics continue to be partly financed by national budget. The Member States have renewed their commitment to develop space technologies expected to generate a wealth of applications with commercial or public services purposes. Hydrogen technologies and nanoelectronics have also gained a priority position in the list of projects up for public R&D investment at the national level and national research capacities in these key areas for long term growth and sustainability have been reinforced.

2.3. Progress on the implementation of the Quick Start Projects

The improved enabling framework both at the European and the Member States level including the availability of financing has had significant knock-on effects on the implementation of the Quick Start projects. However, these effects fell significantly short of expectations voiced back in 2003, namely with respect to transport infrastructure projects.

The Quick Start transport projects are sections of the TEN-T axis spread over the entire territory of the EU, including a majority of railway links, some road and waterway links, as well as motorways of the sea, and the Galileo system. Some progress has been made in the implementation of these projects, but the overall picture remains mixed. The new instruments put in place by the TEN-T guidelines and financial regulations have played a role in unlocking some problematic areas. The new financial instruments have just become operational in 2007, so their effects on the implementation of TENs and mobilisation of private investment will be felt in the coming years only.

In line with this objective, the European Commission has launched in November 2007 a draft proposal for a Decision on the selection of projects for the Multi Annual Programme 2007-2013, which represents a fundamental impulse for a number of Quick Start projects, and that has already received the unanimous assent of the Committee of the Member States.

Progress in completion of electricity connections has remained generally slow, hampering the development of an efficient internal market, as shown in the Commission Communication on the Priority Interconnection Plan adopted in January 2007. This overall assessment applies to the Quick Start projects as well as to other projects of European interest. The main cause for delay is often not the lack of financing but the complexity of coordinating planning and authorisation procedures between several Member States. Conversely, the completion of the Quick Start gas pipelines has proceeded satisfactorily, and none suffers from significant delays.

The substantial financial support mobilised on Quick Start ICT projects from a combination of different sources of funding is one of the actions making tangible the commitment of the EC and the Member States to speed up the delivery and the use of high capacity communication networks. This continued commitment is already living up to its expectations: creating improved access to ICT networks offering new ways of creating and sharing knowledge for work, research and leisure.

For all Quick Start R&D projects, investments decisions are proceeding according to the initial plans, while a tight integration of funding from different sources is taking place. The support to Nanoelectronics projects is in line with the original targets of the Initiative. Adequate funding has been made available to set up the next generation laser infrastructures key for Europe's research. Funding hydrogen and fuel cell research at European level is playing, as expected, an important role to seed and reinforce coordination between various sources of funding. At least in part because of the Growth Initiative special attention to the domain, the critical mass of public and private resources (both financial and technological) has been quickly and timely assembled to finalise the design of the GMES satellites and to install a new spatial launch site.

3. THE GROWTH INITIATIVE WITHIN THE LISBON STRATEGY FOR GROWTH AND JOBS

The European Growth Initiative has brought forward specific measures and instruments by combining its impulse with other policy initiatives within the overarching framework of the Lisbon strategy for Growth and Jobs. Thus, this mid-term review of the Growth Initiative confirms the role of the Growth Initiative within the Lisbon strategy for growth and jobs.

The measures proposed in the European Growth Initiative are now being addressed as a priority by the Lisbon Strategy for Growth and Jobs. To name but a few examples, improving the patent system in Europe, as identified in the European Growth Initiative, was taken over in 2005 as a key policy issue within the strategy for growth and jobs. The i2010 initiative, a European Information Society for Growth and Employment addresses the challenges also mentioned in the European Growth Initiative, but it is being fully developed under the Lisbon Strategy for Growth and Jobs. The European Growth Initiative also emphasised the need for updating the rules applied to State aid for R&D and innovation to make them more conducive to investments; the new framework on state aid for R&D and innovation has been adopted under the impetus of the Lisbon strategy for growth and jobs. The Growth Initiative hinted at the need for measures on risk capital investment to improve SMEs' access to finance especially for innovation. There is also reasonable ground for expect that the Growth Initiative will demonstrate the value added of developing innovative and high-leverage financial instruments combining EU budget resources and EIB group funding to facilitate and accelerate investment in key infrastructure and RDI initiatives. In future, the instruments and projects of the Growth Initiative will be merged even further in the Lisbon Strategy for Growth and Jobs.

Stock taking on progress on the implementation of the European Action for Growth

1. INTRODUCTION

The Growth Initiative aims at stimulating investments with high growth prospects. It is hence fully coherent with the renewed Lisbon strategy for Growth and Jobs. Accelerating investment in transport and energy infrastructure projects of European interest is one of the main priorities of the Growth Initiative. Completing the missing links between national networks should contribute to strengthen the internal market and in this respect it can be seen as complementary to the structural reforms to open up the transport and energy sectors. Knowledge and innovation is a key policy area for both the Growth Initiative and the Lisbon Strategy for Growth and Jobs. However, the Growth Initiative focuses more on the research and technology needs of specific industrial sectors, with the identification of a first list of five Quick Start technological areas considered as important for the innovative capacity and the long-term competitiveness of the EU. As regards the information society, the Growth Initiative puts special emphasis on the development of infrastructure networks and the promotion of investment in three Quick Start areas, while the Lisbon's approach is more comprehensive.

Moreover, the Growth Initiative's ambition is mainly at an instrumental level. It relies on three lines of action: (i) accelerating and optimising public investment, including support from EIB loans; (ii) putting in place new instruments, notably innovative financial instruments, to mobilize private investment; (iii) lifting the regulatory, administrative and other barriers to investment in infrastructure, R&D and innovation throughout Europe, with particular attention to cross-border investment and access to capital by SMEs. Finally, the Action for Growth was also launched with a view of giving a political signal and boosting confidence, thus providing the Lisbon agenda with additional impetus.

The key measures taken at the EU and at the national level to improve the environment for investment, especially for SMEs, and to stimulate R&D and innovation in general, are assessed within the Lisbon Strategic report. Thus, they will not be addressed in detail here, although the relevant measures which were explicitly mentioned in the original communication COM(2003)690 will be briefly reviewed. This mid-term review focuses more on the elements which are specific to the Initiative, such as the public funding provided, the new instruments put in place, in particular innovative financing instruments, and the progress made in the implementation of the Quick Start programme. The mid-term review report will be published as an annex to the Lisbon Strategic report.

The Growth Initiative builds upon a close collaboration between the Commission, the EIB and the Member States to speed up investments in growth-enhancing areas, in particular those identified in the Quick Start programme. It combines mobilisation of public funding with legislative and coordinating actions to encourage private investment.

2. THE IMPROVED FRAMEWORK FOR INVESTMENT

2.1. Framework at European level

Almost all legislative measures identified by the Growth Initiative as necessary to improve the conditions for investment have been adopted and have entered into force. They aim at facilitating investment in large-scale or complex cross-border infrastructure projects, and in research and innovation partnerships.

The new **Guidelines for the development of the TEN-Transport**¹ adopted in April 2004 include a list of 30 priority projects covering all the Quick Start sections. All are declared to be of European interest, with a view to concentrate Community aid and coordinate evaluation and consultation procedures. The Commission can designate, on a case by case basis, European coordinators in order to facilitate progress on projects involving several Member States by mobilising all partners. The new **TEN-Energy Guidelines** of September 2006² aim at better integrating the European market and to enhance the security of supply. They introduce a Declaration of European interest for key priority projects (all 17 Quick Start links are covered), and provide a framework for establishing European coordinators and for monitoring project implementation.

Updated financing rules for TENs³ have increased the maximum Community contribution so as to concentrate resources and provide stronger incentives. In June 2007, the maximum rate was brought from 10% to 20% of the eligible cost of construction for transport priority projects and to 30% for their cross-border sections. For transport, 80-85% of the budget is allocated under the multi-annual programme, mainly to priority projects and, for energy, 80-85% is allocated to priority projects. For telecommunication networks, the ceiling on the share of Community aid was raised from 10 to 30 % of the investment cost in 2005⁴. Moreover, the **revised Eurovignette Directive**⁵ creates the conditions for a wider use of tolls and charges to contribute to financing investment in transport infrastructure. It gives the Member States the right to introduce charges on the entire road network and, as of 2012, it will be applicable to all heavy duty vehicles over 3.5 tonnes.

The updated legislative framework is also more conducive to the development of PPPs. The 7th **Research Framework Programme (FP7)**⁶ opens up the opportunity to combine grant funding, EIB loans and guarantee finance with national public and private investments to set up long-term partnerships in the form of Joint Technology Initiatives (JTI). Acting in key areas for growth and competitiveness, JTI implement the shared strategic research agendas elaborated by the European Technology Platforms, stakeholder-led forums promoted by the Commission since 2003⁷. JTI strengthen knowledge generation in Europe along the lines of the renewed Lisbon agenda.

- 3 Regulation (EC) N° 680/2007
- 4 Regulation (EC) N° 1159/2005
- 5 Directive 2006/38/EC
- 6 Decision 1982/2006/EC
- 7 SEC(2005) 800

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¹ Decision 884/2004/E

² Decision 1364/2006/EC

The Initiative called for the rapid final adoption of the **Community patent** by the Council and the European Parliament. However, in 2004, the Member States' polarised positions on patent jurisdiction arrangements necessitated that deliberations on this key issue be revitalised. Improving the patent system in Europe was thus taken over in 2005 as a key element of the Lisbon Strategy for Growth and Jobs.

The regulatory environment for cross-border investment throughout the EU has been improved with the adoption of two major legislative proposals in 2005. The **Cross-Border Mergers Directive**⁸ substantially facilitates mergers between limited liability companies established in different Member States. Consolidation operations will also be facilitated by the extension of the scope of the **Mergers Directive**⁹ that provides for tax deferral in case of cross-border mergers and divisions of companies, transfers of assets and exchanges of shares. The European Commission has launched a public consultation on the obstacles companies – in particular small and medium-sized enterprises (SMEs) – face when conducting cross-border business in the EU and on the content of a possible European Private Company Statute, to consider a legislative proposal for early 2008.

The Growth Initiative has given some initial impetus to the creation of new instruments and initiatives to provide better coordination of public private funding R&D and innovation, as well as transport, ICT and energy networks. Action within this area is continuing through the Lisbon strategy for growth and jobs.

In 2005, six **European coordinators** were nominated for transport priority projects, and two more have recently been appointed (for inland waterways and motorways of the sea), as well as four coordinators for energy projects. The creation of the TEN-T Executive Agency can also be noted. Besides, measures have been taken to ensure that the different Community funds are used in a complementary way. The **2006 Strategic Guidelines on Cohesion and the accompanying Regulation**¹⁰ require that priority in providing funding for transport should be given to TEN-T priority projects, with the Cohesion Fund playing the key role. The Commission has prepared guidelines on how the various instruments can be combined while respecting the non-cumulation principle¹¹. Further, the Commission adopted in 2007 the Communication¹² "Competitive European regions through research and innovation" dealing with the synergies between the different EU funding mechanisms supporting research and innovation, i.e. EU cohesion policy, FP7, the CIP and rural development policy.

Encouraging private participation in infrastructure projects aims at mobilizing resources but also at increasing the efficiency of procurement and management of the project and its innovativeness. In order to give incentives to investment in large-scale transport projects with long pay-back periods, the Commission has developed **new financial instruments** that provide support beyond the construction phase. Through the **construction cost grant to availability risk**, the Community can participate in periodic payments of the availability fee when the project is in operation. Among the obstacles to

^{8 2005/56/}EC

^{9 90/434/}EEC

^{10 2006/702/}EC and 1083/2006/EC

¹¹ Cf. Council Document 7086/07 ADD 1

¹² COM(2007) 474

PPPs identified in the Growth Initiative was the need to clarify their treatment in **national budgets** and under **EU public procurement rules**. In a chapter added by Eurostat in 2004 to its ESA95 Manual on Government Deficit and Debt¹³, the principle is established that the property is only reported as an asset of the private party if there is strong evidence that it bears the majority of construction risk and at least one of either availability or demand risk. As regards public procurement, the Commission is exploring how to favour competition without unduly limiting the flexibility needed to design complex projects. Stakeholders are being consulted on the options proposed in the Communication on PPPs and Community law on public procurement and concessions¹⁴.

The i2010 initiative, a European Information Society for Growth and Employment, launched in June 2005, tackles consistently the information society challenges, mentioned in the Quick Start Initiative and taken over more comprehensively within the Lisbon strategy for Growth and Jobs. The i2010 initiative builds indeed a comprehensive framework heightening the development of networks, research and innovation in ICT, and promoting their application for social inclusion, public services and quality of life.

Following from the recommendation of the Quick Start Initiative, the **establishment of the Joint Undertakings implementing the JTI ARTEMIS** (embedded computing systems) and the **JTI ENIAC** (nanoelectronics) is now being discussed in Council for approval by the end of 2007, while the proposal for the FHC **JTI** (fuel cells and hydrogen) has been adopted by the Commission in October 2007. The Council regulation is expected to be adopted early 2008. New rules applied to **State aid for RDI** have been defined under the impetus of the Lisbon Strategy for Growth and Jobs where state aid control is prominent. Guidelines on State aid to promote venture capital investments in SMEs¹⁵ and tax incentives in favour of R&D¹⁶ were adopted in 2006 and the new framework on State aid for RDI entered into force in January 2007.

The Initiative pointed to the need for measures on risk capital investment to improve **SMEs' access to finance**, especially for **innovation**. These have actually been launched under the main thrust of the Lisbon strategy for Growth and Jobs, within the 2006 Communication "Financing SME Growth - Adding European Value"¹⁷. The Commission is now working with the Member States towards a single market for venture capital that would allow easier cross-border investment; a Communication on the topic will be issued by the end of 2007. In 2006-2007, exchanges of good practices in financing technology transfer, seed finance, using intellectual property in leveraging finance, and new instruments like mezzanine finance and securitisation, were organised. The Commission has also worked on improving the availability of bank lending to SMEs for innovation.

The areas highlighted by the Initiative have benefited from significant funding from the Community programmes over 2000-2006 and from increased budgets for the 2007-2013 period.

¹³ Chapter: "Long-term contracts between government units and non-government partners (PPPs)"

¹⁴ COM(2005) 596

^{15 2006/}C 194/02

¹⁶ COM(2006) 728 final

¹⁷ COM(2006) 349 final

The 2000-2006 **TEN-T** budget contributed with \in 4.2 B to finance transport projects (in addition, \notin 0.68 B were allocated to Galileo) and the 2000-2006 **TEN-E** budget with \notin 125 M to finance energy infrastructures. For 2007-2013, the TEN-T budget allocation has doubled to \notin 8.013 B (including \notin 190 M earmarked for validation phase of Galileo¹⁸), while the TEN-E budget envelope has increased to \notin 155 M.

In the period 2000-2006 EU Cohesion Policy, through the European Regional Development and Cohesion Funds, provided substantial EU support of €52 B to transport infrastructure, respectively providing €35 B (including an estimated €8.8 B to TEN-T projects) and €17.1 B (allowed for TEN-T projects only)¹⁹. Total planned support under Cohesion Policy in 2007-2013 to transport infrastructure will increase to around €82 B, including €38 B for TEN-T projects²⁰. Support to energy projects from the 2000-2006 Structural Funds amounted to €1.7 B, including €0.8 B for conventional energy sources and electricity networks and €0.9 B for renewables and energy efficiency. Support to energy is planned to increase substantially to €10.7 B over the next programming period; most of this increase concerns renewable energy and energy efficiency (€9 B). In the areas of the Quick Start programme, i.e. electricity and gas networks, planned funding from Structural Funds should increase to €1.6 B, including €0.7 B for TEN-E projects. In 2000-2006 cohesion policy programmes provided €26 B for RTDI, (including €3 B for research infrastructures), while in the period 2007-2013 spending plans anticipate investment of €85.2 B on RTDI²¹ (including €10.3 B on research infrastructures and centres of competence). Finally, telecom infrastructure investment was an additional €1.27 B in 2000-2006 while a further EU allocation of €2.3 B is foreseen in 2007-2013.

The **6th Framework Programme** (FP6) devoted significant resources in 2002-2006 to unlock private investment in RDI: $\notin 12$ B were allocated to collaborative research (including $\notin 4$ B to ICT projects, comprising $\notin 0.4$ B for mobile networks and $\notin 0.8$ B to nano-electronics/nano-systems). $\notin 0.72$ B were earmarked for investment into research infrastructures and $\notin 0.22$ B into ICT-based research infrastructures. Under the FP6, the "Aeronautics and Space" theme was allocated $\notin 1.1$ B of which initial resources of around $\notin 0.14$ B have been provided to trigger the development of GMES and space applications. The FP6 also devoted $\notin 0.67$ to R&D projects in the area of transport, plus a $\notin 110$ M contribution for Galileo. By contrast, **the** 7th **Framework Programme** (FP7) foresees for 2007-2013 much larger spending of $\notin 32$ B on collaborative research projects (including $\notin 9.1$ B for ICT) and $\notin 1.7$ B on research infrastructures (including $\notin 0.57$ B for ICT). The FP7 also changes the order of magnitude of the Community investments in Space with $\notin 1.3$ B for Global Monitoring for Environment and Security (GMES) research projects. The FP7 envelope for transport research including aeronautics has increased to $\notin 4.6$ B.

The Commission has put forward proposals for a substantial revision of the Community contribution and a related revision of the multi-annual financial framework of the Galileo project, as a result of the EC assuming the entire responsibility of its deployment phase (cf part III). The new scenario requires a budget commitment of €3.4 B over 2007-2013.

¹⁹ These data refer to financial plans for 2000-2006, updated with the most recent information available. Data on payments are still incomplete as they can be made up to 2 years after the funds have been allocated.

For 2007-2013 the data are based on spending plans in the adopted and draft programmes as at 30/11/2007. The TEN-T figure does not include any spending in ports and airports – where a share of the \notin 5.4 b no doubt also included TENT-T priorities.

²¹ More details are presented in Staff Working Document Sec(2007)1547 of 14/11/2007.

For the period 2000-2006, the **MAP programme** supplied €0.17 B of support to venture capital to develop early stage investment and €0.34 B to build a new SME guarantee facility and the **eTEN Programme** provided €0.65 B to support projects with total costs of €1.7 B for the deployment of electronic services, mostly in areas of public interest. For the period 2007-2013, two components of the **Competitiveness and Innovation Programme** (**CIP**) take over and expand these actions. The CIP "Information and Communication Technologies Policy Support Programme" (ICT PSP) benefiting from the eTEN experience mobilises €0.73 B on the i2010 priorities. The "Entrepreneurship and Innovation Programme" scales up the MAP programme, devoting more than € 1 B to increase the supply of equity to SMEs and widening the range of financial instruments such as securitisation. It is the European Investment Fund (EIF) that will manage the CIP financial instruments co-investing in venture capital funds (covering early stage and expansion stage), and providing guarantees on loans. These new instruments yet to be launched should leverage around €30 B of new finance for SMEs²². The CIP guarantee window entered into force end 2007.

The EIB has been actively engaged in supporting the Growth Initiative as well as the Lisbon reforms through increased lending facilities, the strengthening and development of financial instruments, and the provision of technical expertise.

Under the Growth Initiative, the EIB has committed to make available \in 50 B of loans by 2010 from its dedicated **TENs Investment Facility (TIF)** in support of TEN-T and TEN-E projects. Loans signed since 2004 are in line with this objective: over 2004-2006 total signatures amounted to almost \in 22 B for TEN-T, plus another \in 2.6 B for TEN-E; adding to this forecasts until 2009 alone adds up to \in 49 B (figures for 2010 are not yet available). Support to TEN-Telecommunications is dealt with as part of the **Innovation 2010 Initiative (i2i)**, launched in 2000 in line with the Lisbon agenda, as well as support to RDI, and education. The target of \in 50 B of lending in the areas of i2i by 2010 should be largely exceeded. In particular, the Bank's activities in support of RDI have developed considerably. The EIB financing of i2i investment reached \in 46 B since 2000, half of which in RDI. Financing of RDI (public and private sector combined) is the largest component, with 61% of signatures in 2006. The EIB Group also provides support to SMEs in particular through venture capital and portfolio guarantees from the EIF.

²²

Decision No 1639/2006/EC and COM (2006) 349

| Credit lines for EU | TEN-T projects | TEN-T priority | TEN-E projects | High capacity communication | Research activities and | EIF Suppo | ort to SMEs |
|------------------------|-------------------|-------------------|-------------------|---------------------------------------|--|--------------------|-------------|
| programmes | total | projects only | | infrastructures | infrastructure | Venture capital | Guarantees |
| 2000-2003 | | | | | 5.7 | 1.4 | 4.4 |
| 2004 | 6.6 | 2.2 | 1.3 | 1.3 | 4.1 | 0.4 | 1.4 |
| 2005 | 7.3 | 2.9 | 0.9 | 1.9 | 10.7 | 0.4 | 1.7 |
| 2006 | 7.9 | 2.7 | 0.4 | 1.3 | 6.7 | 0.7 | 2.4 |
| Lending targets | TE | N-T and TE | N-E | Innovation 2010 | 0 Initiative (i2i) | EIF Suppo | ort to SMEs |
| 2007 | | 8.0 | | 7.2 (of which in th for ICT and 3. | e 1st semester: 0.5 7 for research) | 0.7/0.8 | 1.4/1.7 |
| 2008 | | 8.2 | | 7.4 | | | |
| 2009 | | 8.4 | | 7. | .6 | | |

EIB lending in the areas of the Growth Initiative (€ B)

In addition, the EIB has been developing a range of **innovative financial instruments** to address changing market requirements. The most important one is its significant scaling up of the **Structured Finance Facility**. Other developments include asset-backed securities, loan substitutes, risk-sharing structures for corporate and infrastructure funds. In the area of securitisation, 2006/07 has seen a particular increase in the number of asset-backed securities transactions, and a widening of the geographical spread of these transactions, and of the diversity of the underlying structures. Overall, the Bank has committed to a target of \notin 1.7 B for asset-backed securities in 2007.

New financial instruments of the EIB

Under the **Structured Finance Facility** (SFF), the Bank lends at its own risk to promoters at low or subinvestment grade through a range of financial products. These were risks that the Bank was, traditionally, unable to take. From a value of operations of $\in 0.6$ B in 2006, the Bank has committed to annual targets of $\in 1.5$ B in 2007 to $\in 3.5$ B in 2009. Much of this growth is in key sectors for the Growth Initiative. For RDI, this will include loans and guarantees to corporates, risk-sharing structures for corporates and SMEs, loans and guarantees to large research infrastructures and finance for the European Technology Platforms. For TENs, the main products will be loans with assumption of construction or early operation risk under PPPs, infrastructure funds and guarantees.

The use of **risk-sharing and securitisation structures** has an increasing importance in the areas of the Growth Initiative. The EIB is working with banking partners on mechanisms for sharing risks in project financing in order to strengthen the scope and the funding capacity of intermediaries. The Bank has also stepped up its involvement in asset-backed securities, with a strong acceleration in 2006/2007. The EIB works closely with the EIF in the development of SME securitisation schemes.

The **EIB participation in infrastructure funds** is providing an effective means of making equity investment in key infrastructure sectors, including TENs. It complements EIB's traditional role as a senior lender, and has a catalytic effect of attracting other long-term investors.

The EIB and the Commission have jointly developed new financial instruments, some of them as a direct result of the commitments made in the Growth Initiative.

The Loan Guarantee instrument for TEN-Transport (LGTT) aims to promote private investment in transport infrastructure by providing a guarantee for early post-construction risks. The Risk-Sharing Finance Facility (RSFF) aims to improve access to debt financing for private and public promoters of RDI projects.

New financial instruments developed jointly by the EIB and the Commission

The Loan Guarantee Instrument for TEN-Transport (LGTT), after a market-testing phase, has been officially put in place by the new TEN Financial Regulation and will be finalised by the end of 2007. Potential beneficiaries are PPPs that fulfil a set of eligibility criteria. The purpose of the LGTT is to provide a guarantee to private investors to cover the risk of revenue shortfalls during the five year 'ramp-up' period after construction. The EIB LGTT guarantee, which will cover a specific stand-by credit line, will not eliminate the risk for the senior lenders, but it will offer greater debt service coverage, thus reducing overall financing costs.

The <u>Risk Sharing Finance Facility</u> (RSFF), operational since June 2007, builds on the EIB's Structured Finance Facility (SFF). It provides higher risk finance for private (often midcap companies and SMEs) or public entities looking to expand through RDI. RSFF combines EU budget resources (up to \notin 1 B from FP7) with an equivalent amount of EIB funding. The actual loan volume will depend on the risk profile of the operations, but an amount of some \notin 10 B is quite possible. The EIB also intends to implement RSFF in collaboration with major national and regional banks, thus fostering their capacity to support RDI.

The initiative of the Commission and the European Investment Fund <u>JEREMIE</u> - the Joint European Resources for <u>Micro- to Medium Enterprises</u> - provides expert advice to tackle the lack of risk capital for SMEs in regions by allowing for the transformation of part of the ERDF grants into financial products such as equity, venture capital, guarantees or microfinance. Depending on the type of finance provided, the additional capital provided by the EIB Group including private capital, could be as much as 10 times the amount of ERDF funding.

Several initiatives have been taken forward to improve the coordination of Community and EIB interventions and help Member States to absorb funds and focus investment on European strategic objectives. A Memorandum of Understanding was signed in 2005 between the EIB and the Commission on investment in transport and energy infrastructure and the development of **TENs**. Within the **EU cohesion policy**, the EIB provides technical expertise by appraising projects submitted to the Commission for Structural and Cohesion Funds grants (252 projects were appraised between 2000 and 2006). The EIB follows closely the adoption of operational programmes and national strategic reference frameworks and finances with loan capital large projects or entire programmes. The Joint Assistance in Supporting Projects for the European Regions (JASPERS) put in place by the Commission, the EIB, and the European Bank for Reconstruction and Development (EBRD) aims to assist Member States to prepare major infrastructure projects for grants from cohesion policy funds. The JASPERS team is now working on more than 250 Technical Assistance Activities, which have been defined in 12 Country Action Plans. In view of their size, Romania and Poland are by far the main beneficiaries. It is expected that assistance to about 45-50 projects will be completed by end 2007 and that this work will help to mobilise some € 25 B of grant funding to the 12 new Member States in the coming years, much of it to TEN projects.

The **European PPP Expertise Centre (EPEC)** should be established by the EIB together with the Commission and the Member States in early 2008. It will coach public procurement authorities on how to correctly prepare PPP projects and maximise the benefits from the cooperation with private partners. The EPEC should help to address a relative lack of capacity within the public sector and thus, should result in an increase of number and quality of PPPs, often in sectors relevant to Growth Initiative. It has been strongly welcomed by the private and sectors and international organisations. The EIB is

also playing an important, although informal, advisory role in the Technology Platforms and for European Research Infrastructure (ESFRI roadmap).

2.2. Framework at national level

National public investments in the areas of the Growth Initiative

It is difficult to identify the trends for investment in infrastructures since there are no harmonised statistics available. Moreover as public infrastructure spending is commonly included in national multi-annual investment plans and long-term strategies, with a limited hindsight it is difficult to assess the change introduced by the Growth Initiative against the baseline trends. More than two thirds of the Member States replied to the Commission information request on the Growth Initiative and related infrastructure investments (Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Lithuania, Luxembourg, Poland, Portugal, Slovak Republic, Spain, Sweden, and UK). The information provided gives the following insight – mostly qualitative - on the national investment context onto which the Growth Initiative has developed its effects.

Public investment in **transport infrastructure** has accelerated in recent years in most Member States. Although general conclusions should be drawn with care as not all Member States have replied, there appears to be an upward trend. The upcoming ECMT report²³ on investment in transport infrastructure might confirm this trend. It has to be stressed that the recent acceleration has been much stronger in some Member States, and has taken place in very different contexts. While in some countries (like Austria, Sweden, France), spending has increased continuously since 2004, some old Member States (such as Denmark, Ireland, Luxembourg, Spain or the UK) mention acceleration as from 2006 or 2007. The increase is more substantial in the new Member States (like in Poland, Slovakia, Czech Republic, Bulgaria), where transport infrastructure is typically in a worse shape and thus where the development and modernisation of transport infrastructure is generally considered of high priority. Also, access to the Cohesion Fund resources has generated a stronger dynamic than in the pre-accession years.

Investment in **energy infrastructure** is mainly market-driven²⁴. In many countries (such as Belgium, Germany, Italy, Slovak Republic, Spain), there is little or no public budget financing in this sector except for some feasibility studies. The public intervention consists mainly in providing an adequate regulatory framework, even if in some Member States (like Cyprus, Denmark, Ireland), incumbent main energy transmission operators are State-owned. Energy companies in several countries (e.g. Belgium, Bulgaria, Italy, Lithuania, Greece) accelerated investment in 2004-2006 to develop the electricity and gas networks, notably through capacity increases and new interconnections; other countries (Cyprus, Ireland) are also preparing substantial investments. The need to modernise energy infrastructures and to better integrate national networks into the EU

²³ For transport infrastructure expenditure the only source of comparable data – apart from occasional studies- is provided by the European Conference of Ministers of Transport. The last OECD/ECMT report "Recent trends in Infrastructure Investment" was issued in 2004 and includes data up to 2000. The next ECMT report to be published in 2008, should provide annual data until 2005.

The study "TEN-Energy-Invest" has shown an increase in investments in electricity transmission grids with investments totalling € 3.1 B in 2002, € 3.2 B in 2003 and € 3.4 B in 2004. Yearly investments on cross-border links are currently around € 120 M, i.e. slightly below 4% of the total spending. In most cases, investments are realised through bank loans or transmission systems operators' equities.

market is prompting investments in most Member States. The promotion of energy efficiency and renewable energies, a new priority in many countries, also steadily necessitates high investment level.

Being a priority area embraced by the Lisbon strategy for Growth and Jobs guideline on ICT, **broadband roll-out** is fully analysed in the reports on the implementation of the National Reform Programmes. For example, ICT belongs to the key field of priorities of the Slovak Republic NRP. **Mobile communication networks** develop on commercial terms using competitive technologies. In all member states, networks for mobile telecommunications are extremely well developed and private operators are speedily introducing the next generation of mobile communication technologies. Increased demand for mobile communication services enables the private sector to invest in upgrading the networks to provide innovative high speed mobile services. As an example, Bulgaria, the Czech Republic, Slovenia and Sweden noted a steadily increasing flow of medium term investments into UMTS technologies directly correlated with growing revenues of mobile communication services continue to be partly financed by national budget, like in the Czech Republic or Sweden.

Increasing investment in R&D at national level is crucial for the overall achievement of the Lisbon strategy for Growth and Jobs. Hence, trends in spending from public budgets to support **R&D** and innovation are thoroughly analysed in the NRP implementation reports and the Commission Strategic Report on the Lisbon Strategy. Nevertheless, it is worth mentioning the lasting commitment of Member States to develop fundamental spatial technologies from which a wealth of applications with commercial or public services purposes will grow. In 2005, national ministers renewed their important national contributions to the European Space Agency in order to carry out the GMES, Galileo and Kourou launcher projects in 2006-2012, as reported by Belgium, Finland, Germany, Slovakia, Spain and Sweden. In view of scaling up national research capacities in key areas for long term growth and sustainability, hydrogen technologies and nanoelectronics are gaining a priority position in the list of projects up for public R&D investment at the national level. Ireland, Spain, Germany, Finland are especially ramping up the level of national government funding to these critical areas. Member States directly fund these research activities so as to speed up the market mainstreaming of applications that should stem from this research is necessary to deliver the national sustainable development objectives.

Measures at national level to facilitate investment

The diverse national frameworks shaping the conditions for investing in the areas of the Growth Initiative cannot be faithfully represented here in a few lines. In any event the strategic report on the Lisbon strategy on Growth and Jobs substantially analyses structural reforms and their role to boost investment. The following thus concentrates on some recent national measures to reduce the regulatory, administrative or financial barriers to investment that especially proceed along the lines of the Growth Initiative.

Spain indicates that the development of transport and energy infrastructure has been dynamic in recent years and does not seem hampered by any significant regulatory barrier. A number of countries stresses that the legislative and regulatory measures taken

to liberalise the energy market provide a favourable environment for investment. In particular, in the new Member States the measures taken to comply with the acquis have played a significant role. The Czech Republic also indicates that the quality of project planning and the concentration of funding from different sources have improved as a result of the Growth Initiative. Moreover, some countries (such as Italy, Ireland) have taken measures to streamline authorization procedures for new transport and energy facilities. In Ireland, the Energy Act of 2006 includes specific provisions in this regard for electricity interconnectors, which are considered of strategic importance, and the Planning and Development Act of 2006 has streamlined procedures for transport infrastructure projects. As already indicated in the 2004 and 2005 reports on the Growth Initiative, most countries have introduced institutional frameworks to facilitate the setting up of PPPs, notably for transport infrastructure projects. Setting up a PPP unit at a central government level and the promotion of PPP legislation are the two most prominent elements of the active pro-PPP policies in Member States. Different organisational forms of the central PPP units can be seen across Europe, some are set up independently from the Governments (e.g. Partnership UK) whereas others form integral parts of finance, transport or economy ministries (e.g. PPP Centrum in the Czech Republic). The scope of activities given to them diverge as well; in certain cases these units have only a consultative capacity (e.g. Belgium) or some role on promoting and facilitating PPPs (e.g. Ireland); in other cases they evaluate the "value for money" and give opinion on projects or even participate in concluding PPP deals (e.g. seed capital facility in case of Partnership UK). Nevertheless, an overall trend can be noticed that by ensuring best practices in developing, procuring and appraising PPPs, by alleviating public sector risks resulting from the realisation of PPP projects, by assuring the delivery of flagship PPP projects and by further developing the professional PPP capacity of the public sector, PPP central units assure a higher number and a better quality of PPP projects.

The debates on PPPs during the preparation of the Growth Initiative in 2003 have indirectly contributed to the higher visibility and wider impact of the EU consultative paper on PPPs and Community Law on Public Contracts and Concessions as well as the New Procurement Directives introducing the Competitive Dialogue procedures adopted in the following year. During the period 2004-2007 national legislations of numerous Member States were modified to establish or improve a legal framework for co-operation between public sector and private partners, however, it is not possible to assess whether this trend can be specifically attributed to the Growth Initiative (e.g. "June 2004 Ordinance" in France dedicated to partnership contracts; 2005 "PPP Acceleration Act" in Germany; July 2005 "Act on PPP" in Poland; April 2006 in the Czech Republic; November 2006 "PPP Act" in Slovenia; 2006 in Romania "Ordinance on awarding public procurement agreements" and in 2007 "Decision regulating the award of services and work concession contracts"; in Latvia adoption is in progress; in the Netherlands the procurement law is under revision).

Most of the measures put forward by the Quick Start initiative to make the national environment more conducive to R&D investments are now included in the Lisbon Strategy for Growth and Jobs. In some countries (like Denmark), the initiative did not affect public investment plans and the regulatory framework. In other countries, there are national endeavours to create better conditions for investments in the Quick Start research domains that are clearly encouraged by the new context at EU level. Particularly, closer coordination between national and regional programmes was achieved through the Member States Mirror Group bringing in the national perspective into the Hydrogen and Fuel Cell Technology Platform since 2004. The idea of setting up of national 'replica' Technology Platforms also emerged from recognising the added value of this instrument at EU level: Germany has initiated its Hydrogen and Fuel Cell Technology Innovation Programme - a public/private partnership with a total \in 1 B budget over 10 years; Spain, Poland and the Czech Republic are interested to intensify their support to this research topic through national technology platforms. Regions have also increased their effort on fuel cell and hydrogen technologies, and a Partnership of "Committed Regions" is in the process of being established.. New financial instruments have been set up recently; and Member States could only look forward to reaping the benefits of these new instruments for improving access to risk capital. Slovakia, for example, is getting prepared to take advantage of JEREMIE under its EU cohesion policy programme.

3. PROGRESS ON THE IMPLEMENTATION OF THE QUICK START PROJECTS

The improved enabling framework both at the European and the Member States level including the availability of financing has had significant knock-on effects on the implementation of the Quick Start projects. However, these effects fell significantly short of expectations voiced back in 2003, particularly with respect to transport infrastructure projects.

It was initially foreseen that the list of Quick Start projects could be updated at the occasion of the Spring European Council with the same procedure as for the adoption of the Initiative in 2003. However, it has not been felt appropriate to change the list so far: a few countries (Bulgaria, the Slovak Republic or the Czech Republic) mention that some other projects present the same characteristics as the one included in the Quick Start programme, but other Member States (like Denmark or Portugal) remark the limited visible identity of the Growth Initiative compared to other types of policy frameworks.

3.1. Transport

The Quick Start list on transport comprises 31 sections of the TEN-T axis spread over the entire territory of the Union, including a majority of railway links²⁵, some road and waterway links, as well as Motorways of the Sea, and the Galileo navigation satellite system. Most of these projects are cross-border links.

Investments in transport projects

Considering all funding sources (national funds, Community funds, EIB lending and private funds), a total of \in 5.75 B has been invested in Quick Start transport projects over 2004-2006. Data on investment plans for 2007 and the following years are still incomplete, but an increase in investment is expected over 2007-2010 since works are planned to start or have just started for about 10 projects. However, the objective of \in 38 B by 2010 set in 2003 within the Growth Initiative is unlikely to be met.

Funding from the TEN-T budget allocated to the Quick Start transport projects amounted to c.a. €320 M over 2004-2006, remarkably higher than the amount granted in 2000-2003

²⁵ See table in annex

(c.a. $\in 158 \text{ M}$)²⁶. The mechanisms put in place by the amendments to the TEN Regulation introduced in 2004²⁷ have allowed for better concentration of funds on priority projects and their cross-border sections, also including the Quick Start projects²⁸. The legally permitted co-financing rate from TEN-T funds for cross border or crossing natural barrier sections of the projects of European interest starting before 2010 has increased from 10% to 20%, nevertheless the overall envelope for 2000-2006 was not sufficient to enable funding up to the maximum rates. For 2007-2013, the TEN-T budget of €8.01 billion and the increase in the permitted co-financing rate of up to 30% should provide stronger financial incentives; for some projects where financing is a big challenge, such as the Alpine tunnels, these incentives are expected to play an important role. Nevertheless, the budget remains substantially less than the Commission had felt was necessary, so it will have to be prioritised rigorously while maximising the use of alternative funding sources.

Some Quick Start projects have benefited from contributions from the Structural and Cohesion Funds in 2000-2006 (e.g. the Budapest-Lubljana rail upgrade (PP6)) or should receive significant support in 2007-2013 (such as the Lisboa/Porto – Madrid link (PP3), the Athina-Thessaloniki highway link (PP7), and the Katowice-Breclav rail upgrade (PP23)). However, for many Quick Start projects there has been no applications for funding - although some projects have indirectly benefited from support from the regional funds to connections with the hinterland. Funding of priority projects is expected to increase in the present programming period as a result of prioritisation under the 2006 Strategic Guidelines on Cohesion. It remains to be seen whether further incentives might be appropriate for the cross-border sections.

The EIB contributed to the financing of several Quick Start projects including the Sofia-Kulata motorway (PP7), the Malmö rail tunnel (PP12), the Dijon-Mulhouse railway (PP24), and the Brno-Wien motorway (PP25). However, although the EIB overall provided substantial financial resources to priority projects, often playing a catalytic role for their structuring, a number of the Quick Start sections could not benefit from direct EIB financing. Support has mostly been indirect through financing of other sections of the priority projects thus making investment in the cross-border links more attractive. The Bank intends to further increase its prioritisation of cross-border sections²⁹.

Regarding national funding, the situation differs among the Member States, reflecting the location of Quick Start projects, investment needs, and the pace of implementation. For some countries (such as Austria, Belgium, Bulgaria, the Czech Republic, France, the Netherlands, Poland, Portugal, Slovakia, Spain) significant amounts of investment have been made in recent years or are planned for the coming years, while in other cases the implications of the Quick Start programme are more limited. A few countries (Cyprus, Denmark, and Romania) do not have any Quick Start project located on their territory (apart from "motorways of the sea").

²⁶ Financial decision on TEN-T funding for 2007-2013 will be taken at the end of 2007.

²⁷ Regulation (EC) No 807/2004 of the European Parliament and of the Council of 21 April 2004 amending Council Regulation (EC) No 2236/95 laying down general rules for the granting of Community financial aid in the field of trans-European networks.

²⁸ Concentration of total investment in priority projects as compared to all TEN-T projects has substantially increased since 2003, but direct comparison is not meaningful due to the extension of the 14 Essen projects to a longer list of 30 priority projects in the 2004 guidelines. It is however worth noting that the concentration rate has continued to increase gradually from 41% in 2004 to 45% in 2005 and 83% in 2006.

²⁹ EIB, Evaluation of cross-border TEN projects, Synthesis report, December 2006.

While most countries indicate that the Quick Start projects are included in their public investment plans, the net impact of the Growth Initiative is often difficult to determine. In some cases, the Quick Start projects were already included in existing multi-annual investment plans when the Initiative was adopted (Spain, Ireland, Finland). Some countries mention that the Initiative has had no impact (Germany). Other countries, notably several new Member States (Bulgaria, the Czech Republic, Lithuania, Slovak Republic), have adjusted their transport infrastructure plans to ensure the implementation of Quick Start projects, with the support of EU funds. The Czech Republic mentions that the Initiative contributed to a significant extent to improve the quality of project planning opening up the opportunity to combine different sources of financing. Overall, the specific impact of the Growth Initiative on public investment plans seems to have been generally limited, although the situation varies depending on the countries.

State of implementation

Some progress has been made in the implementation of TEN-T Quick Start projects, but the overall picture remains mixed. Achieving a strong acceleration of any major transport infrastructure programme is ambitious and large-scale cross-border projects face particular difficulties (e.g. significant delays and higher costs than initially envisaged).

Five TEN-T Priority Projects, including sections considered as Quick Start projects (cf. table in annex). Those projects where key sections have been completed, or are nearly finalised, include PP4 - the high-speed line East - where, since Spring 2007, the journey time between Paris-Strasburg has been reduced from 4 hours to 2 hours 20 minutes, and PP2 - the Paris-Brussels-Köln-Amsterdam-London - where the journey time from Brussels to London has been reduced in November 2007 from 2 hours 20 minutes to 1 hour 50 minutes. In the near future, the completion of works on the Amsterdam-Antwerp section will allow a reduction by one hour in journey time.

The first steps of the implementation of Motorways of the Sea³⁰ started in 2004-2005 with Member States signing memoranda of understanding, the setting-up of five task forces, and the definition of master plans. A total of 8 pilot projects is being prepared. Joint calls for proposals have been launched by Finland and Germany (2006), by the Baltic Sea Member States (2006), by France and Spain (2007) and by the North Sea Member States plus Norway (2007). Further calls for proposals will concern the East-and West Mediterranean Sea. The Commission is preparing a report on progress made.

Some key milestones on very long term projects have also been achieved. For example, on the Brenner tunnel (PP1), which is the most ambitious project in terms of financing needs, preparatory works for a pilot tunnel are now underway, and the Austrian and Italian governments signed a memorandum of understanding in July 2007. On the railway axis Paris-Strasbourg-Stuttgart-Vienna-Bratislava, a statement of intent was signed in June 2006 by the governments of France, Germany, Austria and Slovakia and backed up by regional level agreements including, crucially, on three cross-border sections.

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³⁰ The following Motorways of the Sea areas are defined in the revised Community guidelines: Baltic Sea, Western Europe, South-East Europe and South-West Europe.

While there has been some progress, it has been gradual and has not concerned all projects. A majority of projects still face significant delays: 7 projects are progressing according to schedule, 13 projects are delayed by one to four years, and 11 projects face delays of more than five years. The case of the Galileo satellite navigation system is particular³¹. The main causes of delays are: the complexity of coordination and management procedures inherent to cross-border projects, due to different regulations and laws and to cultural barriers; legal challenges on environmental grounds (the incomplete identification of areas needing environmental protection measures made some projects less mature than assumed by the Initiative); technical difficulties, especially for planning complex projects (including, for some rail projects, evolving specifications on interoperability); a lack of prioritisation of the projects in some cases. Further, the initial project planning seems to have often been too optimistic in view of the complexity of the procedures. Lastly rigorous prioritisation of economically and financially viable projects has to take place to attract other types of funding.

Some of the new instruments put in place by the TEN-T guidelines and the new financial regulation have played a role in unlocking problematic areas. Notably, the experience with the establishment of coordinators in the first years of implementation has been positive, for example for the PP1 (Brenner tunnel) and PP 17 (railway axis Paris-Strasbourg-Stuttgart-Wien-Bratislava). Practical plans and timetables have been decided for all 6 projects on which coordinators have been nominated. This has resulted in the achievement of a common agreement on the importance to concentrate the TEN-T funds on the sections of the priority projects, which promise the highest added value for the projects as a whole, i.e. at cross-border sections and at the removal of bottlenecks. In line with that, the European Commission has launched in November 2007 a draft proposal for a Decision on the selection of projects for the Multi-Annual program 2007-2013, which represents a fundamental impulse for a number a Quick Start projects, and that has already received the unanimous assent of the Committee of the Member States.

It is difficult to say to what extent the progress made so far in the implementation of the Quick Start projects can be attributed to the Growth Initiative. The effects of the Initiative on the acceleration of TENs were expected through several channels: acceleration of public investment; mobilisation of private investment, as a result of the catalytic effect of public investment, of new financial instruments, and of the improvement in the regulatory framework; and a political impulse. As indicated above, it seems that the impact of the Initiative on public investment plans to prioritise Quick Start projects has remained limited overall. However, there seems to have been a convergence of ideas in different policy initiatives on the necessity to redirect public spending in physical capital and other growth-enhancing areas. The Growth Initiative has contributed to create this convergence. Regarding mobilisation of private capital to finance transport infrastructure projects, there has been a significant development in a number of countries, facilitated by the revision of national frameworks and some EU measures. As for the political impulse, in some cases the Initiative appears to have generated support to facilitate the start of the projects (e.g. in Germany), although other countries have

³¹ While the development phase was successfully completed, the difficulties that arose in the negotiations on the concession contract for the deployment and operating phases led the Commission to propose alternative scenarios (COM (2007) 534). The Transport Council, reaffirming the strategic value of Galileo, agreed that deployment will be on a public procurement basis. Final decisions could be approved by the European Council on 13 December, followed by EP budget approval.

reported no effect. It does not appear certain that the Initiative has had enough visibility to have had substantial impact. However, the Growth Initiative also contributed indirectly through providing an impulse to the adoption of measures and creation of new instruments. Some innovative financial instruments jointly developed by the Commission and the EIB such as the LGTT have been put in place following commitments made in the Initiative. Most of these instruments and measures have just become operational in 2007 and their effects on the implementation of TENs and mobilisation of private investment might be felt in the coming years.

3.2. Energy

The Growth Initiative foresaw that private investments on the Quick Start sections of the TEN-E should reach \notin 10 B by 2010. In most countries, there has been no significant increase of investment in energy infrastructure in recent years. The limited public investment mobilised within the Growth Initiative could not play a decisive role to boost market-based investment decisions and system operators still lack powerful incentives to increase cross-border capacity. Also, the main cause for delay is often not the lack of financing, whether from private or from public sources. Other difficulties in the implementation of complex cross-border energy projects are more prevalent (e.g. complexity of coordinating planning and authorisation procedures between several Member States; local opposition related to environmental concerns).

Progress in completion of electricity connections has remained generally slow, hampering the development of an efficient internal market, as shown in the Commission Communication on the Priority Interconnection Plan adopted in January 2007³². **This overall assessment applies to the Quick Start projects as well as to other projects of European interest**: 6 out of the 11 Quick Start electricity projects are delayed by more than 3 years and two by one or two years, while only three projects have progressed on schedule and are completed. However, no project has been abandoned.

Conversely, the completion of the 6 Quick Start gas pipelines has proceeded satisfactorily, and none suffers from significant delays. One project has already been completed, two projects are under construction and works are expected to start at the end of 2007 for two other projects; one project is still in authorisation procedure. The projects under construction are expected to start operating between 2008 and 2010 as for their first phases.

The TEN-E budget concentrated €13.5 M over 2004-2006 to finance preparatory studies and coordination related to the electricity links and €10 M for the natural gas projects prioritised in the Quick Start list. Although relatively small, it is clear that this TEN-E budget made significant contribution to trigger the construction decision of some of the Quick Start projects. The Quick Start cross-border links between France and Belgium (EL1), several lines between Portugal and Spain (EL3), connections between Finland and Estonia (EL7) currently completed or under construction increase the transmission capacity of European electricity networks considerably³³. The visibility at European level

³² COM(2006) 846 final (Priority Interconnection Plan).

³³ Further details in Annex and in COM(2006) 443

of the TEN-E projects has been important to increase local support for the projects and to smooth authorisation process.

The visibility of the Growth Initiative was too limited in itself to accelerate the Quick Start projects implementation. In 2006, the Priority Interconnection Plan³⁴ had to identify the most important infrastructures encountering significant delays and the European Commission appointed four European coordinators in September 2007 to facilitate coordination and consensus building for three electricity projects and one gas pipeline. The four energy projects on which coordinators have been appointed include two Quick Start projects facing difficulties (the power link between Germany, Poland and Lithuania, and the interconnection between France and Spain). The Priority Interconnection Plan³⁵ also stressed the importance of coordinated planning at regional level and of the harmonisation of authorisation procedures. The Commission is still working on further ways to streamline cross-border procedures.

3.3. High capacity communication networks

The Quick Start Programme had identified three key projects to speed up the delivery and use of high capacity communications networks as part of Europe's transition towards the knowledge economy: the digital divide project, the mobile communication and technologies project and the ICT-based research infrastructure project.

Investments in ICT projects

The total funding to the Quick Start electronic communication network projects seems to be in line with the targets set in the Growth initiative in 2003. Up to 2010, the total volume of investment in networks that the Quick Start Initiative will mobilise is around $\in 1.8$ B from Community funding (from a combination of structural funds and research spending) and $\in 3.6$ B EIB loans. ICT enterprises made a total R&D investment for the EU25 of $\in 36$ B in 2004, following similar volumes of investments in 2002 and 2003³⁶.

Expenditure in **broadband infrastructure** through EU Structural Funds in the period 2000-2006 amounts to around $\notin 1.2$ B while a further EU allocation of $\notin 2.3$ B is foreseen for 2007-2013. There is little data available about exact funds from Member States, nor about total estimated costs including private funds. The EIB has signed $\notin 1.7$ B direct loans for broadband communication infrastructure. Some $\notin 0.7$ M loaned to three projects support new entrants on the fixed-broadband market and the regional dimension is emphasised within 3 projects representing a $\notin 1.2$ M loan.

Expenditure in **mobile communication technologies** was co-financed from Community Research Programmes with equivalent amounts from private participants and support from national funds mainly via EUREKA/Celtic. The Community and EUREKA financed 60% of the total cost of around €850 M, i.e. €510 M. The FP6³⁷ allocated €370 M in the period 2003-06 to ICT projects on "Mobile and Wireless Communication

³⁴ See comprehensive information in: SEC (2006) 1715

³⁵ COM(2006) 846

³⁶ Data on 2005 and 2006 R&D investments by ICT industry are not yet available.

³⁷ FP6 projects database

Systems Beyond 3G", "Research Networking Testbeds", and "Worker Mobility" in combination with the EUREKA Celtic Cluster allocating around \notin 150 M to telecom research projects. The EIB supports this sector through \notin 2.6 B direct loans: four mobile broadband projects rely on \notin 1.5 B loan to develop UMTS infrastructure and four R&D projects concentrate \notin 1.1B loans for next generation mobile equipment and services.

ICT-based research infrastructures are supported by the EU R&D FP and the National Research and Education Networks (NREN) funded mainly by national ministries of research and education. Providing a controlled, secure, seamless, easy and economical access to shared science and engineering resources with pan-national interconnectivity and European-wide national connectivity requires a total investment of €2.4 B up to 2010 (of which around €2 B for the national level connectivity). The corresponding investments needed at university/college campus and the research institutes level are estimated to be around ten times the investments needed on the national level, i.e. around €20 B Europe-wide, of which around 5% can be brought by private sector investment in local networks. Contributing to these costs, the FP6 has already mobilised €220 M on the ICT infrastructure, of which €93 M is dedicated to pan-European interconnectivity backing the NRENs co-financing of around €100 M. To diversify funding sources for research infrastructures with adapted financial solutions, the Community budget could provide up to a €200 M contribution to the RSFF, matched by an equivalent contribution for the EIB.

State of implementation of the ICT projects

The substantial financial support mobilised on Quick Start ICT projects from a combination of different sources of funding is one of the actions making tangible the commitment of the EC and the Member States to speed up the delivery and the use of high capacity communication networks. This continued commitment is already living up to its expectations: improved access to ICT networks offering new ways of creating and sharing knowledge for work, research and leisure are providing a sound basis on which competitive markets, innovation and consumer satisfaction thrive.

The Digital Divide Quick Start project focused on delivering broadband connections in remote and rural areas using a variety of technologies, based on the priorities defined in the Member States' national broadband strategies. The actual rapid progress in broadband take-up across Europe in the past years can largely be ascribed to a combination of competing infrastructures, effective telecoms regulation, and structural and rural policy instruments. Broadband coverage in EU15 increased from 84% in January 2003 to 90% of the population in January 2005. In remote and rural areas, coverage increased from 42% to 72% in the same period. In January 2006, Digital Subscriber Lines, representing more than 80% of broadband lines, reached 87% of the EU25 population. EU25 coverage of rural areas was only 66%³⁸. It is not possible to say, however, how much of this increase was market-led and how much was publicly funded. At the same time, growing diversification of technological choices for high-speed Internet access, in particular efforts to use digital TV or the electricity network, has reduced the importance of structural factors creating the digital divide. However, quality and speed of provision

³⁸ Source: "Broadband Coverage in Europe", Commission Services (2006, data as of 31.12.2005)

remain an issue in isolated and remote areas without sufficient aggregate demand to justify the operation of commercial markets.

Today, net profits from the **mobile communication** industry in Europe are estimated at around $\in 100$ B; the sector employs half a million people whilst a further two million jobs are indirectly linked to the sector. The sector competitiveness was clearly reinforced by the Quick Start projects heightening research into 3G mobile communication systems and next generation technologies. Some projects integrated local, cellular and broadcast heterogeneous network and service environments, demonstrating the added value of the new "Ambient Networks" concept. Others have provided higher-speed data and better spectrum-efficiency technologies, necessary to develop the market of mobile access to multimedia content. Quick Start projects have contributed to develop new international standards before the end of 2008, preparing the evolution of the radio network architecture towards increased performance and improved cost effectiveness in 2009³⁹. To prolong this thrust in the future, the first FP7/ICT work programme strategic objective on "The Network of the Future" draws upon the research priorities identified by the industry-led eMobility European Technology Platform running since 2005.

The ICT-based research network infrastructure Quick Start project contributed to upgrade the Géant network to 10 Gbit/s in 2005 and to bring it towards terabit speeds by 2010. The Géant network is currently delivering pan-European coverage at 10Gbit/s, connecting more than 40 NRENs, linking more than 3900 universities and research institutes, displaying Gigabit connectivity beyond Europe. Further coordination of efforts to fully integrate computing power, data storage, grid-based middleware, resource sharing and advanced collaboration services is still as relevant as when highlighted by the Quick Start initiative. Actually the FP7 work programme seeks to reinforce Europe's position as a hub for global research networking directly attributing € 95 M to reinforce the advanced communication capabilities available for the 30 million users of Géant. As the corresponding call for proposals is scheduled for 2008, the assessment of the demand for RSFF funding and the associated project results cannot be made before 2009.

3.4. **R&D** and innovation

Investments in R&D projects

To disaggregate from within the support from structural funds, cooperative research programmes and EIB loans the contribution specifically concentrated on the research topics singled out by the Initiative is not always possible, as these have been integrated into wider thematic areas of support. The 2003 estimations of the levels of investment necessary to keep Europe at the cutting-edge of technological development in these domains did not need to be substantially revised. **Investments decisions proceed according to the initial plans, while a tight integration of funding from different sources is clearly taking place.**

The support to Nanoelectronics projects is in line with the original targets of the Initiative, coming mainly from the EU R&D FP, from EUREKA/Medea+ and national programmes. European public cooperative funding schemes, FP and Eureka together

³⁹ Source: UMTS Forum White Paper "3G/UMTS Evolution: towards a new generation of broadband mobile services", December 2006.

come to around $\notin 0.5$ B annual funding to this area. Over the period 2004-08, the Community programmes have contributed to the total $\notin 1.3$ B cost of a selection of nanoelectronics projects with a $\notin 0.77$ B funding, through FP6 and FP7 grants to ICT projects⁴⁰. But FP funding data for nano-electronics infrastructure is too fragmented to be reported. The EUREKA MEDEA+ Cluster, covering both silicon application platforms in selected market areas and enabling technologies supporting them, has supported nanoelectronics projects of a total cost of around $\notin 2.7$ B for 2004 to 2009 with a total funding of $\notin 1.6$ B⁴¹. The EIB is supporting this sector through $\notin 1.2$ B/0.8 M approved/signed loans for R&D and innovative manufacturing capacity and two projects out of 5 projects benefiting from these EIB direct loans will make use of the RSFF.

Funding has been made available to set up the next generation laser infrastructures key for Europe's research, namely: The European X ray Free Electron Laser (XFEL) facility in Hamburg, the Facility for Antiproton and Ion Research (FAIR) instrument in Darmstadt and the IRUX network of 5 soft free electron lasers facilities in different phases of development⁴². The European Strategy Forum on Research Infrastructures (ESFRI) in charge of co-ordinating large research infrastructure projects at the European level has estimated the up-front investments costs to set up these next generation laser infrastructures at about €2,5 B, while the operation of the free electron lasers of XFEL and IRUVX will cost yearly about €0.15 B. Both the XFEL and FAIR projects figure on the ESFRI roadmap of priority projects. In consequence, some €300 M FP6 funding⁴³ and a €60 M EIB loan have already been mobilised on the most mature part of the IRUVX network. For XFEL and FAIR, the EIB maintain operational contacts to prepare the next steps for the realisation of these investments.

To achieve a market penetration of fuel cell and hydrogen technologies for portable, stationary and transport applications in line with Europe's policy objectives, some € 7.4 B of public-private investments are required over the period 2007-2015, as calculated by the European Hydrogen and Fuel Cell Technology Platform. To come closer to this aim, funding at European level is actually playing, as expected, an important role to seed and reinforce coordination between various sources of funding. The FP7 will cofinance hydrogen and fuel cell research and demonstration projects with some €470 M matched by an equivalent amount from participating stakeholders in 2007-2013. This FP7 community funding is much higher than past FP5 and FP6 investments (resp. €0.15 B over 1999-2002 and €0.3 B over 2002-2006). Besides, the EIB both supports basic research in public institutions working on hydrogen-related projects and provides lending to R&D targeted towards hydrogen vehicles and refuelling stations. Within its lending to industrial R&D, the Bank extended a loan to a European automotive manufacturer for the development of a new drive-train, based on hydrogen as fuel; and currently appraises a project for the development of hybrid drive-train systems that might rely on fuel cells.

⁴⁰ Source: FP6/IST project database, projects on: "Next generation nanoelectronics components and electronics integration", "Photonic components and subsystems", "Micro/nanosystems", "Organic and Large area electronics" and "Future Emerging Technologies: Nanoscale ICT devices and systems".

⁴¹ Source: EUREKA, the pan-European network for market-oriented industrial R&D, http://www.eureka.be

⁴² As of 2006, IRUX consortium is formed of: FLASH in operation in Hamburg, FERMI in construction in Trieste, 4GLS and BESSY in advanced technological development phase in Daresbury and Berlin, and MaxLab in conceptual phase in Lund. Other synchrotron projects may enter the consortium from The Netherlands, France and Switzerland.

⁴³ A total funding of 237 ME is approved for FLASH and FERMI, development phases of 4GLS and BESSY are supported with a 71 ME funding.

Satellite technologies and applications receive sustained support drawing upon all types of adequate public-private co-financing schemes. $\in 100 \text{ M}$ from the aeronautics and space theme of FP6 supported projects over the period 2004 to 2006 to deliver pilot service portfolios for main domains of GMES. A myriad of other GMES-related projects on observation sensing technological development or product dissemination was also supported through other FP6 thematic priorities. The FP7 is now devoting €1.3 B to GMES and Space foundation, out of which 85% will be concentrated for GMES service validation and further service evolution, including support to GMES space component development by ESA. Almost €120 M will be used for promotion and development of so-called "downstream services" to be built upon the freely accessible information products of GMES core services. ESA and its member states contribute to the GMES service development through nine thematic projects complementary with FP projects. Beyond FP funding, GMES was identified as one of the themes for a "Fast track option" network under the EU Cohesion Policy initiative, "Regions For Economic Change". Out of a total budget of €375 M dedicated to achieving the goals of the renewed Lisbon agenda, volunteer networks of regions will apply for GMES related actions. In parallel, building of the Russian Soyuz launcher at the European Spaceport at Kourou represents a total cost of around €350 M. Proceeding as planned, the FP6 has already made available \in 5 M and TEN-transport \in 19 M to contribute towards the Launcher Integration Building and the EIB approved a loan of $\in 120 \text{ M}$ - partly guaranteed by France - to Arianespace.

State of implementation

The R&D projects listed in the Initiative presented diverse degree of maturity from the start; each has progressed according to its own starting point.

The Quick Start projects have accelerated and enhanced the range of a number of technological developments in nano-electronics, a technology at the source of a range of innovations (e.g. safer and cleaner cars, high performance communication systems, multimedia equipment, more powerful computers and personal health support units)⁴⁴. With these projects exceeding the initial technology roadmap, the leading position of European players in the semiconductor industry for 22 – 45 nm CMOS technologies has been reinforced. Moreover, the Quick Start projects have significantly advanced the state-of-the-art in photonics providing innovative solutions for the sensor and semiconductor industries⁴⁵. Two European Technology Platforms – ENIAC on nano-electronics and PHOTONICS21 on photonics - carry forward a coherent European vision, as recommended by the Quick Start programme. The ENIAC ETP has also enabled to set up a long-term public private partnership in the form of a JTI. Through this flexible and efficient legal framework, €0.4 B Community contribution, national public and private resources will be combined within one coherent initiative investing €3 B from 2008 to 2013 in the sector.

⁴⁴ Main technological development in nano-electronics through Quick Start projects: adding new materials, devices and processes for emerging micro and nanoelectronics production, developing advanced EUV lithography equipment for the future 32nm and 22nm semiconductor technologies, applying new design approaches for System-on-Chip and Systems-in-Package, consolidating European research in microwave power amplifiers for broadband wireless access.

⁴⁵ Key deliverables in photonics include highly efficient flexible large area flat sources for ICT and general lighting applications (Solid-State lighting), high Brightness Laser Diode technology, and TeraHz sources and detectors for various applications, including bio-sensing (DNA chain recognition), security (sensing of hazardous materials) and semiconductor processing (analysis of mobility and carrier concentration in semiconductors).

The construction of new Free Electron Lasers to create, in Europe, world-leading facility for the production of Infrared to X-rays, was launched according to plans. Such infrastructure providing new, virtually unexplored regimes of coherent light flashing will benefit a very large user community observing the structure and the dynamic behaviour of the components of materials at atomic level. As it was possible to begin with the construction of the most mature projects in 2007; XFEL should become operational in 2013, FAIR in 2014 and IRUVX in 2015. In a wide range of disciplines (nanosciences, materials, plasma physics, astrophysics, environmental and earth science, etc;), research findings are expected to spin off from these new research facilities.

As highlighted by the initiative, hydrogen is a key technology sector for competitiveness and growth: the market for fuel cells continues to grow rapidly with a 40% increase in worldwide sales of fuel cells over the period 2002 to 2005, in direct connection with the worldwide growth of fuel cell R&D by 10% in 2004-2005. There are still a number of technological and non-technological barriers to overcome before autonomous market development. Thus, strong strategic policy guidance at EU level has to flank long-term public investments. In 2003, the industrial players established the European Hydrogen and Fuel Cell Technology Platform while the Commission joined the International Partnership for the Hydrogen Economy⁴⁶. The ETP has delivered a strategy integrating a strategic research agenda and a deployment strategy in March 2005. Aiming at reducing the time-to-market for hydrogen technologies by 2 to 5 years, the Fuel Cells and Hydrogen JTI is being established with expected adoption of the Council regulation early 2008. Such Joint Undertaking is necessary to optimise the transition from R&D to markets. A rapid adoption of the JTI would be a sign of high and effective policy support. Financed with almost €0.5 B Community contribution until 2013 and equivalent private investments from the industry grouping entering the Joint Undertaking, the JTI will explore all opportunities to leverage additional funding at national and regional level, like using the RSFF instrument developed in cooperation between the Commission and the EIB. Acceleration of the development of costcompetitive European hydrogen and fuel cell-based energy and of the deployment of associated transport and stationary applications as a result of the public intervention cannot be detected at this early stage. But an informative benchmarking of the European hydrogen energy roadmap with international partners has been made available at the end of 2007⁴⁷.

At least in part because of the Initiative special attention to the domain, the critical mass of public and private resources (both financial and technological) has been quickly and timely assembled to finalise the design of the Sentinel satellites and to install a new launch site. Europe has thus positioned itself to reap the benefits of future satellite technologies. A wide range of pilot services benefited from FP6 support to test new solutions for early warning systems, post-disaster remediation, renewable energy planning, urban planning and food security surveillance. Open access to this FP6 funded research and FP7 financial support to service validation will lead to gradually rising investments into the development of commercial applications. Requirements for the next generation of environment and security related services are federated across all types of users by the GMES Bureau, a Commission coordination body set up in 2006. This

⁴⁶ Detailed information is found at www.HFPeurope.org.

⁴⁷ http://www.hyways-iphe.org/

structure is providing strategic guidance in a form that is more adapted to the sector than if a JTI had been set up, as initially envisaged by the Initiative. In conjunction, the ESA co-ordinates the development of the GMES satellite network consisting of 5 satellites (called "Sentinel 1 to 5") to monitor changes in the Earth's oceans, land, weather and climate. The first GMES Fast Track Services will be launched by the end of 2008 and the Sentinel-1, will be ready to be launched in 2011 as ESA signed the €230 M deal with Thales Alenia Space in June 2007 to design Sentinel-1. Finally, the installation of a launch site for the Russian Soyuz launcher at the European Spaceport' at Kourou, French Guyana, is proceeding with the goal of a first launch in the first quarter of 2009 – expected to be a communications satellite for Australia. Preparatory work on the site has been completed, and the two major constructions, the 'Launcher Integration Building' and the launch pad itself are now being built. The arrival of Russian engineers to complete what is intended as a 'twin' construction to that already in existence at the original Baikonur site in Kazakhstan is foreseen for March 2008. 'Soyuz Kourou' is already being marketed by Arianespace, and is intended to complement the current heavy launch capability of Ariane 5 and the medium class of the European VEGA launcher. The Soyuz offer will be to place 3 tonnes in orbit, twice its capability from the Baikonur site.

3.5. Effects felt across sectors

Effects on economic growth

It is often difficult to quantify the direct and indirect impact of infrastructure projects on productivity and economic growth. Public infrastructure, in particular transport infrastructure, is generally considered as an important input to GDP. While some effects are short term, public investment in infrastructure can also have long run effects on productivity and economic growth as transport costs are an important determinant of the location and scale of economic activity and the expansion of trade. Quantifying such effects is fraught with severe difficulties and net effects on the economy also depend on how investment is financed. Nevertheless, findings from the empirical literature often indicate positive average effects of public infrastructure expenditure on GDP⁴⁸. However, as highlighted in most Member States' replies, it is not possible to assess to what extent investments made in Quick Start projects have been additional. In any event, the direct impulse provided by the Initiative in terms of increased investment – thus the impact on GDP – seems limited. The Initiative is, instead, likely to have more significant indirect impacts over time on infrastructure investment (in particular in TEN-T priority projects) and thus on economic growth through the new financial instruments and other measures that have been put in place.

It is also important to note that the effects of transport infrastructure on economic growth can vary widely between countries, regions and sectors. The positive impacts of additional investment tend to be smaller when the existing network is already welldeveloped and of good quality. The effects can thus be expected to be relatively higher in the new Member States. Besides, the impact of new investment crucially depends on the extent to which it alleviates bottlenecks in the existing network. An assessment of the

⁴⁸ Cf. for example W. Romp and J. de Haan, Public capital and economic growth; a critical survey, EIB Papers, Vol 10, N°1, 2005; COMPETE study, European Commission, 2006.

impacts of individual projects requires adequate modelling of the whole transport network; spill over effects on other regions and countries are all the more significant for Quick Start projects in view of their European dimension. The impacts of the completion of the Quick Start projects have thus to be appreciated with reference to the completion of the whole TEN-T priority projects, which have been assessed in previous Commission studies⁴⁹. As for ex post studies of individual projects, at this stage little evidence of the impacts is available, since the Initiative focuses on large-scale investments in infrastructures to be built and made operational within a decade.

With regard to electronic communication networks and the Quick Start technological areas, additional public and private investments of the kind promoted by the Initiative have enhanced growth within the sectors in focus, even if final results cannot be ascribed to the Initiative alone. As an example, the Quick Start programme has supported the trends to scale up public investment in nanoelectronics, efficiently bundling support to basic infrastructure development and to targeted research projects. The competitive position of the European semiconductor and photonics industries benefited directly, but also many other industries using nanoelectronics components saw their productivity perspective enhanced. Similarly, new entrants and incumbents stepped up investments to extend and upgrade mobile communication network infrastructures, particularly in countries that have applied the EU regulatory framework in an effective and procompetitive manner. It is from those investment decisions that a more productive use of ICT could be made in the rest of the economy, with a significant impact on growth since 2003. The influence of the Growth Initiative by itself is indistinguishable from the overall impact⁵⁰, yet the contribution of the Initiative cannot be disregarded either. The Initiative made the case for creating Joint Technology Initiatives backed by significant Community resources to increase private investments in R&D and innovation. Such instruments are now fully operational and contribute to closing the gap with other leading economies. Moreover, large scale investments in research infrastructure typically start to deliver in full only once the construction is completed. For several major projects, programmes and initiatives this will still take some years.

Impacts on the internal market and cohesion, employment and environment

To the extent that they are crucial elements for the completion of the TEN-T and TEN-E networks, progress in the implementation of Quick-start projects plays an important role for strengthening the internal transport and energy markets. In this respect it has been already indicated that progress has been quite different for transport infrastructure and for energy infrastructure. An efficient transport system is also a key factor underlying regional development through increased accessibility, thus for the Cohesion policy. Several Commission studies have assessed the impacts of the completion of TEN-T priority projects on regional growth and welfare⁵¹.

The Growth initiative brought additional momentum to update several Community financing programmes benefiting the working of the internal market and advancing cohesion. For example, Member States and ICT industries had been encouraged to invest

⁴⁹ Cf. TEN-STAC study, CE, 2004, and ASSESS study, CE, 2005.

⁵⁰ The patterns of public and private knowledge investments and their associated impacts on growth and competitiveness are fully examined within the Lisbon Strategy strategic report.

⁵¹ Cf. ASSESS, CE, 2005; Annual report on the Cohesion Fund COM(2007) 678

in ICT applications creating tighter social cohesion through the eTEN instrument. The Growth initiative, among others policy declarations, contributed to scale up eTEN in the Competitiveness and Innovation Programme entrusted on the European Investment Fund. The JEREMIE initiative, the result of the Commission/EIB Group collaboration within EU cohesion policy encourages regional actors to address gaps in capital markets in order to reap the maximum benefits of the internal market. Memoranda of Understanding have been signed by the EIF with Slovakia, Greece, Romania, Bulgaria, Italian, French and Spanish regions in line with the JEREMIE initiative. The first funding agreement was signed with Greece in the summer 2007 and some 40 evaluations of demand and supply for SME finance at national and regional level have been carried out by EIF.

The coordination and concentration of space policy funds at EU and MS levels, as reinforced by the political impulse of the Growth Initiative, has effectively enabled the development of numerous GMES applications with tangible long term benefits for the environment and the security. National and European financial support has been channelled towards R&D on hydrogen and legal measures implemented for R&D facilitated the structuring of the research in the field, as suggested by the Initiative. But securing Europe's research excellence and competitiveness, as well as environmental benefits of the hydrogen economy are objectives that deserve attention going far beyond the scope of the Growth Initiative, thus the Lisbon Strategy for Growth and Jobs.

Mobilization of private capital

In 2004-2005, the venture capital market resumed its growth and in 2006 the high-tech private equity investment in the EU reached an all-time high (cf. Graph)⁵². This take up reflects mostly the recovery of confidence after the bursting of the 2000 technology bubble. The Growth Initiative has certainly pushed the implementation of important measures enabling higher rates of return from knowledge investments and increasing the attractiveness of investments into specific technology clusters, and thus participated to create a climate of confidence for investors. Nevertheless, the improved perspectives on the venture capital market are not yet directly demonstrating the Growth Initiative influence. The design and adoption of this modernised financial context suggested by the Growth Initiative took time and the new financial instruments could only be made operational through the 2007-2013 financial perspectives. Many of the new financial instruments introduced by the Growth Initiative have just become operational in 2007. The 2007 context being more favourable than the one prevailing in 2003 indicates that the expected positive effects of the new financial instruments introduced by the Growth Initiative and jointly developed by the Commission and the EIB to mobilise private capital are totally within reach.

⁵² Based on data from ESTAT 36/2007

Venture Capital investments EU15



The early stage of the Risk-Sharing Finance Facility (RSFF) operation started in June 2007, already gives indications of the future positive impacts of these new instruments. Up until the present time, 8 RSFF transactions have been signed and a similar number of transactions are expected to be finalised in 2007, with initial demands coming from renewable energy, biotechnology, manufacturing and automotive sectors. Significant additional demand is expected from all sectors covered by European Technology Platforms and Joint Technology Initiatives. Although it is too early to asses the impact of RSFF, the current pace of approvals of transactions and the forecast pipeline confirm that the measures of the Growth Initiative are key to correct the entrenched market inefficiencies limiting research and innovation private investments.

In terms of guarantee instruments targeted to SMEs, the EIF total guarantee portfolio amounted to some \in 11.1 B at the end of 2006, indirectly benefiting to some 700 000 SMEs. Specific European Commission guarantee mandates are estimated to have facilitated the creation of 2 million jobs.

Reduction of regulatory barriers

There has undeniably been progress in reducing the regulatory, administrative and fiscal barriers to investment in the areas relevant for the Growth Initiative, as shown in previous sections of the report.

The conditions have especially become more favourable across the EU for the development of PPPs. Favourable legislation and administrative capacity at national level nevertheless remain the key to unlock such forms of investments into infrastructures, as shown by the rapid development of PPPs in the UK, Finland and Portugal. As almost all Member States have, since 2003-2004, been undertaking a revision of their regulatory and administrative framework for PPPs, further effects are likely to emerge. The forthcoming establishment of the European PPP expertise centre (EPEC) by the EIB, the Commission and the Member States should facilitate the recourse to PPP as an effective financial solution for major European infrastructure projects. Moreover, it can be anticipated that the new guarantee instrument for transport LGTT will significantly boost public-private involvement into TEN-T during the period 2007 to 2013. With a TEN-T budget allocation of €0.5 B for the period, matched by a corresponding amount by the

EIB, the new facility will indeed be able to support a portfolio of some 30 projects. The implementation details of the LGTT will be finalised by the Bank and the Commission end of 2007- early 2008.

As regards the general regulatory framework for investment throughout the EU, the adoption of the Cross-Border Mergers Directive and the revision of the Mergers Directive were important step forward to remove the legislative, regulatory and tax obstacles to companies' operations across borders and thus to better reap the benefits of the internal market. The effectiveness of these measures, entering into force in 2007, will have to be analysed at a later stage.

Quality of public finance

The relative decline in public investment in most Member States and shares of R&D expenditure below that of EU competitors had been fuelling concerns that an insufficient share of public budgets had been devoted to expenditures enhancing the long-term growth potential. The 2002 and 2003 broad economic policy guidelines recommended to redirect public expenditure towards growth-enhancing investment in physical and human capital, while respecting overall budget constraints and to increase the efficiency of public spending. The Growth Initiative has built upon this idea and there has been broad agreement that it should be implemented while maintaining sound macro-economic policies. Indeed,, for the countries that increased spending on the Quick Start areas or in growth-enhancing infrastructures in general, this heightened effort results from redirecting public expenditure rather than from additional total spending. Nevertheless, in the future, it is important to ensure that support is provided to Quick Start projects based on a detailed analysis of their economic viability and efficient use of public resources⁵³.

⁵³

[&]quot;Quality of public finance" - Note for the EPC Working Group on the Quality of Public Finance, 05/2007

| PP | TEN-T priority projects | Count | Stort | End | Costs | Stage | inve € | Total stment ⁵⁷ | f | TEN-T unding ⁵⁸ € million | Progress in |
|----|--|-------|----------------|----------------|----------------|-----------------|-----------------|-------------------------------|---------------|--|---|
| 54 | - Quick Start sections | ry | Start | Ena | 55 | 56 | Befor e 2003 | 2004- 2006 | 2000- 2003 | 2004- 2006 | implementation |
| | | | | | | | | | | | The studies and preparatory works have been accelerated. The construction of the pilot tunnel has already started |
| | Railway Axis | | | | | | | | | | The construction decision has been delayed Financing is a big challenge |
| 1 | Berlin- Verona/Milan- Bologna- Napoli-Messina | A - I | (2004) | (2015) | (4312) | (P/S) R/S/C/ | 20 | 62 | 5,15 (FS) | 3 (FS) | A European Coordinator has been nominated |
| | Palermo - Brenner Tunnel | | 2009 | 2022 | 6000 | A | | | (F3) | (DG) | In July 2007, AT and IT with the support of DE, have signed a "Memorandum" concerning Brenner Tunnel, including access routes |
| | | | | | | | | | | | Financial contribution from TEN-T 2007-2013 is of paramount importance for the construction phase. |
| | High speed railway axis Paris- Brussels/Bruss | | | | | | | | | | Most of the works advance on the planned time schedule and several lines of the project PBKAL will be in operation on 2007/8. |
| 2 | els Cologne- Amsterdam- London - Liege-Köln | B - D | (1996) 2001 | (2007) 2007 | (1184) 1762 | O/W | 452 | 1078 | 1,20 (DG) | 37,4 (DG) | Works will continue on the section Aachen – Düren (D) for reconstruction of the "Buschtunnel" (2008-2009) and for removing of an important bottleneck (2010-2013) |

4. ANNEX: INVESTMENTS AND STATUS OF QUICK START PROJECTS ON TRANSPORT AND ENERGY

⁵⁴ Reference of the TEN-T priority projects in COM(2003) 564

^{55 (2003} estimates of costs) 2006 revised estimates of costs

⁵⁶ O = on-going; P= Start before Dec. 2006; R= Start after January 2007; S= heavy technical studies; W=works; C= European coordinator nominated; A=agreement signed among MS

⁵⁷ Total cost of segment mentioned including studies in € million, 2003 price level.

⁵⁸ FS: Feasibility study. DG: Direct grant for works

| | TEN-T priority | | | | | | inve | Total stment ⁵⁷ | f | TEN-T unding ⁵⁸ | |
|-----------------|--|-------------|----------------|----------------|-----------------|------------------------|-----------------|-------------------------------|---------------|-------------------------------|--|
| PP 54 | projects | Count ry | Start | End | Costs | Stage | € | millions | | € million | Progress in implementation |
| | - Quick Start sections | | | | | | Befor e 2003 | 2004- 2006 | 2000- 2003 | 2004- 2006 | |
| | High speed axis of south- west Europe | | | | | | | | | | The works advance on the planned time schedule |
| | | | | | | | | | | | Leverage impact of TEN-T financing of 25% of works |
| | - Figueras – Perpignan | E – F | (2004) | (2009) | (950) | (P/W) | 2 | 713,2 | 1,0 (FS) | 5,56 (FS) | PPP financing scheme |
| | | | 2004 | 2009 | 1078 | A | | | | 37,4 (DG) | The international link will be financed and exploited by Euroferro. |
| | | | | | | | | | | | The project is expected to be completed in 2009. For the firs time, the Iberian HSL will be interoperable with res of Europe |
| | | | | | | | | | | | European Coordinator has been nominated |
| | - Lisboa/Porto - Madrid | P - E | (2006) 2007 | (2011) 2013 | (5700) 10750 | (P/W) O/S/W/ C/A | 0 | 146 | 0 | 21,5 | The studies faced big progress from 2004 onwards |
| 3 | | | | | | U.A. | | | | | Substantial contribution from Cohesion fund (P) and ERDF (ES) |
| | | | | | | | | | | | A European Coordinator has been nominated |
| | | | | | | | | | | | The works have started in 2007 (ES). The completion is expected with 2 years delay |
| | | | | | | | | | | | Contribution from TEN-T 2007-2013 is important for the international section (Merida-Evora) |
| | | | | | | | | | | | Following Feasibility Studies, the project faces substantial increase on the cost |
| | | | | | | | | | | | Portugal and Spain has agreed to complete the line |
| 4 | High-speed railway axis east Strasbourg – Appenweier | F - D | (2004) 2007 | (2010) 2014 | (150) | (P/W) R/S/C | | 0,60 | | | The German and French governments have signed an agreement that entered into force in |
| | (Kehl bridge) | | 2007 | 2014 | 122 | N/3/C | | | | | January 2007 |

| 22 | TEN-T priority | Count | Total TEN investment ⁵⁷ funding Costs Stage € millions € million | | Tota investment⁵ osts Stage € millions | | TEN-T unding ⁵⁸ | Duonnoo in | | | |
|-----------------|---|-------|---|----------------|--|-----------------|-------------------------------|---------------|---------------|----------------------------|--|
| PP 54 | projects - Quick Start sections | ry | Start | End | 55 | Stage | € Befor e 2003 | 2004- 2006 | 2000- 2003 | € million 2004- 2006 | implementation |
| | | | | | | | | | | | The Kehl bridge will be constructed between 2008-2010 |
| | Railway axis Lyon-Trieste- Divača/ Koper- Divača Ljubljana- Budapest- Ukrainian border | | | | | | | | | | The studies and French survey works have been accelerated, with substantial contribution of TEN programme. But delays on the Italian side persist. |
| | | | | | | | | | | | Financing is a big challenge |
| | - Mont – Cenis Tunnel | F – I | (2006) Not | (2017) 2020 | (6100) 7305 | (O/S) R/S/C/ | 200 | 84 | 93,56 (FS) | 45 (FS) | A European coordinator has been nominated |
| | | | d yet | | | | | | (13) | | F and I signed a international Treaty on 2001, endorsed by F and I national Parliament |
| | | | | | | | | | | | Financial contribution from TEN-T 2007-2013 is paramount importance for the construction phase |
| | | | | | | | | | | | The date for the start of the works can not be defined till the "Observatory of the "Suse valley" has completed its works |
| | - Budapest- Ljubljana – Rail upgrade | HU–SI | (2006) | (2015) | (760) | (P/W) | 0 | 111,85 | | | € 43,5 mio from ISPA before 31.12.2003 and € 40,8 mio from CF on 2004-2006 |
| 6 | | | 2006 | 2023 | 1510,4 | C | | | | | CF 2007 – 2013 will contribute to finance the project. Nevertheless, Slovenia could face financial problems |
| - | | | | | | | | | | | A European coordinator has been nominated |
| | | | | | | | | | | | The difference of the 2003 cost estimation and 2006 cost estimation is related to a more mature analysis of the project |

| | TEN-T | | | | | | inve | Total stment ⁵⁷ | f | TEN-T unding ⁵⁸ | |
|-----------|--|-------|----------------|-----------------------|---------------------------------|----------------|-----------------|-------------------------------|----------------|-------------------------------|---|
| PP | projects | Count | Start | End | Costs | Stage | € | millions | | € million | Progress in |
| | - Quick Start sections | ry | | | | | Befor e 2003 | 2004- 2006 | 2000- 2003 | 2004- 2006 | implementation |
| | Motorway axis Igoumenitsa/P atra-Athina- Sofia-Budapest | | | | | | | | | | |
| 7 | - Athina- Thessaloniki – (Bulgaria) (included in | EL-BG | (1996) 1996 | (2008) 2008 | (1200) ⁵⁹ 2535 | (O/W) O/P/W | 4654 | | 18.5 | 4 | The project is near completed and project financing is assured |
| | Pathe) | | | | | | | | | | Substantial EC contribution from Cohesion Fund |
| | Sofia – Kulata – (Greece) | BG | (2003) | (2010) 2014 | (675) 738 | (P/W) O/P/W | 0 | 14 | 0 | 0 | The works should be implemented between 2007 and 2013 |
| | Nordic triangle railway/road axis | | | | | | | | | | |
| | - Kerava- Vainikkala- (Russia)-Rail | FIN | (2003) 2003 | (2006) 2012 | (591) 1515 ⁶⁰ | (O/W) O/P/W | 422 | 191 | 4,5 (DG) | 26 (DG) | The section Kerava- Lathy finished in 2006 |
| 12 | upgrade | | | | | | | | | | The cost and construction period of the sections Lathy-Luumaki and Luumaki-Vainikkala are mutch higer than foreseen in Quick Start program |
| | - Malmö and Stockholm rail Tunnels | S | (2004) 2004 | (2011) 2011/1 6 | (2000) 939 | (P/W) O/P/W | 0 | 630 | 7(FS) 4(DG) | 5(FS) 26(DG) | Works started in 2004, end foreseen for 2011 and 2016 respectively |
| | UK/Ireland/ Benelux road axis | | | | | | | | | | Works on the key bottlenecks of the section are ongoing, |
| 13 | - Felixtowe- Holyhead/ | UK | (1996) 1996 | (2010) 2013 | (1349) 1349 | (O/W) O/P/W | 549 | 896 | 0 | 0 | and they are to be continued during 2007-2013 |
| | Stranraer-Road (new or upgrade) | | | | | | | | | | |
| | Railway axis Paris- Strasbourg- Stuttgart | | | | | | | | | | A European Coordinator has been nominated |
| | Vienna- Bratislava | | | | | | | | | | D/A bilateral agreement has been signed in June 2007 for the IEA |

59 Remaining works

60 Remaining works

| | TEN-T | | | | | | inve | Total stment ⁵⁷ | f | TEN-T unding ⁵⁸ | |
|-----------------|--|--------|----------------|----------------|------------------------|----------------------|-----------------|-------------------------------|---------------|-------------------------------|---|
| PP 54 | projects | Count | Start | End | Costs | Stage | € | millions | | € million | Progress in |
| | - Quick Start sections | ry | | | | | Befor e 2003 | 2004- 2006 | 2000- 2003 | 2004- 2006 | Implementation |
| | - München- Mühldorf- Salzburg Bail | D – A | (2002) 2002 | (2015) 2015 | (898) 488 | (O/W) O/P/W | 12 | 79 | 0 | 0 | studies and construction of the Saalach bridge |
| 17 | upgrade | | | | | | | | | | An integrated approach should be given to the München-Mühldorf- Freilassing- Salzbourg section |
| | Wien-Bratislava- Rail upgrade | A - SK | (2004) 2007 | (2010) 2015 | (134) 764,8 | (P/W) O/P/W | 0 | 77,9 | 6,6 (FS) | 0 | In July 2007 A and SK signed a Treaty and a "Lettre d'intention" on the construction of this section. |
| | | | | | | | | | | | Connection with airports of Vienna and Bratislava is recommended. |
| | Rhine/Meuse- Main-Danube inland | | | | | | | | | | Study and pilot test started in September 2007 |
| | - Wien- | | (2006) | (2015) | (190) | | 0 | 0.2 | 6.6 | | Works will start in 2008 |
| | Bratislava | A – SK | (2000) | (2013) | 205,7 | (F/W) R/S/C | 0 | 0,3 | (FS) | | A European Coordinator has been nominated |
| 18 | - Rhine-Meuse, including lock of Lanaye | NL – B | (2005) 2005 | (2019) 2019 | (504) 681,5 | (P/W) P/S/W/ C | 0 | 24,8 | | 2,26(FS) | Works for the construction of a lock in Lanaye are planned to start in 2009 |
| 19 | High speed interoperability on the Iberian peninsula - Corredor Norte - Noroeste, | E - P | (2001) 2002 | (2010) 2020 | (8736) 17381, 74 | (O/W) O/R/S/ W | 33 | 972 | 0 | 2,5(FS) | Huge project that include the development of the HST in NW of Spain. The Quick Start project should be restricted to the link Porto-Vigo |
| | including Vigo- Porto | | | | | | | | | | Works have already started on the Spanish side |
| | Motorway of the sea | | | | | | | | | | |
| | - Motorway of the Baltic Sea | EU | (2004) | (2010) | t.b.c | (P/W) | 0 | 3,7 | 0 | 1,5 | European Coordinator appointed for the motorways of the sea on 27 September |
| 21 | - Motorway of the sea of western Europe | EU | (2004) | (2010) | t.b.c | (P/W) | 0 | 5,5 | 0 | 2,8 | Two calls for proposals + one for the north sea countries |
| | - Motorway of the sea of | EU | (2004) | (2010) | t.b.c | (P/W) | 0 | 4 | 0 | 2 | One call for proposals + one for |

| | TEN-T priority | | | | | | inve | Total stment ⁵⁷ | f | TEN-T unding ⁵⁸ | |
|-----------------|--|------------|----------------|----------------|----------------|--------------|-----------------|-------------------------------|-----------------|-------------------------------|--|
| PP 54 | projects | Count | Start | End | Costs | Stage | € | millions | | € million | Progress in |
| | - Quick Start sections | 'y | | | | | Befor e 2003 | 2004- 2006 | 2000- 2003 | 2004- 2006 | implementation |
| | south-east Europe | | | | | | | | | | the north sea countries |
| | - Motorway of the sea of south-west Europe | EU | (2004) | (2010) | t.b.c | (P/W) | 0 | 2 | 0 | 1 | Master plan study in preparation |
| | Railway axis Athina-Sofia- Budapest- Vienna-Prague- Nürnberg/Dres den | | | | | | | | | | |
| 22 | - Budapest- Wien-Rail upgrade | A - HU | (2004) 2004 | (2010) 2020 | (1318) 1163 | (P/W) R/S | 0 | 8,30 | | 2,5 (DG) | Project to be re- dimensioned, since traffic is less than expected. Project currently postponed. |
| | Railway axis Gdansk- Warsaw- Brno/Bratislav a Vienna | | | | | | | | | | |
| 23 | - Katowice- Breclav-Rail upgrade | PL – CZ | (2004) 2009 | (2010) 2016 | (731) 705 | (P/W) | 0 | 0 | 0 | 0 | On the Polish side both sections leading to Czech and Slovak Republics are to be |
| | | | | | | | | | | | at the latest. On CZ side works on completion |
| | - Katowice- Zilina-Nove Mesto n.V. – Rail upgrade | PL - SK | (2002) 2006 | (2010) 2015 | (1331) 1110 | (O/W) | 0 | 13,1 | 0 | 3,25 (FS) | Works ongoing on SK side, completion by 2013 |
| | Railway axis Lyon/Genova- Basel- Duisburg- Rotterdam/Ant werp | | | | | | | | | | |
| | - Dijon- Mulhouse- Mülheim-New rail | F – D | (2006) 2006 | (2010) 2010 | (2080) 2080 | (P/W) | 2011 | 69 | | | Work on the Eastern sector of the HSL Rhine – Rhone ongoing (140km). The section will be in operation by 2011. |
| 24 | Basel – Karlsruhe-New rail | CH – D | (1987) 1987 | (2015) 2020 | (4235) 4256 | (O/W) | 1112 | 466 | 10(FS) 1(DG) | 29,41 (DG) | Works ongoing on the sections:- Karlsruhe – Rastaft (2001-2015)- Rastaft – Offenburg (2005-2012)- Offenburg – Bassel (1997-2020)- Katzemburg tunnel (2003-2011) |

| | TEN-T | | | | | | inve | Total stment ⁵⁷ | f | TEN-T unding ⁵⁸ | |
|-----------------|---|--------------|----------------------------------|----------------------------------|--|----------------------------------|-----------------|-------------------------------|---------------|-------------------------------|---|
| PP 54 | projects | Count | Start | End | Costs | Stage | € | millions | | € million | Progress in |
| | - Quick Start sections | ry | | | | | Befor e 2003 | 2004- 2006 | 2000- 2003 | 2004- 2006 | Implementation |
| | - "Iron Rhine":Rheidt- Antwerpen-Rail upgrade | B - NL | (2004) 2015 | (2010) 2018 | (550) 560 | (P/W) | | | | | B-NL have agreed to upgrade the existing line and to share the costs. The studies will be concluded mi 2008 and the works undertaken between 2015 and 2018 |
| 25 | Motorway axis Gdansk- Brno/Bratislav a- Vienna Brno-Wien | CZ - A | (2005) 2007 | (2010) 2014 | (479) 925,28 | (P/W) | | | | | CZ to undertake comparative studies to determine appropriate alignment following strong opposition to its original proposal |
| 26 | Railway/road axis Ireland/United Kingdom/conti nental Europe Cork-Dublin- Belfast-Rail upgrade | IRL-UK UK | (2003) 2004 (2005) 2009 | (2010) 2010 (2008) 2012 | (469) 686 120 120 | (P/W) O/P/W (P/W) O/P/W | 0 | 80,83 7,89 | | 3 (DG) | Only at the beginning of the feasibility study stage for HSL project between Belfast and Dublin (connection Belfast- lrish border) Ongoing upgrade works Renewal works only so far. Low commitment to the investment |
| | TOTAL TEN-T | | | | | | 9467 | 5748 | 158 | 320 | |
| 15 | Galileo Development and deployment phase | EU | (2001) 2002/2 007 | (2010) 2013 | (3400) 3400 – deploy ment only | | | 2560 | 350 | 330 | Following the last Commission communication (COM(2006) 272 final), he options to finance this programme are currently studied Towards deployment stage |

| | Energy projects - Quick Start sections | Country | Start | End | Cost (estim. in QSP) revised | (Stage) ⁶¹ | TEN-E funding € million 2004- 2006 | Progress in implementation and EIB support |
|-------|--|----------------|--------------|------|---------------------------------|-----------------------|---|--|
| EL 1. | France - Belgium - Netherlands - Germany: Electricity network reinforcements in order to resolve congestion in electricity now through the Benelux. | | | | | | | The Avelin-Avelgem line was financed by the EIB as part of the Elia Transmission Network upgrade project signed in December 2005. The Avelin-Avelgem construction did not face any major problem, despite crossing a wildlife reserve and requesting regional permits. |
| | - Avelin-Avelgem line Moulaine-Aubange line | | | | | | 0.5 | Aubange is completed in BE. In FR, it is still the study phase, with difficult acceptance of the routing by the local population in urban areas. |
| | Borders of Italy with France, Austria, Slovenia And Switzerland: increasing electricity interconnection | | | | | | | |
| EL. 2 | capacities. - Robbia - St.Fiorano line Phase shifter installation | CH-IT IT-SI | 2003 2004 | 2005 | (25) 77 (40) | F - | 0.25 | The Robbia-St Fiorano line was completed after 12 years of development and its operation began in 2005. The signature of a Memorandum of Understanding with local authorities on changes of routes and environmental compensation lifted the barriers to the project development. |
| | France - Spain - Portugal: increasing electricity Interconnection capacities between these countries and for the Iberian peninsula | | | | | | | |

⁶¹

Stage: F=Finalised, C: Construction Phase, A=Authorisation phase, S=Study phase, D=Deleted.

| | Energy projects - Quick Start sections | Country | Start | End | Cost (estim. in QSP) revised | (Stage) ⁶¹ | TEN-E funding € million 2004- 2006 | Progress in implementation and EIB support |
|-------|---|---------|-------|-------------------------|---------------------------------|-----------------------|---|--|
| | and grid development | | | | | | | |
| EL. 3 | - Sentmenat - Bescano - Baixas line | ES-FR | 2004 | (2006) 2009- 2010 | (100) 145 | A | 0.6 | The Sentemenat- Baixas link has experienced significant difficulties of local acceptance over the years and has now reached the authorisation phase. |
| | - Aldeadavila - Douro- Valdigem line | ES-PT | 2006 | (2008) 2009 | (11) 70 | S/C | 1.8 | The Aldeadavila- Valdigem route crosses rural areas with a low population density. To date, no problem has been identified. |
| EL. 4 | Greece - Balkan countries - UCTE System: development of electricity Infrastructure to connect Greece to the UCTE System. - Philippi - Hamidabad line | GR-TR | 2004 | (2006) 2008 | (50) 70 | С | 0.55 | No significant problem has been noticed for the time being. A compromise needs to be found between new infrastructure needs and environmental concerns. |
| EL. 5 | United Kingdom - Continental Europe and Northern Europe: establishing/increasing electricity Interconnection capacities and possible Integration of offshore wind energy - Undersea cable | NL-UK | 2004 | (2006) 2010 | 480 | A | 8 | The EIB is in the process of initiating the appraisal work Crossing the North Sea together with the diversity of procedures put severe constraints on the implementation. A compromise has to be found between new infrastructure needs and environmental concerns, possibly with the help of the regulators of the two Member States. |
| | Denmark - Germany - Baltic Ring (including Norway - Sweden - Finland - Denmark - Germany): increasing electricity interconnection | | | | | | | |

| | Energy projects - Quick Start sections | Country | Start | End | Cost (estim. in QSP) revised | (Stage) ⁶¹ | TEN-E funding € million 2004- 2006 | Progress in implementation and EIB support |
|-------|--|---------|-------|----------------|---------------------------------|-----------------------|---|--|
| | capacity and possible integration of offshore wind energy. | | | | | | 2006 | |
| EL. 7 | - Skagerak 4 undersea cable | DK-NO | 2005 | (2008) 2012 | (400) 260 | S | - | For the Skagerak project; it was difficult to estimate the socio-economic benefit for both countries. The prioritisation of the project in the Nordel Master Plan could facilitate its progress. |
| | - Harku - Espoo (ESTLINK) | EE-FI | 2005 | (2007) 2006 | 110 | F | 0.67 | For the Estlink project; a strong governmental support and a solid coordination process with authorities participated to the success of the completion of the link without any delay. |
| | - Alytus-Elk | LT-PL | 2006 | (2008) 2012 | (434) 270 | S | 0.15 | For the Alytus-Elk project, major delays have been addressed by the setting up of working groups at company and ministerial level, further studies of the Polish grid stability and security, and by using the route of an existing line. Furthermore, an input from UCTE, UPS and IPS and the upgrading of the Polish grid might facilitate the progress of the project. |
| | TOTAL Electricity | | | | Incomplete data | | 13.52 | |
| NG. 1 | United Kingdom - Northern Continental Europe, including Netherlands, Denmark and Germany - (with connections to Baltic Sea Region countries) - Russia: gas pipelines connecting some of the main sources of gas in Europe, improving the interoperability of the networks, and increasing the security | | | | | | | Although approached in late 2005 by the promoter the EIB has indicated that it could only be involved in this project if there is a unanimous support from all Member states (Article 18 procedure). Benefiting from high level policy support, |

| | Energy projects - Quick Start sections | Country | Start | End | Cost (estim. in QSP) revised | (Stage) ⁶¹ | TEN-E funding € million 2004- 2006 | Progress in implementation and EIB support |
|-------|--|----------------------|-------|----------------------------------|---------------------------------|-----------------------|---|--|
| | of supply. - North Transgas pipeline | RU-DE NL-UK | 2006 | (2010) 2013 | (5000) >5000 | C/S/A | | this project has some chances to be constructed, but probably after its competitor (the NEGP), and after 2013. |
| NG. 2 | Algeria - Spain -Italy - France - Northern Continental Europe: construction of new gas pipelines from Algeria to Spain, France and to Italy, and increasing network capacities in and between Spain, Italy and France. - Algeria - Spain - France pipeline | DZ-ES-FR DZ-LY-IT | 2004 | (2008) 2009 (2008) 2011 | (1500) 630-800 (540) 1340 | A S | 2 | The EIB is about to sign a 185 MEUR loan toward the expansion of the Transmed pipeline (Algeria-Tunisia- Italy), and is closely following the development of the Medgas (Algeria- Spain) and Galsi (Algeria-Sardinia- Italy). Appraisal work for these projects is currently scheduled for the first quarter of 2008. Medgas works should finished between 2008 (first phase) and 2012 (last phase). No problems have been reported from Algeria or Tunisia, nor from the Italian side |
| NG. 3 | Caspian Sea countries - Middle East - European Union: new gas pipeline networks to the European Union from new sources, including the Turkey - Greece, Greece -Italy and Turkey - Austria gas pipelines. - Turkey - Greece -Italy | TR-GR- IT | 2004 | (2010) 2011 | (900) 950 | A | 8 | EIB is financing the Turkey-Greece gas interconnection- Greek section- (Ioan of 22 MEUR signed in February 2006) Appraisal by the Bank of the Greece- Italy gas interconnection is currently scheduled for the beginning of 2008. The Bank continues to follow closely the development of the Nabucco project. The study phase is almost finished, and the authorisation |
| | TOTAL Gas | | | | Incomplete data | | 10 | phase is ongoing without encountering any important problems. |

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