Policy Paper

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Towards an SME friendly IST programme

Lessons learned from FP6 and policy recommendations for FP7
with special emphasis on the situation in the new member states

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Executive Summary

While many high level EU initiatives aim to support SMEs, there are still significant challenges to their full integration in the multi-annual framework programme for research and development (FP) in general and the IST programme in particular. This document reviews the experience and lessons learned within the EU funded projects EPRI-start and FINANCE-NMS-IST during FP6. This policy paper also follows up the event "At the heart of Lisbon: Supporting Innovative SME", which took place in the European Parliament on March 7, 2006. In this executive summary we present the main barriers encountered and some policy recommendations.

Key barriers include a mismatch of SME ideas with open calls, insufficient integration of SMEs in the policy making process, only partially suitable instruments, problems with integrating SMEs in consortia, their weak and often subordinate position in negotiations and project execution as well as some disadvantageous evaluation criteria.

In order to overcome these barriers several **policy recommendations** are suggested:

- SMEs should be better integrated in the policy making process on the EU level, either by funding a High tech SME[1] representation or by encouraging existing SME interest representations to deal with these issues.
- Resources for IST priorities of interest to SMEs should be increased and support for SMEs should be concentrated on these areas in particular.
- Coordination between SME support projects and within the relevant Commission services should be enhanced.
- Suitable instruments for SMEs, such as "Take Up Actions" (see chapter 2.3.2) and "exploratory awards" (see chapter 2.1.1.) should be re-introduced. In FP7, instruments should be rebalanced in favour of STREPs.
- The financial situation of SMEs should be better taken into account by introducing a higher overhead rate, improving their cash flow, clarifying the financial rules and the access to management 7% (see chapter 2.3.8 and 2.6.1.) and by exploring how to facilitate subcontracting to SMEs.
- The integration of SMEs in consortia core teams should be supported. Their position in negotiations should be strengthened by publishing a code of conduct for handling of financial information.
- A SME ombudsman office should be established to tackle any issues arising in project execution. A code of conduct should be established.
- Generally, the rules and procedures should be simplified and innovative ways in which the bureaucratic burden for SMEs could be lightened should be investigated (e.g. subcontracting options).

For a full list of recommendations please turn to the table on page 31-33 (chapter 4). It is hoped that these recommendations can contribute to increased SME participation. This is not only desirable in order to increase competitiveness and growth but also to concretely show that the EU acts in the interest of the SME entrepreneur who is, after all, also a citizen of the Union. In fact, in an era of increased Euroscepticism, demonstrating the benefits of EU actions will be essential.

[1] For the definition of High Tech SMEs see chapter 1.3. below

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The aim and purpose of this paper is to raise awareness of the framework programme SME issues, and not to give legally binding advice. Empirica and EFPConsulting endeavour to deliver a high level service; notwithstanding this, no guarantee can be given on the correctness or completeness of the information provided and neither the European Commission, the Finance-NMS-IST project partners, the EPRI-start partners nor EFPConsulting or empirica are responsible or may be held accountable for any loss suffered as a result of this paper. Any information given does not necessarily reflect the official position of the European Commission.

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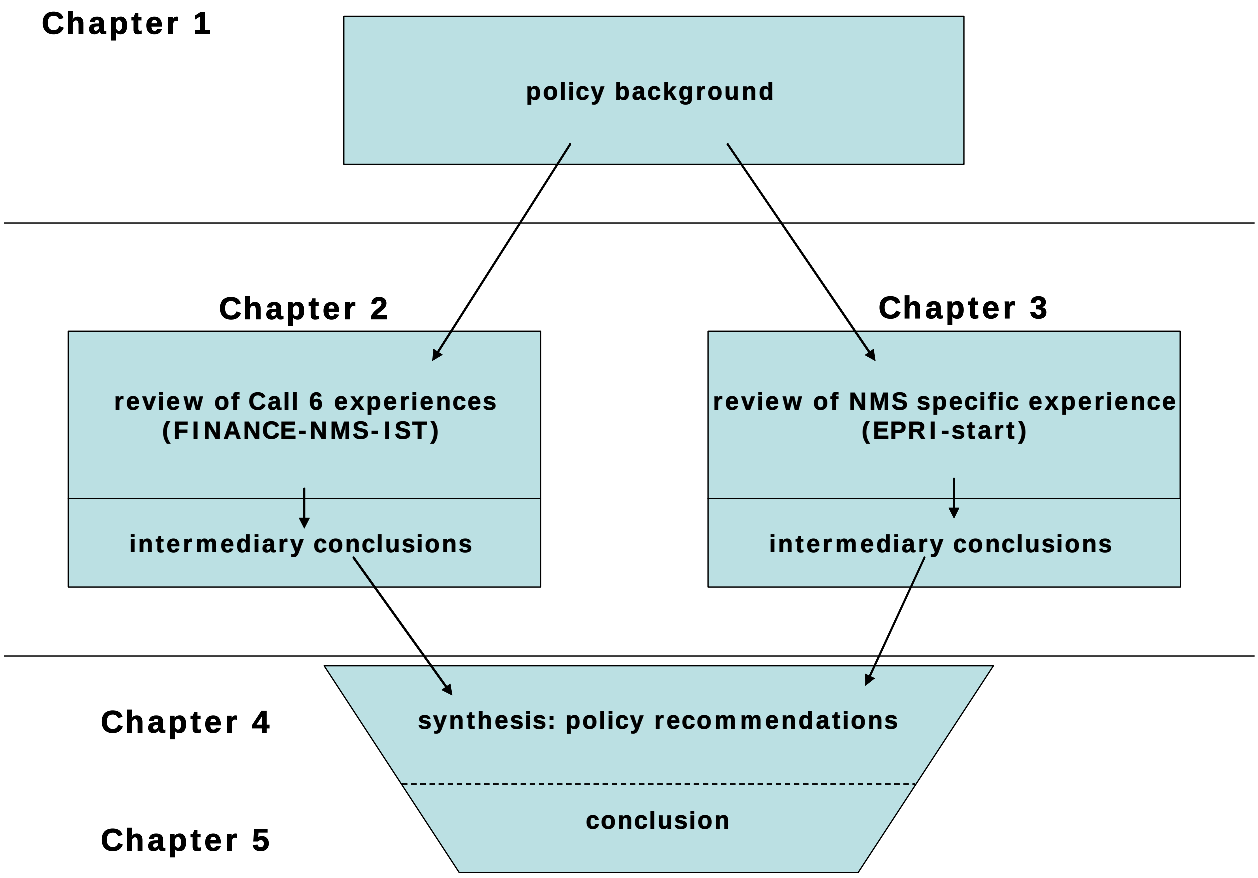
Content

Introduction

This policy paper reviews the experience of SMEs concerning their participation in the Information Society Technologies (IST) programme within the sixth framework programme for research and development (FP6, 2002-2006). We start out by outlining the general policy background in support of SMEs at the EU level, including the support actions foreseen within the framework programme and the IST priority. We will then apply a two-pronged approach with chapter 2 summing up the experience from SME participation in the FP6 calls (FINANCE-NMS-IST project) and chapter three analysing the needs and requirements of SMEs from the new member states in the IST domain (EPRI-start).

These two strands of investigations will be synthesised in chapter 4 which will present concrete recommendations for better SME involvement. Finally, the conclusion points to the role SME support actions can play in reconnecting the EU with its citizens.

The structure of this paper can thus be visualised in the following way:



1. The EU and SMEs

1.1. Overview of the general policy context

Support for SMEs[2] is high on the EU's list of policy priorities. It is recognised that European SMEs make up 99% of all enterprises and provide around 75 million jobs and that they are therefore vital to delivering stronger growth and more and better jobs – two key components of the re-launched **Lisbon agenda**. In the general policy context several documents have explicitly dealt with SME needs. Firstly, the **European Charter for Small Enterprises**[3], approved at the Feira European Council (June 2000) advocates SME support actions in ten key areas and also foresees annual implementation reports from the member states. On the operational level, the **multi-annual programme for enterprise and entrepreneurship** plays an important role in SME support. Furthermore, creating a more SME friendly regulatory and administrative framework is also an important part of the European Commission's **Action Plan for Entrepreneurship** (2004)[4] which includes several key actions to achieve this goal.[5]

In November 2005 Enterprise and Industry Commissioner Verheugen launched a "new, more pragmatic, comprehensive and inclusive SME policy" (Commission Press release)[6] which aims to establish a partnership between the EU and the Member States as well as streamlining EU policy instruments.[7] The **Commission's new approach** will result in a single coherent policy framework based on the "think small first principle" which will be integrated into all policies. Particular emphasis is put on a more systematic consultation and cooperation with SME stakeholders to involve them in the policy making process at an early stage.

The European Commission has established a **SME Envoy**, situated within DG Enterprise and Industry, as an interface with the SME community who integrates SME interests and needs in the European Union policies and initiatives, and provides a single contact point for SME organisations. For 2004 the envoy has published a report summarizing the activities of the European Union benefiting SMEs in a variety of policy areas, such as competition, employment, energy and transport, structural funds, agriculture, enlargement and internationalisation.[8]

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[2]The EU defines an SME as an enterprise with less than 250 employees and an annual turnover of less than 50 million euros.

[3] European Charter for Small Enterprises (2000)
http://europa.eu.int/comm/enterprise//enterprise_policy/charter/index_en.htm

[4] CEC (2004) Action Plan: The European agenda for Entrepreneurship. COM(2004) 70 final
http://europa.eu.int/comm/enterprise//entrepreneurship/promoting_entrepreneurship/doc/com_70_en.pdf

[5] see Entrepreneurship Action Plan. Key Action Sheets. Key Action 6-A - Facilitating SME's business co-operation in the internal market http://europa.eu.int/comm/enterprise//entrepreneurship/action_plan/ap_06a.htm

[6] Commission Press Release (2005) Promoting Growth and Employment: Commission tables new, comprehensive policy for small and medium-sized enterprises. IP/05/1404.
http://europa.eu.int/rapid/pressReleasesAction.do?reference=IP/05/1404&type=HTML&aged=0&language=EN&guiLanguage=en

[7] CEC (2005a) Implementing the Community Lisbon Programme - Modern SME Policy for Growth and Employment. COM 551 final
http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/com/2005/com2005_0551en01.pdf

[8] CEC (2005b) The activities of the European Union for small and medium-sized enterprises (SMEs) SME. Envoy Report. SEC(2005) 170
http://europa.eu.int/comm/enterprise//entrepreneurship/sme_envoy/pdf/sec_2005_170_en.pdf

Additionally, a 2005 update provides an easy to read overview of funding opportunities for European SMEs.[9]

Most recently, SMEs have featured as an important topic of the **European Spring Council 2006**, held during the Austrian EU presidency. The European Council acknowledged the utmost importance of creating a more favourable business climate, especially for SMEs and holds that the "think small first" principle needs to be systematically applied and needs to be come a guideline for all relevant legislation.[10]

Reactions from SME interest representations such as Eurochambres, the SME Union, UEAPME and UNICE have generally been mixed. The emphasis on SMEs is welcomed but it is pointed out that all these papers need to be followed up by concrete actions, such as cutting red tape, improving access to finance, further improving consultation, facilitating SME access to Community programs, simplifying state aid rules and less obstructive taxation.[11]

1.2. Overview of SME support actions in RTD and information technology

Statistics have shown that the gap between the R&D expenditure of SMEs in the EU and the US is steadily growing. Supporting SME RTD has thus become an important priority for Europe. Funds are made available through the LIFE Environment programme (2002-2006), the Intelligent Energy for Europe Programme (2003-2006), the Marco Polo programme (transport, 2003-2010), EUREKA, the European Investment Fund, the Innovation 2010 initiative, the competitive and innovation programme (CIP, 2007-2013) but, most importantly, through the sixth and seventh framework programme for research and development (FP6 and FP7, 2002-2006 and 2007-2013 respectively).

FP6 aimed to fund SMEs with around 2.3 billion Euros from 2002-2006. This sum is made up of about 1. 865 billion (15% of the budget) which are spread across the seven thematic priorities plus 470 million allocated to horizontal research activities. The Commission emphasises that, despite some concern, it has taken steps to integrate SMEs in the **new instruments** designed for FP6, namely Integrated Projects (IPs) and Networks of Excellence (NoE).[12] Still, STREPs, with their clearly

[9] CEC (2005c) European Union Support Programmes for SMEs. An overview of the main funding opportunities available to European SMEs. DG Enterprise and Industry.
http://europa.eu.int/comm/enterprise//entrepreneurship/sme_envoy/pdf/support_programmes_2005_en.pdf
[10] Council of the European Union (2006) Brussels European Council 2324 March 2006 Presidency Conclusions. p.8
http://www.eu2006.at/en/News/Council_Conclusions/2403EuropeanCouncil.pdf
[11] see *inter alia* the following documents
Eurochambres Position Paper (2005) The Commission Communication on a New SME Policy
http://www.eurochambres.be/PDF/pdf_entr/NewSMEPolicyPosition.pdf
SME Union (2006) 10 Million New Jobs until 2010 ("10m+"). Highlights of the SME Union Package.
http://www.sme-union.org/viewdoc.php?LAN=en&FILE=doc&ID=208
UEAPME (2006) European Policy for Crafts and SMEs: Now it's time for concrete actions.
http://www.ueapme.com/docs/pos_papers/2006/060309_SME_Initiative2006.pdf
UNICE (w.d.) Let SMEs grow! European SMEs speak out their need for growth
http://212.3.246.117/Common/GetFile.asp?DocID=14944&logonname=guest&mfd=off
[12] compare European Commission, DG Research (2006) SMEs in FP6. Sharing in Europe's Future.
http://sme.cordis.lu/docs/rec4a100_smesfp6brochure_lr.pdf

defined and focused targets remain the favourite instrument for SMEs. Some assistance is also available through the Marie Curie Transfer of Knowledge (TOK) scheme. As a successor to the earlier CRAFT the cooperative and collaborative research instruments were designed specifically for SMEs in FP6. It supports innovative SMEs with no research facilities of their own.

In previous framework programmes the participation of SMEs in the information society programmes and its predecessor had been relatively high, amounting to about 25% in FP5 (1998-2002)[13]. For FP6, an overall participation rate of 15% for the whole framework programme was intended but, because other sectors were not expected to achieve this rate, it was hoped that the IST programme would compensate with a higher rate of 25%. Chapter 2 reviews the experience of SMEs and discusses the issues and challenges encountered with many of these support actions.

1.3. High tech and low tech SMEs

We define a High Tech SME as being an SME with an in-house R&D capability that can contribute to the technological aspects of a project (concerning both enabling and application technology). On the other hand, we define a Low Tech SME as a potential end user of an application or service which will enable them to develop or optimise their existing business. Low Tech SMEs normally do not have an internal R&D capability. While Low Tech SMEs have a role to play in the definition of end user requirements the focus of the IST programme should be targeting the High Tech community. Hence, high tech SMEs are the priority focus of this paper.

2. Review of the experience from FP6 Calls

This section is based on a paper released by both the Idealist34 and Finance-NMS-IST projects.[14] Although it did not exclusively address SMEs in the NMS, all of the points made are particularly important to them.

The intention in this section is to outline the identified SME problems with respect to successful participation in the IST projects in FP6. They are based on direct feed back, both documented and hearsay as well as several years of handling problems experienced and trying to solve them. During the past year and a half EFPC[15] (as the coordinator of Finance-NMS-IST project and as a sub-contractor to the coordinator of the Idealist34 project, responsible for project Quality Management) has itself, as an SME, experienced many of those problems. To facilitate the description of these issues we break them down into the following categories –

- Financial issues
- Identifying and joining a consortium
- Difficulties directly related to the instruments
- Difficulties in negotiation
- Consortium agreement difficulties
- Project Execution difficulties

[13] For an analysis of SME participation in IST in FP5 see http://www.eutema.com/eutema-Report3-02.pdf
[14] To download the full version see http://www.finance-helpdesk.org/downloads/EFPCPaper6V1.pdf
[15] see http://www.efpconsulting.com/

- Other

The data on which the findings reported in this chapter are based was gathered from the following main sources:

- The Idealist session held in the Hague at IST2004 as well as followup emails after the event.
- Informal and formal feed back from Idealist NCP partners on an ongoing basis.
- Surveys and reports carried out within Idealist project.
- Extensive feedback from questions sent to Finance-helpdesk.
- Feedback received from participants in more than 40 training sessions EFPC has held on FP6 across Europe.
- Information from Gago Committee report[16] on IST Five Year Assessment 1999-2003 that covered the impact of introduction of FP6 IST.
- Information from Marimon report[17] on Evaluation of the effectiveness of the New Instruments of Framework Programme VI.
- EMail feedback on this subject resulting from reaction to our web published book on IST in FP6.
- Personal experience of EFPC as the Israel ISTC delegate in FP5 and FP6 from Israeli SMEs and information from other delegates.
- First hand experience from EFPC involvement in proposals and projects in IST FP6.
- Experience of company staff as evaluators.
- Experience gained from customers related to experiences.
- Information received from partners in the various projects we are involved in - all related to SME participation.

Although it is difficult to assess the number of SMEs covered, the above input synthesises feedback and comments received from thousands of small and medium sized organisations, mainly via third parties.

2.1 Financial difficulties

Several of the following also could be classified under problems related to contract negotiations but we cover them here.

2.1.1 Exploratory awards cancelled

In previous framework programmes RTD Exploratory awards (22,500 Euros in FP5, 45,000 Euros in FP4) were a reasonable way for SMEs to offset the cost of both finding partners and preparing a proposal using experienced third parties. In FP6 the cancellation of these awards, coupled with huge over subscriptions, has resulted in many SMEs considering it too expensive to bid against likelihood of success. It should therefore be explored how exploratory awards could be reinstated.

[16] http://europa.eu.int/comm/dgs/information_society/evaluation/pdf/5_y_a/ist_5ya_final_140105.pdf
[17] http://www.cordis.lu/fp6/instruments_review/

2.1.2 FCF 20% overhead rate

In FP5, companies could claim effectively 80% overhead rate. This was the single biggest stimulation to SME participation as it made it nearly as attractive for SMEs to participate as for larger companies. In FP6 this was basically reduced to 20%.[18] Cleary, some ways and means need to be found to permit a more equitable overhead rate for SMEs in the future.

2.1.3 Lack of guidance/knowledge on use of FC

Given that the initial draft of the Financial Guidelines were only issued when the first call was being closed and due to their complexity and incompleteness, it was extremely difficult for SMEs to realise that most could claim a much larger overhead by using the FC model instead of FCF model. Even today with later drafts of the Financial Guidelines, this is still far from clear to the majority of participants. This has resulted in concerns related to ability of SMEs to co-finance their participation. Many SMEs could in fact justify much higher overheads if they used the FC model, thus minimising or removing the need for explicit co-financing.

2.1.4 Lower budget available for SME R&D

The amount of the gross IST budget available for R&D activities is significantly lower in FP6 than in FP5, also impacting the actual funding available for R&D in SMEs (as opposed to the percentage figures). This is aggravated by several additional factors.

Firstly, the costs of audit certificates could be significant.[19] Furthermore, allowing the first 7% of management costs to be funded at 100% instead of the previous 50% results notionally in an extra 126 MEuro being taken away from R&D activities. Much of this money will go either to the large industrial companies or project management companies, not to SMEs.[20] Finally, Networks of Excellence (NoEs) are mainly funding integration activities, not R&D and NoEs will not fund SMEs. In total more than 500 MEuro of IST funding was NOT available for funding SME R&D.

In this context, the Finance Helpdesk (www.finance-helpdesk.org) was setup to provide assistance to organisations, particularly SMEs in the NMS, with the understanding and interpretation of the financial guidelines. The Finance Helpdesk also provides an anonymous helpline and material complementary to the Commission's.

[18] Actually slightly higher as it applies to more than just labour costs. However, most SME activity in IST is labour costs.

[19] In an IP of say four years and with twenty industrial partners each charging 4,000 Euros per annum for a certificate, this would result in 320,000 Euros going to auditors. Overall in IST such certificates could cost 100 MEuro.

[20] Additionally, because much larger projects require more management, the previous guideline of around 10% for RTD project management could result in IPs devoting say 12% or 15% to such activities. It is estimate that this could cost at least another 100 MEuro – lost to R&D.

2.2 Identifying and joining a consortium

2.2.1 Cannot identify forming key consortia

SMEs, and in particular those that are not involved in currently running projects, have great difficulty in identifying key players who are building consortia in their own interest area. Even if they do, it is generally too late to get in or to play a major part[21].

2.2.2 Domination by major players

By their very nature, one would expect successful consortia to be formed and dominated by the existing major players. The major players have participated in the various bodies (formal and informal) that helped shape the work program and thus justifiably feel that IPs have been instituted for them. However, they may invite in other SMEs that may have some technology they see as potentially strategic.

2.2.3 Being accepted into a consortium

Once a consortium with a reasonable chance of success has been identified, it is a hard sell to have them accept an unknown SME as a partner. Many of these reasons are the same as outlined in the previous section. Major coordinators were in a position to be very selective of SME partners.

2.2.4 Participation in core team

Because of the large number of partners in FP6 IP projects a two tier management structure is normally used. This means that a core team is usually formed which makes the key decisions. It is estimated that only very few independent SMEs were able to gain entry to such core teams. This has frequently led to disadvantageous positions for SMEs (see also 2.2.5 and 2.4. below).

2.2.5 Joining consortia too late to influence

This is similar to the previous point in that SMEs that join late have to conform to the terms and conditions laid down by the core team and in particular the coordinator who sometimes exhibit a 'take it or leave it' attitude. This can vary from being told what man rate they should use to being given a fixed allocation to do an unreasonable amount of work.

It should therefore be assessed how consortia can be induced to take SMEs into their core team, so as to enable the SMEs to take a bigger role in the decision making processes of the project.

[21] Partnering mechanisms such as CORDIS or Idealist are often only used by inexperienced participants.

2.2.6 Contributing to proposal then being dropped

In the initial calls there was a misplaced impression that large IP consortia were being favoured and the funding would be much greater than finally indicated. This resulted in many cases of SMEs writing major parts of a proposal and even being the originators of many of the innovative ideas, only to find them dropped from the proposal at the last minute. Unfortunately it was only rarely that any SMEs were able to get some written assurances on joining a consortium that they would not be dropped.

2.2.7 Advent of European Technology Platforms

On the one hand European Technology Platforms[22] (ETPs) are making a previously unofficial process more transparent. However, they could be seen to be a result of the major European Industrial players not having been put entirely in the driving seat of the Integrated Project instrument. ETPs have a role of effectively defining the Strategic Technological Roadmaps in key research areas. This is equivalent to officially defining major parts of the FP7 work programme. But even in the latter half of FP6, consortia have been formed within some of the initial ETPs. It has proven relatively difficult for SMEs to self fund their active participation in ETP activities.

2.3 Difficulties directly related to the instruments

2.3.1 Four year commitment – too long for SMEs

By nature the new instruments in FP6 (i.e. IPs and NoEs) were planned to last at least four years. Large companies and universities have long term plans and strategies; SMEs on the other hand and especially high tech start ups usually only have a planning horizon of a year to eighteen months. Large companies have current products in the field and current customers. i.e. they have a legacy system problem. This is their strength and their weakness. Whereas the SMEs rarely are weighed down by current products and customer based. Because of this it is difficult for high tech SMEs to be able to commit to a four year program. This is especially so in a sector like IT where there are major technological and market discontinuities on a more frequent basis. While the EPRI-start SME survey did not identify project duration as a major issue, the fact that SMEs need to be flexible and can sometimes ill afford to be “locked in” a particular market for an extended period of time needs to be taken into account.

2.3.2 Further from Market (“Take up” gone)

FP6 IST appears to have become much less flexible than in previous frameworks with respect to closeness to the market. The emphasis appears to be more on longer term enabling technology and has moved away from short term extremely innovative technology and “Take up”.

[22] See www.cordis.lu/technology-platforms

The IST concept of “Take up” projects as used in several past Framework Programs has effectively gone. They were used by High Tech SMEs to stimulate the adoption of their new technology by leading potential users and by Low Tech SMEs to allow them to trial and adopt new major emerging technologies to maintain their competitiveness. The old instrument was funded at 100% additional costs and tailored to this type of activity. In FP6, Take up is now included under “innovation” activities, which is treated as R&D from a funding point of view and thus is funded at the 50% rate. For SMEs, especially those using FCF, this is a major financial change.[23]

In some technical sectors such as mobile applications, the market window can be very close. Thus the emphasis in IPs seems to be driven more by exploitable results in x years rather than innovation beyond the state of the art. This impacts SMEs much more than the larger companies as SMEs do not generally operate on such long time frames. The interest of SMEs in closeness to the market is also visible in their interest in IST priorities, as analysed by the EPRI-start project (e.g. the negligible interest in nanotechnology, see chapter 3.3 below).

2.3.3 “Impact” mandates participation of the major companies

This refers to one of the most problematic evaluation criteria. i.e. SMEs are unlikely to be able to demonstrate convincingly their impact, as stated in the evaluator guidelines for IPs:

> “The proposed project has to be suitably ambitious in terms of its strategic impact on reinforcing competitiveness (including that of SMEs) or on solving societal problems and that the innovation-related activities and exploitation and/or dissemination plans are adequate to ensure optimal use of the project results.”

It is therefore suggested to modify the impact definition in such a way as to take both high tech and low tech SMEs better into account.

2.3.4 Anonymity no longer required in RTD proposals

In previous framework programmes proposers where anonymous in the technical project evaluation (Part B of the proposals), in order to ensure that the evaluators would only take the technical excellency of the project into account (and not the prestige of the consortium partners). Even indirect identification of the participants (e.g. "a major Finish mobile phone manufacturer") was forbidden. The score received for this part made up 60% of the overall marks. Only in part C (management, dissemination, impact and exploitation) were the partners revealed, with evaluators having to finish part B before turning to part C.

This anonymity requirement, applied from 1984-2003, was suddenly removed in FP6 which has made the evaluation less transparent and has the potential of significantly affecting SMEs, who might well encounter bias from evaluators favouring large players. In other words, a level playing field, especially in respect of technical excellence (which may be compromised) can no longer be guaranteed. Hence, ways to reinstate anonymity should be explored, especially in STREPs.

[23] In addition, the newly redefined “demonstration” activity seems to be encroaching on the traditional Take up territory. In the future Take up activities may thus even be reclassified as “demonstration” and therefore receive funding at 35% only.

2.3.5 Legal position and powers of Coordinators

The legal position of coordinators is much stronger in FP6 than they were in RTD projects under FP5 rules. In fact, the position of the coordinator is perceived as being even stronger by many project officers and therefore by participants. SMEs are therefore under increased pressure to open their books to the coordinator and in a weak position to resist unreasonable demands by the coordinator.

2.3.6 SMEs cut back disproportionately prior to submittal

In the compilation of the final proposal when the overall cost is seen to be far too high, frequently it is the SMEs who are asked to cut back but still to do the same work. There are many examples of this from disgruntled SMEs.

2.3.7 SMEs having to be in “at any cost”

High Tech SMEs generally have a very focused market segment. Often they also have one or two major potential competitors and one or two market leading potential customers who are open to innovation. If such customers and/or their competitors are already in the consortium, most such SMEs would in fact join at any cost. Such a position has been exploited by coordinators and should be totally rejected by the Commission.

2.3.8 7% Consortium Management costs reserved

7% of the project costs can be identified as Consortium Management costs and will be paid at 100% to FC and FCF organisations. These costs are those related to managing the project overall and not specific to a particular R&D activity within the project (see 2.1.4 above). However, while the 7% are correctly mainly for the coordinator, some of these funds should also be shared with the other partners for overall management activities such as participation in the management board or attending the plenary. However, most coordinators are reluctant to release any of these 7% funds (see also 2.6.1. below). Project Officers should therefore ensure that the coordinator is fair in sharing access to these funds for project wide management activities.

2.3.9 Evaluation weights, criteria and thresholds

Each evaluation criterion has associated with it a threshold and a weight. Thresholds are extensively used in FP6 to emphasise the importance of the technological excellence in research proposals.

However the final ranking of proposals with respect to funding is dependent on the overall scoring and the IST program in FP6 has never used the criterion weightings to reflect the importance of technical excellence in the final rankings. Thus it often happens that a proposal with a good management plan will score 4 or 4.5 out of five; whereas another proposal which is slightly better technologically may only score 3 or 3.5. Without unitary weightings for everything the former could get funded with the latter not being funded. However, weak management plans can be corrected in negotiations, weak technology cannot. This problem appears to impact newcomers and especially SMEs more than the established players who have a credible management history. It is therefore suggested to increase the weight of the technical evaluation criterion and consider eliminating the Management one entirely.

2.3.10 SMEs in Networks of Excellence

In the launch of FP6 the Commission documentation specifically encouraged SMEs to join the new Networks of Excellence. However, because of their nature NoEs are at best only partially suitable for industry in general and SMEs in particular. There may be some opportunity for SMEs to be involved in Consortium Management or in Technology Transfer activities but not to receive research funding.

2.3.11 Difficulties with the SME program itself

The SME program within FP6 is tangential to the other programs. It suffers from several maladies unique to itself. We shall briefly mention those brought to our attention:

- Innovation Relay Centres

This partially funds a large network of centres whose main goal is to foster technology transfer. IRCs originated many years ago to support SME participation in the Framework Programs and were fully funded. However now they appear to work in the grey area between high tech and low tech SMEs and overlap to a certain extent with the NCP networks. Their technology transfer activities seem peripheral to the Framework Program.

- SME special instruments

There are two types of special instruments for SMes (paralleling to a certain extent STREPs and IPs).[24] Both have some research entity carrying out research on behalf of several SMEs or an SME network. In those projects, the SMEs themselves are unlikely to receive funding - it mostly goes to the research partners. As the research partners are fully funded, the IPR is owned not by them but by the SMEs, who are generally not in a position to market it. This is frequently unclear to SMEs who become involved either as users or as research entities.

[24] See chapter 1.2

2.4 Difficulties in negotiations

2.4.1 SMEs generally not directly involved, cut back in negotiations

Most times SMEs are not directly involved in the negotiations and sometimes are not even being informed prior to meetings in Brussels. Where the coordinator invites part of the consortium to the negotiation meeting, it is invariably the members of the core team and this usually excludes SMEs. Travel to such meetings is not an eligible cost.

It is therefore suggested to develop negotiation guidelines for SMEs in order to increase their knowledge and understanding of the underlying processes and to facilitate their better incorporation in the process.

In the negotiation phase cuts seem to be levied on hard pressed SMEs rather than on the larger players. Actually, the cut backs often take the form of the SME being forced to perform the same work at lower cost or to slash their travel costs. Most SMEs new to the program are at the periphery of Europe and travel costs are proportionally higher. It would therefore be very useful if a way could be found to fund SME travel costs.

2.4.2 Financial checks by competitors – disclosure

Projects, especially IPs, tend to address a particular technological sector and often involve several of the key players and potential users. As a result, often competitors or potential investors (i.e. predators) may participate in the same project. Because of the new FP6 conditions, in particular the "Collective Responsibility" aspect, it is now generally up to the Coordinator to determine the financial viability of its partners. In the past, this check could be done directly with the Commission and sensitive internal financial data and business plans were not disclosed to any of the partners. Not having this "shield" can cause SMEs particularly serious problems.

In order to avoid these problems innovative ways to increase confidentiality need to be found. In this context, clear and unambiguous guidelines on how to handle financial viability checks should be produced.

2.4.3 Improper use of CPF A6

During negotiations, the coordinator has to supply the Commission with a set of CPF forms. Each participant has to fill in the various parts of the A2 form but in the majority of cases (where there is collective responsibility) only the coordinator should need to fill in the A6 form which asks for detailed financial information. However, the instructions are fairly unclear. Thus it turns out that many SME participants are being asked for detailed financial information by the coordinator to pass onto the Commission.

2.4.4 Financial disclosure on CPF A2a

A fairly minor but still significant other CPF problem is that even for those that are able to avoid supplying all the detailed A6 information, the A2 form requires number of employees, turnover and balance sheet totals. This is entirely new. It is used to determine if a partner is an SME or not. In the past it sufficed to state whether you exceed specific figures or not, e.g. number of employees is less than 250. The problem for some SMEs is the same as for the A6 form. The fact that such a change was made shows the lack of understanding of business and commercial sensitivities of SMEs. On checking, it was found that it was this way because of planned changes to the SME definition in January 2005.

Even though revealing such basic facts should not be damaging to SMEs, the EPRI-start project can confirm from its own experience that SMEs are often very reluctant to release even such basic information about themselves. Therefore, if one wants to ensure that SMEs conform to the EU definition of an SME this could be accomplished by quoting the definition on the A2a form, with the organisation having to tick a box to acknowledge that they have read and conform to the EU definition.

2.4.5 SME alleged financial difficulties broadcast to consortium

As financial viability issues are handled more and more by the coordinator, this aspect has in some cases been broadcast to the whole consortium. In some instances detailed financial concerns are being transmitted. However, the mere fact that the Project Officer is delaying the process because of alleged financial problems with a specific partner, can seriously damage the commercial operations of a company, especially as potential or actual customers are involved. Also, such a fact could be used by another participant outside of the project context to blacken a company in a sales situation.

2.4.6 Non transparency & inconsistency in application of ex ante controls

In FP6 negotiations not all Directorates are relying on Coordinators to verify the financial viability of SME partners. However, many insist on financial guarantees for the whole duration of the project not just on the advance. The 15 March 2005 draft of the Financial Guidelines page 120 clearly stated –

> "For instruments with financial collective responsibility at a level that is sufficient to cover the Community financial contribution:
>
> - a full financial viability check is not necessary for all the contractors but must be carried out for the coordinator.
> - the pre-financing cannot exceed 85% of the maximum Community financial contribution."

However, these guidelines were disregarded in many Directorates. High Tech SMEs frequently have minimal sales for their first several years of operation. They do not have positive cash flow. However, many of them receive annual injections of funding from their shareholders. Thus generally there is no major problem in showing that there is coverage on a rolling annual basis for advances. But virtually no such company could or would provide a three or four year financial commitment. In some cases this is even being insisted on as a condition for participation, not just advance payment.

2.4.7 Being dropped as role is financially marginal

This is an effect that has been reported. It was suggested in some cases to drop some partners as their grant is relatively small. The reasons given were that it complicates management and the consortium is too large. While the question how to best approach the issue of cutbacks remains a difficult one, fairness in dealing with all partners needs to be ensured.

2.4.8 Use of transfer of funding as Management Tool

This is a variation of the overall Consortium Agreement problems. We have noted that many coordinators are now wishing to dispense funding in arrears, not because of financial viability concerns, but because they want to use it as a management tool to ensure that partners undertake their assigned work in time. i.e., they will only be paid for work undertaken. Because of the cash flow implications, this impacts SMEs most severely. Again, this is a difficult issue as coordinators argue that they need some management incentives to deal with difficult partners. In fact, the set-up of the SME ombudsman, as proposed below, would be useful to resolve such conflicts.

2.4.9 Across the Board Bank Guarantees

Because of collective responsibility some consortia, especially in IPs have opted to insist on a bank guarantee from every partner with such responsibility prior to every advance payment. This affects mainly SMEs financially as it effectively prevents them from accessing any advance as the banks will hold the money against the guarantee. For large companies the bank would merely subtract it from their current credit line. Also, the possibility of Third party guarantees is often ignored.

2.5 Consortium Agreement Difficulties

There is great concern that after an SME has overcome all the hurdles and obstacles outlined here when it finally comes to signing a Consortium Agreement as mandated by the Commission they will again be put in a take it or leave it position. It is insufficient to publicise some examples of Consortia Agreements via the IPR Help Desk and CORDIS website. They are compiled without the input of SMEs and appear to be organised to protect the interests of major players. In fact there are some major errors in several of the drafts. In particular one recommends paying for first year to partners in three payments with the majority being in arrears, contrary to the intention of the new rules for FP6. It is suggested to produce a more SME friendly CA agreement example.

2.6 Project Execution Difficulties

Now that many projects have been running for several years we are aware of problems highlighted by preparation of Cost Statements.

2.6.1 Access to 7% Management denied for Audit Certificates

Contrary to what is written in the Model Contract and in the Financial Guidelines, some participants are not being permitted to charge their Audit Certificate costs to the Management 7% (see 2.3.8 above).

2.6.2 Cash Flow Difficulties

Despite the explicit intention of the new financial regulation to improve the cash flow for participants, in reality it has made the situation worse for SMEs. This topic has already been alluded to but is a fundamental problem. It relates to the various model Consortium Agreements that to varying extents cover the financial interests of the major players at the expense of the cash flow of the minor players i.e. SMEs.

From a Commission perspective projects should be in positive cash flow right up to the last 15% of the expenditure. However, in order to protect themselves from the collective financial responsibility, the major players are imposing stringent conditions on release of funds to the less financially secure partners. Being paid in arrears; being paid per deliverable or provision of bank guarantees are examples of common practice. All of these instances result in SMEs incurring additional expense in the way of bridging loans or provision of guarantees. Such provision should be chargeable under the 7% Management but not a single instance of the coordinator accepting such an idea has been identified.

2.6.3 Micromanagement by the Commission

Although in general much more autonomy has been given to consortia in FP6, many instances of micromanagement by Commission staff have been noted. This has ranged from demanding extreme technical detail being added to the Description of Work to making unreasonable demands on activities way beyond their planned level of resource.

2.7 Other

2.7.1 Pre-call Activities

One of the key activities is the preparation of the work programme. This is carried out with input from Commission Officials, ISTAG (IST Advisory Group), the IST Committee and Consultation meetings (both formal and informal). The arrival of Technology Platforms is playing an increasing important role in this area (see 2.2.7 above). Unfortunately, High Tech SMEs do not really participate in this process. The main influence is from the major industry players.

2.7.2 Project Ethics and Best Practice, SME ombudsman

In previous Framework Program when Project Officers were of necessity more involved in a hands-on manner, a code of good practice developed. This was partly embodied in the contracts and partly because of the closer involvement of the Project Officers. Likewise a code of good practice should be produced in the new system and an SME ombudsman should be established to deal with any complaints.

2.7.3 Project Officer training

Problems have been encountered at two particular levels:

- Lack of uniformity of interpretation of the rules across Directorates
- Clear lack of knowledge of the rules by individual Project Officers.

There are many instances of different interpretation of the rules by Commission officials. Differences have been noted between Directorate Generals, Directorates, Units and even individual Project Officers. There is no justification for such systematic discrepancies across the Framework Program.

Additionally to general training on the rules of the FP, project officers need to be made aware of specific SMES needs (as described in this document) in order to take them better into account in their daily work.

2.8 Intermediary conclusions

There were many problems created in FP6 that had a negative impact on the participation of SMEs. Many resulted from a clash between the new financial regulations and the intentions of the new instruments in FP6. The remainder were a result of implementation problems which, in retrospect, should have been tested before broad introduction.

These problems were compounded by forcing a "one size fits all" philosophy across all the technical areas. It is clear that the dynamics of diverse industries and technological areas do not lend themselves to a single solution. For example it is difficult to align time frames in the IT market with that of say aeronautics or genomics.

In addition, the needs of high technology SMEs both in regard to technical as well as financial aspects need to be understood by their involvement in the planning and validation of relevant programs.

In the next section we highlight the specific needs of SMEs from the New Member States, who participate in the framework programme for the very first time.

3. Experience of SMEs in the new Member States (EPRI-start)

The EPRI-start project, funded by the European Commission (SSA), is to stimulate the participation of small and medium enterprises from all ten New Member States of the European Union in the European Union's IST Programme. The project comprises an extensive range of activities to both educate innovative IST-oriented enterprises from the New Member States with no or low experiences in participating in the IST programme and at the same time raise the awareness of existing and newly arising consortia in the IST community.

Furthermore, the project also informs relevant political stakeholders, such as the European Commission, SME interest representations and interested MEPs from all political groups. In this context, EPRI-start's European event[25], entitled "At the heart of Lisbon: Supporting Innovative SME" (European Parliament, March 7, 2006) explored both the challenges and the opportunities innovative ICT oriented SMEs encounter. In the framework of the EPRI-start project this policy paper is designed as a follow-up action to this event with the aim of clearly describing the barriers and challenges ICT SMEs encountered and to outline policy recommendations to all interested parties.

In this chapter we focus on the needs of ICT SMEs from the new member states, drawing in particular upon the wealth of experience collected by the 12 EPRI-start project partners during the project. We start by outlining the state of the information society in the new member states in order to provide the general context in which these SMEs operate. The feedback of the SMEs to their local EPRI-start partners is the basis for the overview of challenges and barriers encountered by NMS SME. We also present the preliminary findings of the EPRI-start SME survey, as far as they suggest or support particular policy recommendations. The findings will be be integrated in the policy recommendations at the end of this document

[25] co-organised with the European Grants Advisor (an initiative by Microsoft) and the office of Othmar Karas (MEP, chair of the SME Intergroup). See http://www.epristart.org/epristart/Matrial/Invitation_Supporting_Innovative.pdf

3.1. The Information Society in the New Member States

In order to analyse the needs of ICT SMEs from the new member states we firstly need to take into account the context in which they operate. Research indicates both a gap between the EU15 and the New Member States and among the 10 new members in the development of the information society.[26] While the EU15 generally has more regular internet users than persons who claim never to have used it[27], the situation is reverse in the new member states. Except for Slovakia and Estonia, the proportion of individuals which have never used the internet is higher than the number of regular users.

Another indicator for the gap between the leaders and the laggards in the information society is the percentage of employees that use computers connected to the internet in their normal work routine. For the enlarged European Union of 25 member states the average percentage of persons using computers for work is 35%. 10 EU member states exceed this average and can therefore be regarded as frontrunners - however, as the table shows, only three[28] of them are from the new member states. Particularly noteworthy among the new member states is the very good performance of Slovenian companies – 45% - which places them well above the European average. With figures of above 50%., the Nordic countries are "top of the class" in the EU as a whole.

Figure 1: Percentage of persons employed using computers connected to the Internet in their normal work routine 2003 – 2005: data for NMS only

Frontrunners (use >35%)	Average performers (Use 26% - 35%)	Laggards (use < 25%)
Estonia	Cyprus	Lithuania
Slovenia	Poland	Hungary
(Malta)	Czech Republic	Latvia
	Slovakia	

Source: Eurostat 2005 Community Survey on ICT Usage and e-Commerce in Enterprises (all sectors except financial sector).

Nine member states can be regarded as average performers, among them four new member states. Finally, six member states are laggards, three among them – 50 percent – new member states. Latvia and Hungary come last, with rates of 16% and 17% of the population respectively.

This internal divide among the new member states is also confirmed by other figures: the average percentage of companies with a website, for instance, is 62%. However, only 29% of companies in Latvia have their own website, followed by 40% in Hungary and 41% in Lithuania.[29] A further factor to take into account is the national investment in ICT. For Cyprus, for instance, the lack of national support for

[26] see for instance CEC Staff Working Document (2005) eInclusion revisited: The Local Dimension of the Information Society SEC (2005) 206. http://europa.eu.int/comm/employment_social/news/2005/feb/eincllocal_en.pdf

[27] except in Greece, Spain, Italy and Portugal

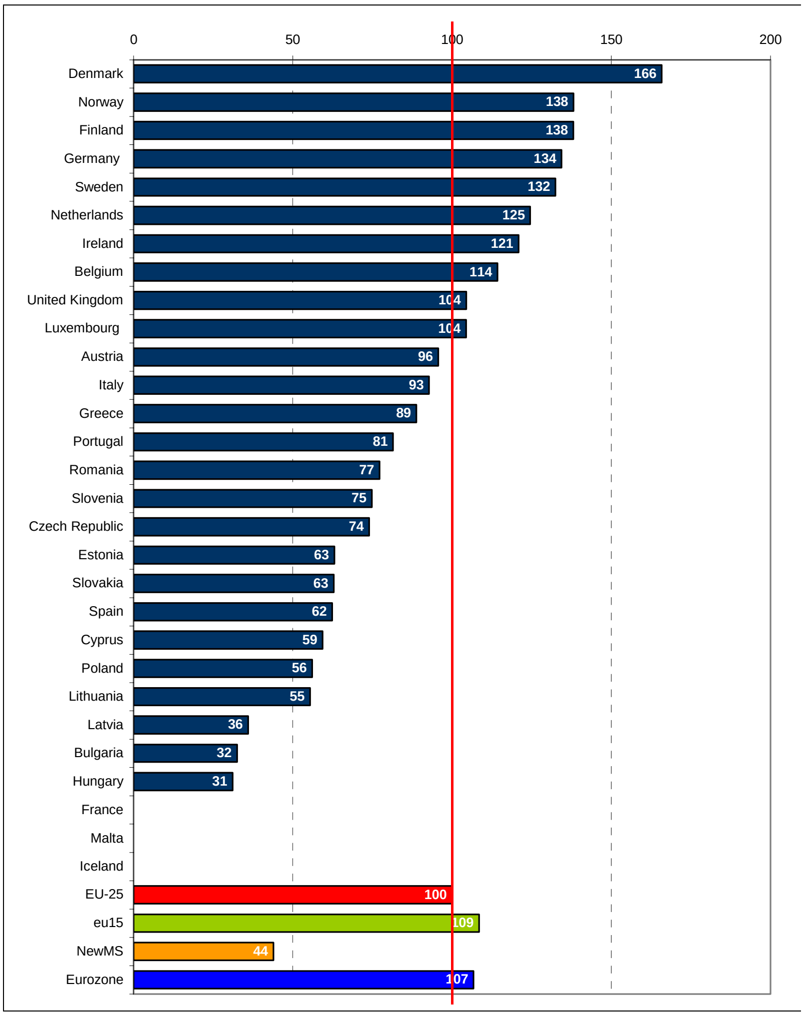
[28] Eurostat has no data on Malta, but Maltese sources indicate that the country is among the forerunners. See http://nso.gov.mt/statdoc/document_file.aspx?id=990

[29] Eurostat (2006) Use of the Internet among individuals and enterprises. Statistics in Focus 12/2006, p.4

ICT investment was identified as a major barrier for SMEs. In fact, if a basic ICT infrastructure is simply not available it makes no sense to deploy sophisticated models for virtual teamwork and the like.

The ICT Adoption & e-Business Index 2005 (IAEB Index) has been developed by the technology and communication research organisation empirica to bring such data in a coherent perspective.[30] This compound index has been developed by taking selected indicators from the areas of basic connectivity and ICT adoption, eCommerce and eBusiness. The following figure presents the overall results of the IAEB index. It clearly shows that the new member states rank clearly below the European average with Slovenia, Czech Republic and Estonia showing the best performance (but still significantly below the European average) while especially Hungary but also Latvia, Lithuania and Poland are seriously lagging behind.

Figure 2: Overall ICT Adoption & eBusiness Index 2005 rankings



Source: Eurostat 2005 Community Survey on ICT Usage and e-Commerce in Enterprises (all sectors except financial sector). Calculations by empirica

[30] see http://www.empirica.biz/empirica/projekte/laufende-details_en.htm#benchpol

Within the process of certification and qualification[31] the EPRI-start project has also assessed the financial viability of NMS IST SMEs. Of the 81 companies willing to disclose their turnover for the last financial year, 54 (66,6%) belong to very small enterprises with a turnover rate of less than 500.000 Euros per annum. Turnover ranged from 25.000 Euros p.a. to 28,7 mio Euros p.a, with 12 companies (15%) having a turnover of more than 2 mio. Euro (see figure 3 below).

Figure 3: Turnover in Mio € per New Member State

Turnover in Mio. €	Czech Republic	Estonia	Hungary	Latvia	Lithuania	Malta	Poland	Slovakia	Slovenia	total
< 0,2	4		3	4	4	3	3		4	25
0,2-0,4	3	2		1	3		1		4	14
0,4-0,6	1	5	2			1	4	1	1	15
0,6-1	2			1					1	4
1-1,5	3	3		1			1		1	9
1,5-2				1			1			2
> 2	1		1	2	1	1	3	2	1	12

Source: EPRI-start (81 SMEs)

As the information society is, generally speaking, less developed in the new member states, ICT SMEs can be expected to struggle more than their Western European counterparts. Furthermore, it needs to be taken into account that many NMS SMEs are participating in the framework programme for the very first time. Therefore, assistance to these small and medium sized enterprises is of particular importance in fostering the growth of the information society in the 10 new countries. In this context, not only is it useful to have actions on the EU level but the EC should also further encourage continuing national investment in ICT, with special emphasis on SMEs. More could also be done to encourage the networking of national policy makers in order to exchange experiences of the challenges and opportunities faced by IST SMEs from the new member states.

3.1.1. High- and low-tech SMEs in the NMS

As already outlined in chapter 1, SMEs can be divided into two technologically distinct categories: High Tech SME's and Low Tech SME's. High Tech SME's often have strong innovative R&D capabilities and can participate in most areas of the IST program while low tech SMEs are usually small manufacturers, retailers and service companies with no in house R&D capability. However, they can still participate in the IST programme as end users for new technology. The EPRI-start project has used the data of 141 SME collected in the EPRIstart partner pool to apportion the SME of the NMS into these two categories.

[31] Within the EPRI-start project SMEs are prepared to participate successfully in the IST and this process is referred to as "qualification" and "certification" For more information see http://www.epristart.org/epristart/content/Project_Description.php.

Figure 4: High- and low-tech SMEs in selected new member states

Technological level of SMEs	Number		Percentage	
	High Tech	Low Tech	High Tech	Low Tech
Cyprus	10	0	100,0%	0,0%
Czech Republic	10	10	50,0%	50,0%
Estonia	5	5	50,0%	50,0%
Hungary	1	6	14,3%	85,7%
Latvia	9	1	90,0%	10,0%
Lithuania	8	0	100,0%	0,0%
Malta	4	7	36,4%	63,6%
Poland	15	18	45,5%	54,5%
Slovakia	16	0	100,0%	0,0%
Slovenia	10	6	62,5%	37,5%
Total	**88**	**53**	**62%**	**37%**

Source: EPRI-start partner estimation, from certified partner pool

The figure shows that in the Czech Republic and in the Estonian sample of SME the high-tech SME equal the low-tech SME (50%). In Hungary, Malta and Poland we can see the domination of low-tech SMEs, while in Latvia and Slovenia the situation is the opposite. However, since the EPRI-start project tried to hand-pick the more advanced SME of the NMS there is an in-built bias in these tables. But the overall distribution shows that there is a place for both categories in the IST programme and that even a considerable number of low tech SMEs are interested in participating.

3.2. Challenges encountered by NMS SMEs

Many EPRI-start project partners in the new member states[32] have reported on the feedback received from their SME target group. In the following a brief overview of the challenges encountered by these NMS SMEs is provided:

- **Cyprus**
  - No experience in project participation
  - Many SMEs not research oriented
  - Difficulties with co-financing

- **Czech Republic**
  - Missing partners.
  - Misunderstood potentials of EU partnerships and projects.
  - A variety of support actions for SMEs are running in the Czech Republic
  - Scepticism towards FP6
  - IPs and even STEPS do not fit SMEs well, they prefer trial activities
  - Difficulties with co-financing

[32] For a list of the local EPRI-start partners see http://www.epristart.org/epristart/content/Partner_List.php. The information below is taken mostly from EPRI-start deliverable D103 and D202.

- Difficult for SMEs to participate in a project which fits their need, high risk associated
- Language barrier

- **Estonia**
  - Many SMEs not R&D oriented
  - Many SMEs feel not ready for international collaboration
  - Most SMEs not ready to co-finance project
  - Negative previous experiences

- **Hungary**
  - ICT market is segmented: the majority is not interested in wider co-operation; the minority has already been engaged in international projects
  - the number of ICT SMEs is lower than stated in the official register
  - SMEs often do not conduct any RTD activities
  - Lack of English is an obstacle
  - Lack of developed Information society and internet access is an obstacle
  - Perceived bureaucracy of EU projects is an obstacle

- **Latvia**
  - Country with the lowest GDP per capita and lowest relative number of SMEs within the EU
  - Due to the economic situation representatives of SME are rather depressed and do not do anything when they cannot see the immediate positive result
  - Low self-esteem

- **Lithuania**
  - SMEs more interested in local than in international projects (due to considerable preparations necessary for the latter)
  - Previous international and project experience lacking
  - Shying away from perceived bureaucracy (filling out numerous documents)

- **Malta**
  - Lack of experience;
  - Lack of a research culture;
  - Low success rate of submitted proposals;
  - Lack of sufficient funds for co-financing (especially for the new instruments);
  - Complexity of programme and application procedures;
  - Mismatch of partner searches to SME objectives

- **Poland**
  - European projects considered not relevant
  - Scepticism concerning applying for EU funds
  - Feeling of Insecurity due to lack of experience in projects
  - SMEs do not feel prepared to participate in European projects, due to the conditions the companies are in

- **Slovakia**
  - English language deficiency

- Too many various agencies have already offered training
- Once the project is accepted, payments are too slow and very late
- Not a lot of consortia requests for partners from Slovakia

- **Slovenia**
  - Majority of SMEs are not R&D orientated and thus have not enough capacities and resources for own research
  - SMEs have little experience in participating in EU projects and are therefore somehow afraid of participating
  - SME project ideas were not suitable for FP6 requirements
  - Lack of congruence between IST program objectives and SME's strategic focus
  - Very few SMEs have an idea about their potential contribution to a European project, their role and position in a consortium and expected outcomes
  - Lack of funds for co-financing

This feedback provides qualitative evidence of problems encountered, some of which are connected to the local context and some of which apply to all the SMEs in the new member states or even concern SMEs in the whole of Europe. The more general barriers include a lack of R&D orientation, a lack of interest in European collaboration and/or scepticism concerning the bureaucracy involved, insufficient funds for co-financing and negative previous experiences or indeed insecurity due to no previous experience.

For further analysis EPRI-start has additionally conducted quantitative research, most notably an analysis of the SMEs in the EPRI-start database and a survey of NMS SMEs, which will be discussed below. The review of the qualitative and quantitative data collected paints a coherent picture of NMS IST SME needs and will be synthesised in the preliminary conclusions.

3.3. FP6 and FP7 IST priorities: NMS SME interests and needs

In the mapping exercise conducted as part of the qualification and certification exercise within EPRI-start, all SMEs in the database have been assigned to relevant IST priorities. In fact we have taken the strategic objectives of IST call 5 which allow measuring the strategic interest of SMEs in the IST priorities supported by this well-endowed call. The following overview is based on the EPRIstart database entries as of April 11, 2006:

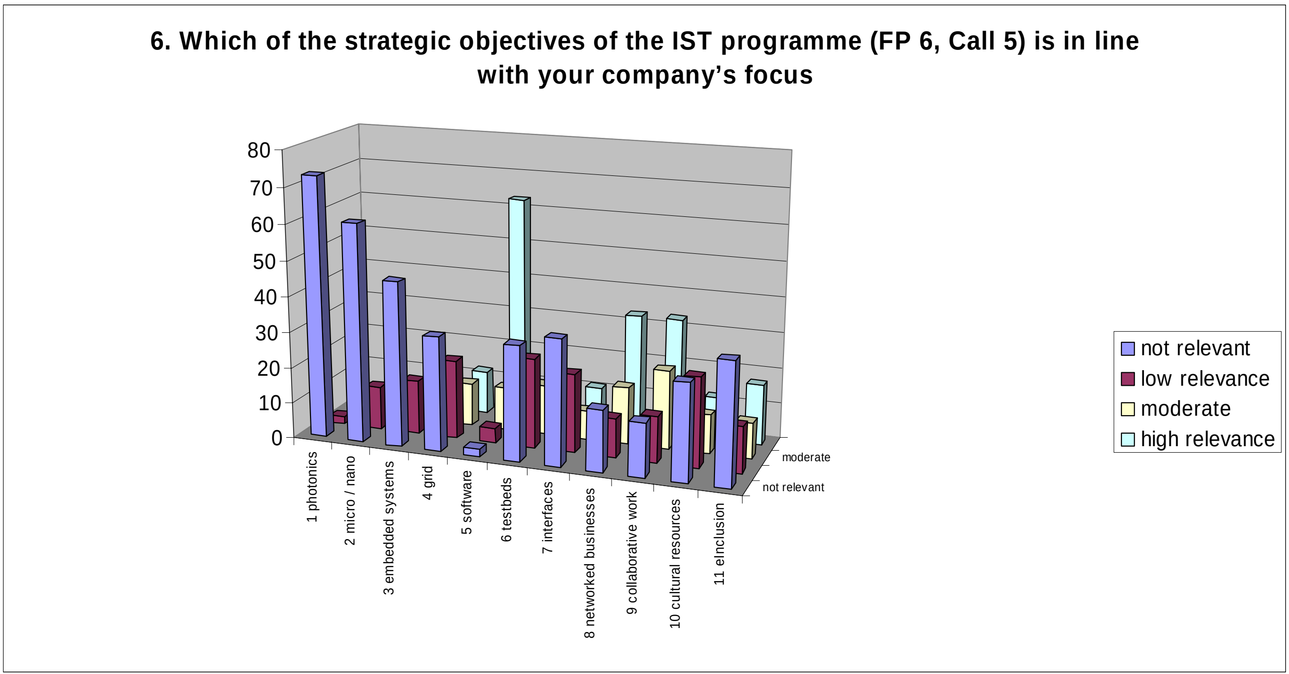
Figure 5: EPRI-start database entries according to IST priorities

IST priorities area (call 5)	SMEs
Access to and preservation of cultural and scientific resources	6
Advanced grid technologies, Systems and Services	18
Collaborative Working Environments	49
eInclusion	30
Embedded systems	11
ICT for Environmental Risk Management	22
ICT for Networked business	60
Micro/nano based sub-systems	4
Multimodal Interfaces	6
Photonic components	2
Research networking testbeds	4
Software and Services	150
Other: FET - simulating emergent properties in complex systems	1

Source: EPRI-start database. Total no. of entries: 270 SMEs (April 11, 2006). SMEs could choose more than one priority.

Cleary, some categories were far more popular with SMEs than others. A large number of SMEs opted for the catch-all classification as providers of software and services (150), followed with a considerable margin by ICT for Networked Business (60) and collaborative working environments (49). On the other side of the spectrums a variety of categories did not fit SME interests very well: FET (1), photonic components (2) as well as research networking test-beds and Micro/nano based sub-systems (4 each) stand out in this regard. This impression was confirmed by an in-depth survey conducted by EPRI-start (see figure 6 below) which again highlights the primary interest of SMEs in software.

Figure 6: IST strategic objectives of interest to SMEs

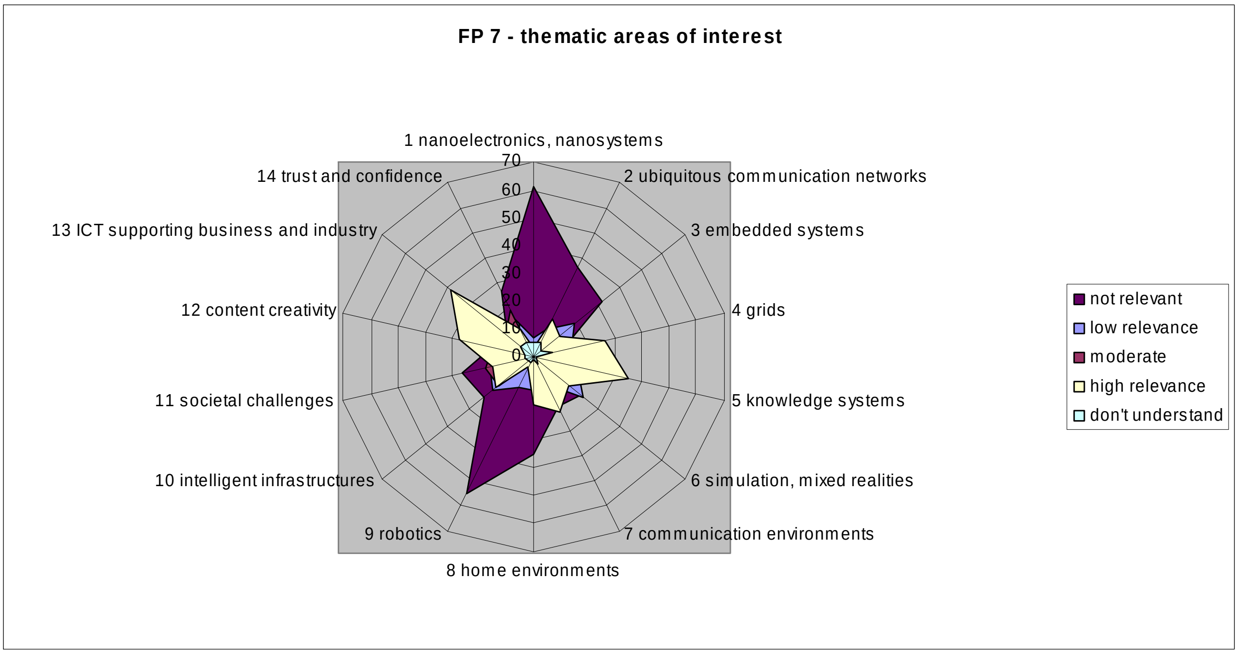


Source: EPRI-start SME Survey (Base: 85 SMEs)

While this evidence clearly suggests that some IST priorities fit SMEs better than others, EPRI-start has also found that many project ideas suggested by SMEs are not covered by existing calls at all, which results in a loss of creative potential as SMEs are not able to obtain funding.

SMEs were also asked which of the activities likely to be addressed in FP7 would be of particular interest to them (figure 7 below). Business and industry, content, knowledge systems and personal communication environments were conceived as being particularly relevant while, again, nano-technology and robotics scored poorly.

Figure 7: SME interest in FP7 activities



Source: EPRI-start SME Survey, preliminary version (Base: 85 SMEs)

The underlying reason for the lack of congruence between the IST priorities and SME needs is that SMEs have up to now not figured prominently in the policy making process where the priorities for the framework programme or the annual work programmes are decided. Currently existing SME organisations usually have few high tech SMEs as members and do not possess the necessary expertise and/or interest to participate in these consultations. In order to better integrate SME needs in the policy formulation process the following actions are suggested:

- EU support to existing SME organisations to devote more resources to High Tech SMEs
- Support the set up of a specialised high tech SME organisation
- Increase the allocation of resources to those priorities of interest to SMEs
- Support the inclusion of SMEs in European Technology Platform[33] with a clear aim of giving them space to be involved in policy formulation

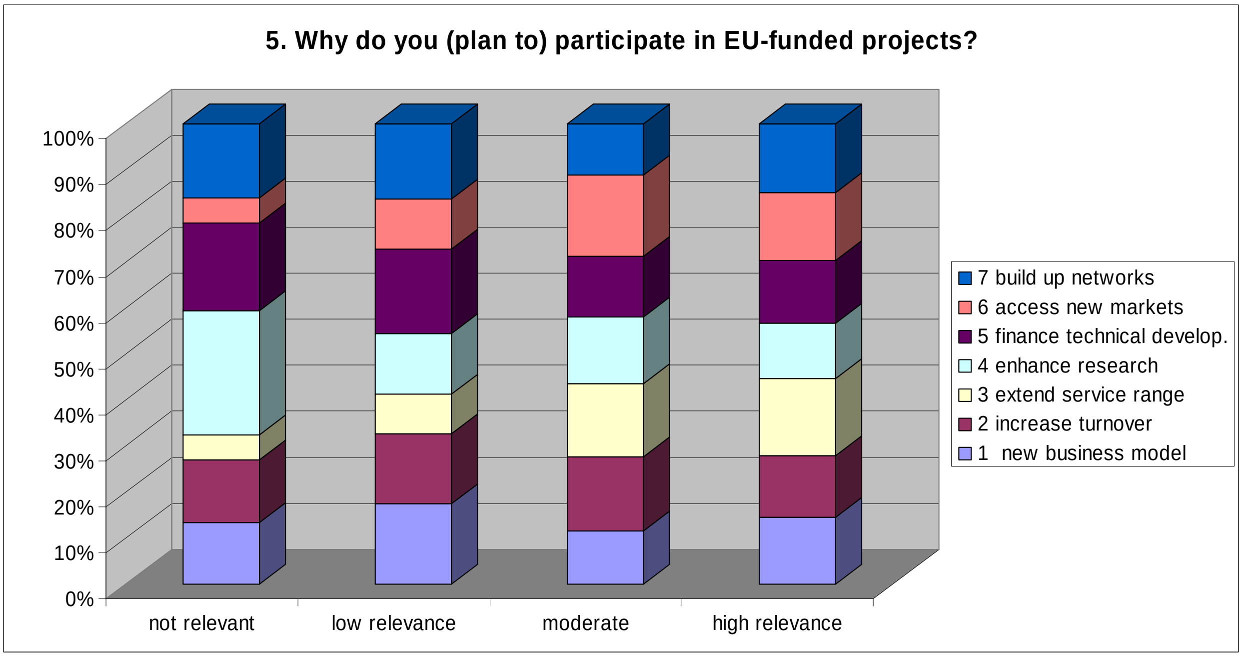
3.4. Survey: NMS SME and the IST Programme

As already mentioned, the EPRI-start project carried out a survey of NMS IST SME needs (conducted in December 2005 and January 2006) in order to further evaluate the needs of IST SMEs from the new member states. This chapter briefly discusses the preliminary findings of this survey, based on the data collected in February 2006 (85 SMEs) in as much as it is clearly relevant to a policy perspective. An in-depth final analysis of the survey will be conducted in a separate deliverable of the ERPI-start project, to be made available on the website.

Nearly half of the SMEs (49%) interviewed were seeking EU funds because corresponding opportunities were not available from other sources, thus indicating the principal importance of EU support in this area. Extending the service range, applying new business models, building up networks and accessing new markets were given as highly relevant reasons for participation. However, when contemplating the reasons considered as not relevant “enhance research” sticks out as being least important to SMEs (see figure 8 below).

[33] Integrating SMEs in technology platforms is the goal of the EPISTEP project (www.epistep.org) although policy aspects do not seem to play a major role in their work.

Figure 8: Reasons for participating in EU funded projects

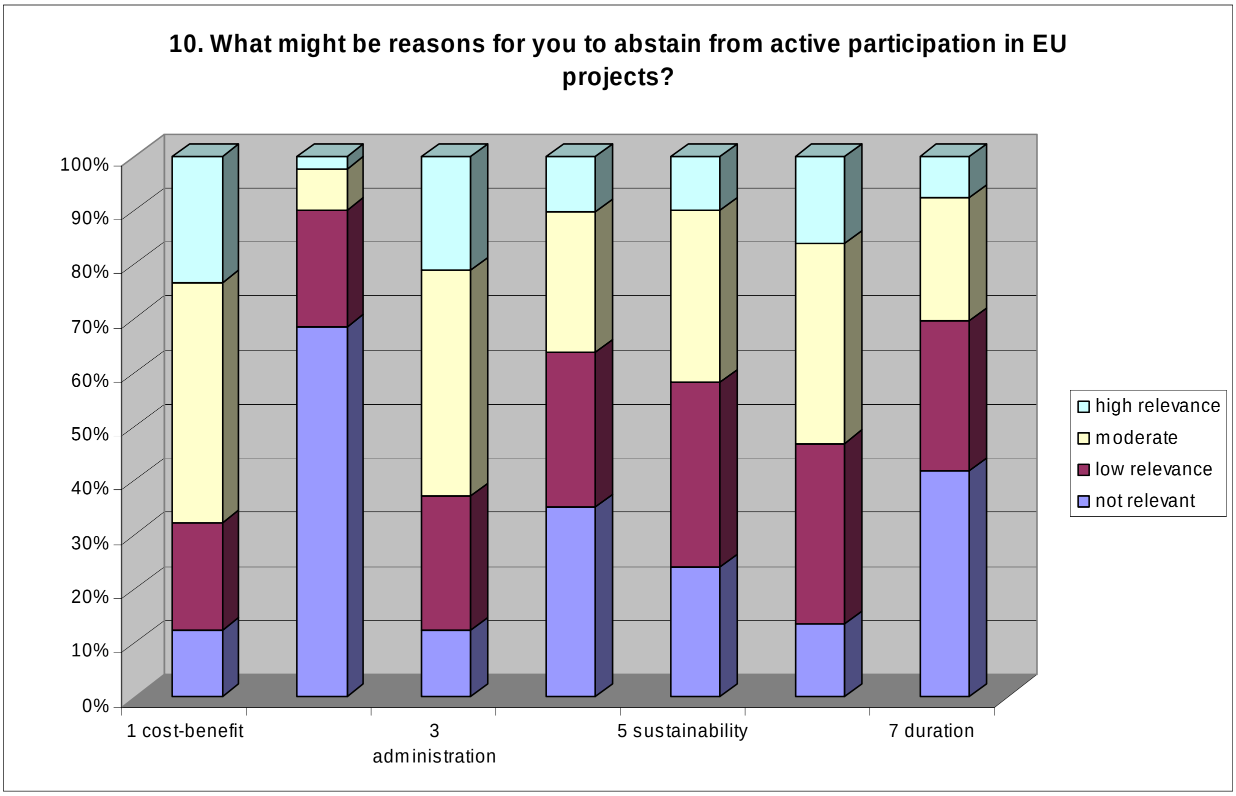


Source: EPRI-start SME Survey, preliminary version (Base: 85 SMEs)

The main reasons given for not submitting a proposal (figure 9)were that there was no suitable idea, no partners or lack of time. Finally, SMEs were asked what their reasons for refusal to participate in EU IST research might have been. Here the key issues were the cost-benefit ratio, the administrative work as well as the EU instruments. Interestingly, and somewhat in contradiction with earlier evidence from the project partners, neither language nor the duration[34] of projects were considered an obstacle.

[34] However,, the research done by EFPC (see 2.3.1 and end of 2.3.2) has found that being locked in a particular market for a considerable time can have significant negative impact on SMEs.

Figure 9: Reasons for not participating in EU funded projects



Source: EPRI-start SME Survey, preliminary version (Base: 85 SMEs)

3.5. Coordination among SME support projects

The EU is currently funding a variety of activities to support SMEs, including a whole range of projects in support of SME participation in the IST domain. These projects cover distinct but frequently overlapping thematic areas and countries as well as conducting similar activities, as is illustrated by the figure below:

Figure 10: Overview of EU funded SME support projects in the field of IST

IST GENERIC

	IDEALIST	STIMULATE	IDEALIST EXTEND	FINANCE NMS IST	IST RESULTS
AWARENESS RAISING	X	X	X	X	
TRAINING / MONITORING				X	
MATCHING / CLUSTERING / AUDITS	X				
PARTNERSEARCH	X		X		
PROPOSAL WRITING		X			
EXPLOITATION / DISSEMINATION					X

GEOGRAPHICALLY TARGETTED

	ADMIRE P	CEEC IST NET	CHINACOOP	EUROPEAN IST	ENGAGE	EPRISTART	GAPFIL	GET IN	GRID@ASIA	INCITE	IST ACADEMIES	IS2WEB	MEDRESSA I & II	MONSOON	SEE-INNOVATION	RECIST	SITE	STAR NET
AWARENESS RAISING		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TRAINING / MONITORING	X			X	X		X	X		X	X	X	X	X	X			X
MATCHING / CLUSTERING / AUDITS					X	X	X			X		X		X	X	X		
PARTNERSEARCH	X	X	X		X	X	X		X	X		X	X	X	X	X	X	
PROPOSAL WRITING				X	X			X		X			X	X		X		
EXPLOITATION / DISSEMINATION			X		X		X		X	X		X	X	X	X	X		

SPECIFIC IST TARGETS

	DETECT IT	6DISS	EASIER	ECTIST	EPISTEP	FASTER	IST-EC2	IST-BONUS	IST-WORLD	LINK	MISMEC	NAOMITEC	PATENT	PRO-NMS	SECURE FORCE
AWARENESS RAISING		X	X	X	X	X	X	X					X	X	X
TRAINING / MONITORING		X	X		X			X						X	X
MATCHING / CLUSTERING / AUDITS	X		X	X	X		X	X		X	X	X	X		X
PARTNERSEARCH			X	X	X	X	X	X	X			X	X	X	X
PROPOSAL WRITING														X	
EXPLOITATION / DISSEMINATION		X	X		X		X	X	X					X	X

Source: IDEAL-IST Website[35]

However, coordination between these projects is currently is very loose or does not exist at all. This can lead to counter productive situations where SMEs are

[35] http://www.ideal-ist.net/networking1.php

approached by several support actions offering similar actions and requesting similar things from the SME (this feedback was received from several SMEs). In order to enhance cooperation EU-funded projects themselves agreed to implement a roadmap at the IST event in 2004,[36] containing the following actions:

- Short term: cross-linking of websites, a list of joint events, a common newsletter, a common partner search facility
- Mid term: a joint Memorandum of Understanding, a unified contact point versus the European Commission, a common web portal (through CORDIS)

An informal review in mid 2005, however, found that only the common partner search facility had been set up (through IDEAL-IST). Reasons for the lack of progress given were the lack of available resources within the structures of currently running projects. Furthermore, there was little pressure from the Commission to strengthen cooperation among the projects, as SME support programmes are managed by different project officers. Where coordination and cooperation exists, these are often the results of personal contacts and not of a coherent and well managed process.

In order to avoid duplication of work and to ensure that synergies are realised, better coordination between EU projects should be a key priority in future SME support. There are several possibilities how this could be achieved:

- Enhance coordination facilities in the Commission itself

This could be realised through increased networking between the Project Officers of the relevant projects as well as establishing an “SME officer” which has as its central task the coordination of the projects as well as coordination with SME actions in other relevant DGs (most notably the SME envoy in DG Enterprise)

- Fund a “meta-project”, with the explicit task of coordinating SME support actions[37]

Such a project could take up several of the measures proposed in the 2004 roadmap, such as common events, targeted dissemination activities with the participation of several projects, a common web portal and others. An important function could also be joint brokering activities towards the SME audience, pooling existing databases to ensure broad and synergetic coverage and avoid duplication of efforts. In this sense, such a coordination project would provide “one face” to the stakeholders, namely the SMEs themselves but also the IST community and the European institutions. In contrast to the currently fragmented approach this could lead to a substantial increase of the effectiveness of SME support actions

[36] see http://europa.eu.int/information_society/istevent/2004/cf/vieweventdetail.cfm?ses_id=534&eventType=networking

[37] as an example see for instance the CISTRANA project, which aims to coordinate national ICT strategies: http://www.cistrana.org/

3.6. Tackling bureaucracy

The (perceived) bureaucracy of participating in EU projects is often considered a key disadvantage by SMEs when considering whether or not to participate in the IST programme. Consequently, thought needs to be given on how the rules and regulations can be simplified, so as to make participation more attractive for SMEs. In fact, efforts to simplify the rules and regulations are currently underway in preparation for FP7. However, until large scale reforms are implemented short solutions means to reduce the bureaucratic strain on SMEs should be explored.

In this context, some EPRI-start project partners have pointed to the benefits of sub-contracting. Through hiring SMEs for specific tasks, the consortium harnesses their expertise and at the same time ensures their timely payment. Furthermore, the sub-contracted SMEs are not involved in the complex rules and procedures governing the relationship between the Commission and the main consortium. On the other hand, however, subcontracted SMEs are also not involved in the set-up, continuous running and final product of the project. It could therefore be argued that subcontracting could be a good way to introduce SMEs to EU project but that, once the SME has gained some experience, it also needs to be ensured that the company does not get stuck in subcontracting but benefits from the opportunity to participate as a full partner in a project as well.

3.7. Preliminary Conclusions

Statistics point to the fact that the information society in the new member states is not yet as developed as in many “old” EU member states. Supporting IST SMEs from the new member states thus takes on a particular importance. In fact, results from the SME survey suggests that EU funding is indeed a vital resource for these SMEs, as nearly half (49%) said that no corresponding national resources were available.

However, significant barriers were also discovered. Most prominently, a number of IST priorities do not fit (NMS) SME needs well. SMEs are primarily interested in software and services but often hyped areas such as micro and nano technologies were of little concern. Additionally, SMEs identified the cost-benefit ratio, the administrative work and the makeup of the EU instruments as the key barriers to participation in the IST programme.

In the next chapter, the findings from the review of SME participation in the IST programme and the EPRI-start findings on NMS SME participation will be synthesised to arrive at a coherent set of recommendations for better SME integration into the next framework programme’s IST priority.

4. Policy Recommendations for FP7

The research presented in this paper so far has already pointed out a variety of barriers, challenges but also possible support mechanisms for better integrating SMEs in the IST programme. In this chapter we weave this detailed tapestry into a coherent overall set of recommendations to be presented to all relevant stakeholders, including policy makers such as the Commission and interested MEPs, SME interest representations and similar EU funded SME support programmes.

The following table structures SME challenges as well as our recommendations on three levels:

- an overall policy level
- a financial level
- an administrative level

While these levels are in practice highly intertwined - for instance the administrative level and the financial level but also the impact of the policy level on the other levels - such a distinction has the advantage of focusing on specific areas and being able to point out concrete support possibilities. Each section has in italics one or several general challenges and corresponding possible solutions with concrete instances and suggested support actions elaborated below.

Finally, in our conclusion we point to the importance of SME support not only for the Lisbon agenda (see introduction) but also for reconnecting the EU to its citizens.

Summary Table: a Multi- level Approach to SME Challenges and Support Actions

Challenges **Overall Policy level**	**Suggested solutions and actions**
Mismatch of SME ideas with open calls - some existing IST priorities do not fit SME needs - for some innovative SME corresponding IST priorities do not exist (hence no funding can be made available) - insufficient interest representation of High Tech SMEs	*Better integration of SMEs in policy design, (e.g. the annual work programme)* - supporting existing SME interest organisations to devote resources to high tech sector and/or - support the set up of specialised high tech SME interest organisations - increase support for those IST priorities of interest to SMEs (software & services in FP6, content in FP7) - support inclusion of SMEs in European Technology Platforms
Not sufficient support for ICT SMEs in the national context	- EC to further encourage national investment in ICT, with special support actions for SMES - EC to encourage networking of national policy makers in and between the EU member states.
Lots of different EU funded SME support projects - with often less than optimal coordination	*ensure better coordination between EU funded SME support actions internally and also with other relevant stakeholder* - enhance central coordination facilities in the Commission, also between DG INFSO and Media and ENTR (e.g. SME Unit in DG INFSO and Media) and/or - fund a “meta project” coordinating SME support actions and integrating other relevant stakeholders (SME organisations, policy makers)
Instruments only partially suitable for SMEs	*Take action to ameliorate the situation, such as*

	- reinstating exploratory awards - reinstating take up actions - rebalance the instruments in favour of STREPs in FP7
Financial level	
SME resources (cash flow) very limited - if problems occur with transfers from the Commission / Coordinator this can have severe repercussions for SMEs	*Several concrete measures* to support SMEs in this regard: - find regulatory means to improve effective cash flow for SMEs - introduce higher overhead rate for SMEs - encourage and clarify use of FC model (instead of FCF) - ensure proper access to management 7% (from coordinator) - consider subcontracting for involving SMEs (100% funding)
Project phases/administrative level (integration, evaluation, negotiation, execution phases)	
SME integration in consortia problematic - Danger of domination of "big players" in consortia	*Several concrete measures* to support SMEs in this regard: - info days when the work programme is issued, not when the call is announced so as to avoid early formation of closed consortia - study how to encourage consortia to take SMEs in their core team - Publish "SME friendly" model consortium agreement
SME position in evaluation can be disadvantageous - "Impact" criterion - Non-technical evaluation criteria (e.g. management plan) - removal of anonymity in technical evaluation	- Modify definition of "impact" to take SMEs better into account - Increase weight of technical evaluation criteria - Re-introduce anonymity
SME position weak in contract negotiations	- publish contract negotiation guidelines for SME participants - publish a code of conduct for handling of financial information

	in negotiations - try to solve collective responsibility guarantees for SMEs centrally
SME position in execution phase can be precarious	- Establish an SME ombudsman office - Publish a code of conduct
General complexity of rules and procedures	*simplify procedures for SMEs in FP7* - long term: reworking of the rules - short term: promote subcontracting as a simple way of SMEs to get involved

5. Conclusion

As we have seen in the introduction, SME support actions are primarily seen in the context of the Lisbon agenda. However, it will be argued here that a second meta-level argument as to why SME support is needed is at least as important.

Events in 2005 have shown that public support for the European Union can no longer be taken for granted. In this context we have to take account of the fact that those in charge of SMEs are not only entrepreneurs, they are also EU citizens. If, as current evidence suggests, they regard EU support structures for SMEs are overly bureaucratic and not fitting their needs, it is only a small step to transfer this impression to the EU as a whole, contributing to a downward trend in popular support and legitimacy of the European Union.

Vice versa, however, this is also a great opportunity for SME support: if one is able to demonstrate convincingly that the European Union is indeed going to considerable lengths in order to enable SMEs participation in its research programmes and access to funding this may contribute to an improved understanding of the added values of the Union to its citizens.

However, this cannot be accomplished by better communication alone. The recent "Plan D" for democracy, dialogue and debate and the Commissions communication strategy[38] need to be complemented by a rigorous drive towards better policy in all domains, demonstrating the benefits of the European Union to the average citizen. In this context, SME support can play its role in fighting the trend towards Euroscepticism. It is in this spirit that the above recommendations for better SME integration into the IST programme have been written.

[38] CEC (2005) The Commission's contribution to the period of reflection and beyond: Plan-D for Democracy, Dialogue and Debate. COM (2005) 494 final
http://europa.eu.int/comm/commission_barroso/wallstrom/pdf/communication_planD_en.pdf
and
CEC (2006) White Paper on a European Communication Policy. COM (2006) 35 final
http://europa.eu.int/comm/communication_white_paper/doc/white_paper_en.pdf