

SME access to European standardization

Enabling small and medium-sized enterprises to achieve greater benefit from standards and from involvement in standardization

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¹ <http://www.confartigianato.it/index.asp>

² <http://www.isso.nl>

Preface

The vital role played by SMEs in the European economy has long been recognized. *The Lisbon Strategy for Jobs and Growth* and subsequent policy initiatives at both the European and national levels have identified Europe's 23 million SMEs as a group that requires special attention. Furthermore, the 2008 Small Business Act for Europe provides support to promote SMEs' 'participation in standardization and improve SMEs' information on, and use of European standards'.

In order to remain relevant to and connected with SMEs, the European standardization system needs to consider how it can utilize new processes, new technologies and existing best practice to respond more fully to the needs of SMEs. Consequently, in June 2008, the General Assemblies of CEN and CENELEC agreed to set up a project to define the key problems faced by SMEs in influencing, accessing and using European standards, and to recommend practical solutions at each step in the process.

The project reviewed the full life-cycle of standardization – from the need/benefit analysis for new standards, through the development process to publication and access to the content of standards and, finally, feedback on the use and deployment of standards.

We have identified a range of issues facing SMEs through direct involvement with them and have been able to match these issues to a range of solutions for use by SMEs, standards bodies and trade associations.

The results of this project are assembled in a 'toolbox'. CEN and CENELEC, as owners of the project, will monitor and manage the implementation of the toolbox over the months ahead.

On a personal level I would like to thank all the members of the steering committee, which included national standards bodies, CENELEC national committees, CEN Management Centre and CENELEC Central Secretariat, European Trade Federations – particularly NORMAPME and Orgalime, and the European Commission and EFTA. Their time, commitment and the enthusiasm which they brought to the project, coupled with their first-hand experiences of issues facing SMEs, were invaluable.

Mike Low

Steering Committee Chairman
CEN/CENELEC SME Access Project

Executive summary

The European standards bodies CEN and CENELEC have asked for recommendations on how to improve access to European standardization for small and medium-sized enterprises (SMEs). The ultimate aim is to provide solutions to improve the value of standardization and standards for SMEs and to reduce their financial impact. The project addresses European standards (including their development) and standardization, and relates these to the business goals of SMEs. SMEs are enterprises with fewer than 250 employees; they form a diverse group, ranging from small crafts to innovative high-tech companies.

In order to prepare this advice, literature was studied, a workshop was organized and the preliminary findings were verified in a survey among the CEN and CENELEC members (National Standards Bodies and National Committees, respectively, both referred to below as 'NSBs')

Barriers for SMEs

Many SMEs could obtain greater benefit from standards and standardization or, indeed, even face problems relating to standards. This situation arises from the inherent weaknesses of many SMEs, in particular their lack of strategic resources. Solutions may focus on these resources, for instance by compensating for a lack of time, money or knowledge. They may also focus on making the 'supply side' of standards and standardization more easily accessible. The third option is to focus on the role of intermediary organizations to bridge the gap between SMEs and the 'standardization world'. Trade associations, in particular, could play this role.

SMEs may face the following sequence of barriers to benefit from standards:

- a) awareness of standards;
- b) awareness of the importance of standards for the SME's own company;
- c) tracing standards;
- d) obtaining standards;
- e) understanding standards;
- f) implementing standards;
- g) evaluating the implementation of standards.

They may, in addition, face the following sequence of barriers to benefit from involvement in standardization:

- a) awareness of the process of standardization;
- b) awareness of the importance of involvement in standardization for the SME's own company;
- c) tracing standardization projects;
- d) becoming involved;
- e) being involved effectively;
- f) evaluation.

A toolbox of 58 solutions

We have developed a set of 58 solutions: first, for greater benefit to be obtained from standards; second, to achieve more benefit from involvement in standardization, and a third category of general solutions to facilitate these aims. They are solutions to the barriers referred to above, and examples of the solutions have been provided. This set of 58 solutions may be seen as a 'toolbox' from which NSBs and trade associations can select the appropriate subset to support SMEs in their country.

A survey among both NSBs and trade associations showed support for almost the entire set of solutions. Many of the proposed solutions are in place already in a substantial number of NSBs; these NSBs then tend to highlight both their relevance and cost-effectiveness. However, the term 'having implemented' does not exclude the possibility of improving this implementation by using the toolbox.

The issue of free standards, often considered to be the core issue for SMEs, does not have a prominent place in our study. The price of standards is no more than one of the issues relating to the barrier to obtaining standards. 'Free' standards are not a reasonable solution given the current business models of most NSBs.

SMEs need support in their immediate environment at national level. The major role, therefore, is to be assumed by the NSBs and the national trade associations. A strong co-ordination between the two is a prerequisite. Of course, the national level depends on efficient functioning at the European level, but the NSBs are not in favour of measures to make further improvements at that level; the trade associations, in particular those for small SMEs, see more importance and cost-effectiveness in these solutions.

Recommendations for CEN and CENELEC

CEN and CENELEC could function as a platform for the exchange of information between NSBs with regard to following up the implementation of the toolbox – for example, which solutions are deployed, which give the best results, in which case, etc.

The system of European standardization is in line for some improvements in its process, in the information relating to the process, and in the quality of CEN/CENELEC support for this process.

Recommendations for NSBs

Most of the 58 solutions apply to NSBs. They can choose the relevant subset by assessing the current situation in their country: Which solutions are in place already and which are not? To which barriers do they relate? Guidance is given to determine national priorities.

In any event, the top priority is to further improve or establish relationships with trade associations, to discuss with them who will take which role, and to provide them with knowledge and materials.

Another priority area would appear to be education in standardization, it being seen as the fundamental starting point for solving the problem of lack of awareness of standards and standardization.

Recommendations for trade associations

In improving the situation for SMEs, the role of trade associations is crucial. Some trade associations are very active in supporting their members in the field of standards and standardization; others have less or no activity. Support by trade associations could start with an analysis of the strengths and weaknesses of the member companies in relation to the opportunities created by, and threats imposed by, standards and standardization. This could be an exercise undertaken by NSBs and trade associations together. Based on that, the trade association can select the proper set of solutions from the list provided in the report. Close co-operation with the relevant NSB is recommended.

1 Introduction

1.1 Reasons for the study

This study stems from a request from the European standards bodies Comité Européen de Normalisation (CEN – European Committee for Standardization) and Comité Européen de Normalisation Electrotechnique (CENELEC – European Committee for Electrotechnical Standardization) to come up with recommendations to the administrative boards of these organizations on how to improve access to European standardization for small and medium-sized enterprises (SMEs). The ultimate aim is to provide solutions to improve the value of standardization and standards for SMEs and to reduce their financial impact.

The project addresses both European standards (including their development) and standardization, and relates these to the business goals of SMEs. Standards may be relevant for almost any SME and, for a smaller number of SMEs, involvement in standardization is also relevant.

Standards have the potential to benefit SMEs, but may also hinder them. In this sense, the core questions for SMEs in relation to standards are:

- How are standards already helping my business?
- How will standards help and/or impact upon my business?
- What standards currently exist and what new standards are in the pipeline?
- How do I obtain access to the text of the standards?

Core questions related to standardization include:

- How can I influence the process?
- How do I use standardization to deliver benefit?
- How do I provide feedback and how is that feedback used to improve the standards?

A more general question is:

- What role can be played by my trade association, professional body, or regulators to assist me?

These questions can also be seen as problem areas. Before the project started, the members of CEN and CENELEC (National Standards Bodies (NSBs) in EU and EFTA countries) were asked to react to these questions and no further problem areas were raised.

The steering committee decided to focus on standards bodies and trade associations at both the national and European level, rather than on governments or other stakeholders (although, of course, these also play an important role).

1.2 The steering committee and research team

A steering committee was formed consisting of:

- Mike Low (BSI, UK) – President
- David Bell (BSI, UK) – Secretary
- Gaston Michaud (CEN)
- Pascal Poupet (CEN)
- Elena Santiago (CENELEC)
- Jean-Paul Vetsuypens (CENELEC)
- Christina Timo (CEI, Italy)
- Lars Flink (SIS, Sweden)
- Rüdiger Marquardt (DIN, Germany)
- Francisco Javier Verdera Marí (AENOR, Spain)
- Alain Millot (AFNOR, France)
- Doede Bakker (Orgalime)
- Loucas Gourtsoyannis (NORMAPME)
- Jean-Pierre Isnard (FIEEC, France)
- Renate Weissenhorn (European Commission).

The research team consisted of:

- Dr Ir Henk J de Vries, Associate Professor of Standardization at Rotterdam School of Management, Erasmus University. Project leader and main author of the report.
- Professor Dr Knut Blind, Professor of Innovation Economics, Technische Universität Berlin. Also head of the Competence Centre 'Regulation and Innovation' of the Fraunhofer Institute, Karlsruhe/Berlin, and Professor of Standardization at Rotterdam School of Management, Erasmus University. His main responsibility is his contribution to the interpretation of the findings.
- Axel Mangelsdorf, PhD candidate at Technische Universität Berlin. Axel made an inventory of the available literature, documented 'best practices' and played a major role in preparing the questionnaire, calculating and presenting the results in graphs.
- Hugo Verheul of Stenden Hogeschool Leeuwarden / Stenden University, Berlin was a partner in an earlier project on removing barriers for participation in standardization.³ In this project, his main contribution is in preparing and moderating the workshop and in analysing its results.
- Jappe van der Zwan is Manager Business Development at Netherlands Standardization Institute NEN. His involvement focuses on a review of past and current projects (Jappe is in charge of the SMEST project⁴), brainstorming with the project leader, and reporting the findings.
- Jago Himperich, student assistant. Support in the project includes increasing the survey response by phoning respondents.

³ Verheul and de Vries, 2003.

⁴ <http://www.smest.eu>

1.3 Basic terms and abbreviations

In this report we use the following basic terms and abbreviations:

SME	Small and medium-sized enterprise, which is an enterprise with fewer than 250 employees. SMEs range from small crafts to innovative high-tech companies.
Trade association	An organization of companies and/or professionals. They may be associations for all companies including SMEs, or organizations exclusively for SMEs. Trade associations may be sector-specific or general. Unless mentioned otherwise, the term should be taken to mean trade associations at the national level.
NSB	National Standards Body (member of CEN), or National Committee (member of CENELEC).
TC	Technical Committee (at the national or European level, responsible for standardization activities in a given area).
SC	Subcommittee of a Technical Committee (with delegated responsibility for a part of the TC's area).
WG	Working Group (temporary committee responsible for the development of a limited number of standards).

1.4 Structure of the report

The question to what extent SMEs do indeed face **problems** has been addressed in other studies; we provide an overview of these in Chapter 2. We will argue that SMEs may face a sequence of barriers to profit from standards and from involvement in standardization. For each of these barriers, solutions may apply. Some of these solutions are already available and are applied in parts in Europe. Additional solutions may need to be developed.

Chapter 3 provides further information about the **research approach**.

Chapter 4 is the core chapter. It lists and describes the **solutions**. For most of the solutions some current examples (where possible, 'best practice' examples) are given and, in some cases, additional suggestions for improvement are presented. Together these constitute a 'toolbox' of solutions that may be applied both by standards bodies and by trade associations at the national and European level.

In a survey of standards bodies and trade associations, **feedback on these solutions** was sought. The results and a short analysis of the feedback are presented in Chapter 5.

Most of the solutions can be implemented by national standards bodies (NSBs) and sometimes also by the European bodies CEN and CENELEC. Some of the solutions address **trade associations** and some 'best practice' examples about their role are collected in Chapter 6. This chapter concludes with a description of how trade associations could support their members in the field of standards and standardization.

Chapter 7 ends with **conclusions**, discussion and recommendations.

2 SMEs and standards – a survey of the literature

2.1 Characteristics of SMEs

The barriers encountered by SMEs in benefiting from standards and participation in standardization are, at least in part, related to some of the general characteristics of SMEs, especially their size, and to the way in which most SMEs are managed. SMEs in general, particularly the smaller ones, have a structural lack of strategic resources. The management of smaller firms is largely involved in the daily operational practice, and there is no time or money available for activities that are not directly related to the primary process. This phenomenon has been investigated extensively, for example in relation to the difficult adoption of cleaner technologies by SMEs. It appears that many SMEs even lagged behind in the adoption of technologies with evident short-term advantages.⁵ Here is a typical reaction of an SME manager: 'I'm behind on production, my client does not like my delivery, my assistant is ill, I had to mend our main machine last night, and my best foreman lost his left finger yesterday. I'm too busy to deal with quality, health or whatever? Oh, environmental issues!'⁶

This quote could also have been about standardization, or indeed any other strategic issues that may be beneficial to the firm but on which SME managers simply lack the time and money to make an informed decision. Because of this lack of strategic resources, SMEs tend to have a short-term view of their business. There is no room for planning for years ahead, as is the case with many larger firms. This means that SMEs rarely anticipate changes in their business environment, such as future regulations or the development of new standards. It also means that SMEs are a notoriously difficult group to target for communication schemes. Most SMEs tend to inform themselves and discuss strategic issues within a limited, stable network of suppliers, trade associations and consultants. It is hard to reach SMEs with relevant information from outside this network; the better way is to use this network.⁷

This characterization applies to the vast majority of SMEs, especially to the 92 per cent that have fewer than 10 employees but nevertheless provide 37 per cent of the employment in Europe. Of course, there are SMEs, especially the medium-sized ones, which really think and act strategically and possess all the necessary resources. These SMEs will also be addressed in this report.

2.2 Introduction to SMEs and standards

Despite the fact that SMEs make up 20 million enterprises in Europe and employ 80 million people, SMEs and especially micro enterprises do not play a leading role in either creating or using standards.⁸ However, standardization allows companies access to the state of the art in technology and thereby strengthens their innovation capacity. It creates a level playing field for the market access of companies and the introduction of new products and services. Moreover, standardization has played an important role in creating a European Single Market. Standards are the most important instrument to enable the interoperability not only of products but also of services.⁹ To this end, SMEs should be encouraged to use standards and participate in the European standardization system.

⁵ Verheul, 1999a; Yakovitz and Hamner, 1993.

⁶ Smith, 1996, p. 135.

⁷ Verheul, 1999b.

⁸ Iffour, 2003; Mason, 2002.

⁹ Bahke and Wende, 2003.

The possible under-representation of SMEs in standardization¹⁰ can be explained by their size and their related financial position. SMEs often do not have the time, personnel or financial resources to engage in standardization. In other words, SMEs evaluate the time spent in creating standards as too long, and they face a higher financial burden compared with large companies in participating in standards-setting committees since the costs of travelling and participation are invariably fixed. The costs of participating in standardization meetings are especially high for SMEs because they often lack the necessary expertise in standardization matters. Moreover, SMEs regard the standardization process as being inflexible.¹¹ With regard to the implementation of standards within the company, SMEs are also at a disadvantage because of their lack of 'absorptive capacity'. This includes a lack of expertise and organizational infrastructures (e.g. standardization units or enterprise knowledge management) that is necessary for a proper implementation of standards.¹² Furthermore, the importance of standards and standardization for companies depends on their size.

Research in the framework of the EU-SME Observatory Research has shown that the issue of standards and standardization is more important for medium-sized enterprises (i.e. 50 to 250 employees) than for micro and small enterprises (i.e. organizations with fewer than 10 employees or between 10 and 49 employees, respectively). In addition, the EU-SME Observatory Research lists the following problems experienced by SMEs with regard to standards and standardization. In order of importance, the problems are:¹³

- lack of information as to which standards have to be met;
- difficulties in applying standards correctly;
- difficulties in obtaining certification of compliance with standards;
- inability to participate in the development of new standards.

In the next two sections we focus on standards and on involvement in standardization, respectively. This study does not address the issue of certification, although it is the case that problems faced by SMEs with regard to standards and conformity assessment are interrelated.¹⁴

2.3 Problems relating to standards

SMEs may lack awareness about standards. The German Commission for Occupational Health and Safety and Standardization (KAN) conducted a survey with the aim of determining how much SMEs know about occupational health and safety standards and the importance attributed to such standards. Among other topics, the ability for companies to obtain information about standards was considered in this survey. The results suggest that 65 per cent of the SMEs are aware of sources from which to obtain information about standards. Consequently, a significant number of SMEs (35 per cent) are not aware of any sources from which to obtain information about standards. Generalizing those survey results to SMEs in all sectors reveals that a large part is not aware about standards and consequently cannot benefit from them.¹⁵

¹⁰ Iffour, 2003; Mason, 2002.

¹¹ Blind and Thum, 2004.

¹² Blind, 2007a.

¹³ European Commission, 2002.

¹⁴ AFNOR, 1995.

¹⁵ Eichener, 2001.

The same report also mentions that the main problem for SMEs is to find relevant information on the standards that exist and whether they are relevant for the company. The more standards there are, the more difficult it is to find them and, therefore, the ease with which new work items are added to the programme is said to cause problems in the market.¹⁶ Related to this is the fact that companies often do not know whether an existing standard is still in effect.¹⁷ Furthermore, SMEs are often unaware of the locations for the distribution of standards documentation.¹⁸ NORMAPME (the European Office of Crafts, Trades and Small and Medium sized Enterprises for Standardization) argues that obtaining useful and relevant information is the biggest problem.¹⁹

A further problem relates to the costs of standards documents, which (as reported by a recent EIM study) is the main problem for SMEs.²⁰ According to a company survey, SMEs are disadvantaged in that they do not subscribe to standards documentation and are therefore not as informed as larger companies are about current standards.²¹ The cost of standards is different in each country: for example, in 2008 the price of the English version of the European standard EN 12622:2001 was €48 in Luxembourg compared to €199 in the UK.²² Despite all of the barriers, SMEs do buy standards; indeed, in Sweden 90 per cent of those who buy standards are SMEs.²³

Surveys have also shown that SMEs face difficulties in understanding the context of the standard.²⁴ Specifically, SMEs find standards documents difficult to understand, too long and they contain many unnecessarily technical terms.²⁵ The number of references to other standards is also a problem. A majority of SMEs say that they have had negative experiences with regard to the interpretation of the content of the standard,²⁶ if standards are not available in the native language, the problems relating to understanding the standard's content increase.²⁷ NORMAPME reports that SMEs would like standards that are clearly arranged, and that contain clear requirements and instructions for implementation.²⁸

Similar arguments are mentioned in a study on e-business standardization in the automotive industry.²⁹ The authors argue that not including SMEs as users of standards in their development leads to standards that are too complicated for SMEs to deal with. The importance of involving users of standards – and especially SMEs – in the standardization process is further emphasized in other publications.³⁰ However, from the automotive case, it can be argued that it is not always desirable to involve users in standardization because it can slow down the process.³¹ Consequently, we see the relation between the content of standards and the standardization process itself. Jakobs *et al.* argue that the involvement of

¹⁶ Bonner and Potter, 2000; Van de Kaa *et al.*, 2007.

¹⁷ Müller *et al.*, 2008.

¹⁸ Müller, 2009.

¹⁹ Iffour, 2003.

²⁰ Van Elk and van der Horst, 2009.

²¹ Müller *et al.*, 2008.

²² VDMA, 2008.

²³ Data from SIS.

²⁴ Gronau, 2008; AFNOR, 1995.

²⁵ Gronau, 2008; Bonner and Potter, 2000; de la Fuente and de Vries, 1995.

²⁶ Van Elk and van der Horst, 2009.

²⁷ Müller, 2009; Karaöz and de Vries, 2009; Teichmann and de Vries, 2009; Teichmann, de Vries and Feilzer, 2007, Teichmann, de Vries and Feilzer, 2006.

²⁸ Iffour, 2003.

²⁹ Gerst and Jakobs, 2005.

³⁰ Jakobs, 2004, 2006; Burrow, 1999; Foray, 1994; Ketchell, 2003.

³¹ Gerst and Jakobs, 2005.

users is important to enable them to contribute ‘user requirements’, but an increase in the number of users need not be a desirable goal per se.³²

The implementation of a standard in a company can also create problems for SMEs. This phase is often the hardest and is also the most costly part of the process. For instance, Müller *et al.* report that SMEs face problems because they lack training opportunities for employees and consequently the personnel is not adequately trained to implement a standard in the company.³³ However, most of the benefits, of course, come from the implementation. Benefits may also come from transfer of knowledge.³⁴

2.4 Problems relating to involvement in standardization

SMEs are said to be under-represented in the standardization process. However, the question is to what extent this is the case and whether under-representation constitutes a problem. Although standardization is often perceived as dominated by large companies, 40 per cent of SMEs are interested in taking part in standardization processes; however, only 12 per cent are currently active.³⁵ Surveys show that 52 per cent of participating companies believe that they have an advantage over those who do not participate.³⁶ Available studies on SMEs in standardization are basically concerned with the question of how SMEs can participate in standards-setting committees as empirical evidence shows that SMEs are under-represented on such committees.³⁷

In the area of electrotechnical standardization in France, 8 per cent of the experts in TCs are from SMEs. However, because large companies tend to participate in more TCs, the percentage of SME companies is higher at 12 per cent. In addition, trade associations representing SMEs also participate.³⁸ In Spain, 99.84 per cent of the companies are SMEs.³⁹ AENOR has 9,821 participants in its TCs representing 3,249 entities, of which 2,782 are companies. The percentage of SMEs is not known and would not provide exact information about SME representation because many SMEs are represented via their trade association. Among the 889 members of AENOR there are 173 professional and industrial/services associations, 539 companies (307 SMEs, 232 large enterprises) and 85 institutions.⁴⁰

The following shows the number of SMEs (the first figure) against the number of large enterprises (the second figure) among the members of some other NSBs:

- CYS (Cyprus): 49 / 16,
- BDS (Bulgaria): 157 / 52,
- Electrosuisse/CES (Switzerland): 1,442 / 50,
- SNV (Switzerland): 450 / 80.⁴¹

In a sample of NEN committees, the proportion of SMEs in the number of participants is 29 per cent, 46 per cent of the participants represent big companies, 8 per cent are from

³² Jakobs, Egyedi and Monteiro, 2004.

³³ Müller *et al.*, 2008.

³⁴ Arzelier, 2002.

³⁵ Iffour, 2003.

³⁶ Iffour, 2003.

³⁷ Blind and Mangelsdorf, 2008; Blind and Nowak, 2008; Jacovides *et al.*, 2008.

³⁸ Data from the Fédération des Industries Électriques, Électrotechniques et de Communication FIEEC.

³⁹ Data from the Spanish National Institute for Statistics INE provided by AENOR.

⁴⁰ Data from AENOR combined with Van Elk and Van der Horst, 2009.

⁴¹ Van Elk and van der Horst, 2009, p. 99.

government and 17 per cent represent other stakeholders.⁴² SIS claims a 70 to 75 per cent SME membership and emphasizes that this is a reasonably good figure. In most countries it is difficult to give percentages because, in general, SMEs are not registered as a separate category and trade associations may represent SMEs, or both SMEs and larger companies. These figures do not provide information on the extent to which non-representation constitutes a problem for SMEs; for some categories of SME, in particular very small ones, it can be argued that representation is not needed. In any event, the situation is open for improvement. The reasons given for under-representation are lack of financial means to participate and lack of human resources.⁴³

Four Dutch case studies on stakeholder involvement in standardization⁴⁴ identified possible barriers for 'weak' stakeholders. It turned out that a 'weak' stakeholder is not a pre-defined category but depends on the standard concerned. In the case of an ergonomic standard, for example, SMEs (ergonomic experts) dominated the scene and the interests of the largest national employers' organization and the largest trade union were ignored. Whether a stakeholder is weak depends on power (size, financial resources and knowledge), legitimacy (e.g. whether some committees want to exclude certain stakeholders) and urgency (i.e. the priority given to standardization by stakeholders). The most frequently found reason for non-involvement was simply being unaware of the activity. If there is awareness, other barriers may then appear. The researchers found 27 barriers against involvement, 'lack of money' being only one of these and not the most important barrier.

Problems related to work in standardization committees are addressed by Jakobs *et al.*⁴⁵ They interviewed senior members of different working groups in the International Organization for Standardization (ISO) and the International Telecommunication Union (ITU) and found that the majority of participants were members from service providers and vendors and not from users of standards. The interviewees also saw that there were sometimes not enough people who were sufficiently prepared and committed to do the work. Similar arguments are discussed by Simons and De Vries.⁴⁶ They critically review the habit of standardization committees to focus on proposals for standards presented by one participant, which eventually leads to a lock-in effect and prevents better solutions from being found.

Egyedi and Toffaletti⁴⁷ discuss an issue ignored in most studies: for a discussion of stakeholder representation the difference between the national and the European or international level is of the utmost importance. They have chosen the atypical case of standardization in the field of social responsibility but nevertheless give an interesting contribution to the discussion on the extent to which the standardization system is 'democratic'.

2.5 Discussion

Many studies are based on survey research. Consequently, most of the answers are the result of the pre-defined questions and there is a danger of non-response bias. For instance, the 65 per cent of SMEs in the KAN study which are said to know where to find standards⁴⁸ is probably too optimistic and in studies about percentages of SMEs that participate in

⁴² Data from NEN, 2009.

⁴³ Müller, 2009.

⁴⁴ De Vries *et al.*, 2004; Verheul and de Vries, 2003.

⁴⁵ Jakobs *et al.*, 2001.

⁴⁶ Simons and de Vries, 2006.

⁴⁷ Egyedi and Toffaletti, 2008.

⁴⁸ Eichener, 2001.

standardization, participating SMEs may be more inclined to complete a questionnaire. Therefore, better research is needed. First, research is necessary to show the real figures about, for instance, the quantity of standards sellers, the number of visits to websites and subscriptions to newsletters, the number of SMEs and other stakeholders that participate in committees.

According to NORMAPME, the NSBs in the Czech Republic, France and Germany have 15,000, 130,000 and 350,000 clients respectively – a small percentage of the total number of companies in these countries, the majority of which are SMEs. In the perception of NORMAPME, this shows enough evidence that SMEs face major problems but this is not necessarily the case; maybe those companies have no need to do anything related to standards. In order to study this aspect, it is necessary to distinguish between different sizes and categories of SME and also to use another form of research in the form of in-depth case studies. Such studies can reveal whether there are real problems or missed opportunities. The limited number of case studies available shows that there are indeed problems related to standards and to involvement in standardization for SMEs and for other stakeholders and that these problems are more diverse than many of the survey research-based studies suggest.⁴⁹ For such a combination of problems, simple solutions are not sufficient. Rather, a set of interrelated solutions is needed. It should be kept in mind that some solutions (for instance, providing standards for free) may cause new problems (for instance, a more expensive process of standards development).

2.6 Conclusions

The majority of SMEs typically lack strategic thinking and lack practical resources (time, money and knowledge) to pay attention to standards and standardization. In particular, the very small SMEs discuss strategic issues with a limited, stable network of suppliers, trade associations and consultants; therefore, the most effective way to support them in the field of standards and standardization is through such organizations. Medium-sized SMEs and, more generally, SMEs for which standards are related to their core business (e.g., companies in the field of testing, certification and some forms of consultancy) have more opportunity to pay attention to standards but face several barriers in doing so. Problems reported relating to standards include lack of awareness, tracing standards, their cost, difficulty in interpreting them and problems with their implementation. For some SMEs, participation in standardization activities might be beneficial but this can create even more problems. Certainly, SMEs are under-represented. Again, awareness is a first issue. Lack of financial and human resources are a main reason but additional barriers apply and, even if an SME does participate, it is not self-evident that this participation will be effective.

⁴⁹ Verheul and de Vries, 2003; Karaöz and de Vries, 2009, Jakobs *et al.*, 2001.

3 Research approach

3.1 Introduction

The aim of the project is to provide solutions to improve the value of standardization and standards for SMEs and to reduce financial impact. These solutions should form a ‘toolbox’ to be used by standards bodies and trade associations at the national and European level. This chapter describes how this solutions toolbox was developed. The following sections describe the three phases of the project:

- Phase 1: Identifying the problems and available solutions
- Phase 2: The preferred solutions
- Phase 3: Testing the solutions

3.2 Phase 1: Identifying the problems and available solutions

NSBs, CEN and CENELEC provided the research team with materials describing the problems for SMEs and solutions to these problems. The research team complemented these with some academic studies and experiences and made an initial analysis of the problems and solutions/best practices. We are aware of the fact that some of the practices described in the literature are no longer in use,⁵⁰ but they can still be a source of inspiration. Based on the literature and our experience in previous research,⁵¹ we have developed a barrier model: a model that shows a sequence of barriers that SMEs may face in obtaining benefit from standards or from involvement in standardization. Below we give a short description of this model. The model, as such, can be seen as a first result of this project and it forms the basic structure for finding solutions to the problems of SMEs.

3.2.1 Barriers against benefiting from standards

SMEs may face a sequence of barriers, each of which may hinder them from benefiting from standards:

1. **Awareness of standards**

An SME may be unaware of the existence of standards in general and of specific standards.

2. **Awareness of the importance of standards for its own enterprise**

An SME may be not aware of the added value of standards for its own enterprise. It might see standards as a necessary evil rather than as a powerful tool to achieve its business objectives.

3. **Tracing standards**

Once an SME knows that standards exist which can be useful for its company, it may then face problems in finding the relevant standards.

⁵⁰ This applies, for instance, to several of the practices described by EIM Business & Policy Research, 2006.

⁵¹ De la Fuente and de Vries, 1995; de Vries, 1999; Verheul and de Vries, 2003; de Vries *et al.*, 2004; Schaap and de Vries, 2004; Willemse, de Vries and Dul, 2006.

4. **Obtaining standards**

Once an SME knows which standards it needs, it should be able to obtain them. The first problem is related to the cost of buying the standard. Second, an SME sometimes discovers that it has bought the wrong standard; a lack of information in the description of the contents of the standard may be the reason for this.

5. **Understanding standards**

Once a standard has been obtained, the SME may then face problems in understanding it as a result of difficult technical content, technical language, non-availability of a version in the national language, too many references to other standards, or lack of information about the context of the standard.

6. **Implementing standards**

SMEs may have difficulties in implementing standards because of the complexity of some standards and lack of knowledge or skills.

7. **Evaluating implementation of standards**

The reason for the implementation of a standard is to achieve business goals. An SME may therefore wish to evaluate such implementation. Is it able to assess the benefits, if any? Can the company learn from this experience for implementing standards in the future? Is there any reason to modify the implementation? Does the company have any feedback for the developers of the standard?

3.2.2 Barriers against benefiting from involvement in standardization

SMEs may also face a sequence of barriers, each of which may hinder them from benefiting from becoming involved in standardization.

1. **Awareness of the process of standardization**

An SME may be aware of standards but may not realise that it can actively participate and influence their development process.

2. **Awareness of the importance of being involved in standardization for their own company**

Once an SME is aware of the fact that it can become actively involved in standardization, it may find it difficult to assess whether its involvement would be worth the investment.

3. **Tracing standardization projects**

Once an SME is aware and interested in the development of standards, it may face problems in tracing the relevant standards development projects.

4. **Becoming involved**

An important reason for non-participation is simply being unaware of the standardization process. Lack of resources (money, time, skills and knowledge) is another reason.

5. **Being involved effectively**

Being involved does not imply that involvement is effective. Other participants may ignore an SME simply because it is an SME. Issues presented by a multinational may carry more weight, consciously or unconsciously. However, research shows that the role of individuals in standardization can be decisive. Is an SME able to delegate a highly-qualified person, in terms of both knowledge and skills, who is able to make the difference? Lack of knowledge and skills is the main problem at this stage.

6. **Evaluating**

Involvement in standardization is a long-term investment. Cost precedes benefits but continuous focus on benefits is needed during the process. Is the SME able to evaluate the effectiveness of its involvement?

7. **Initiating new activities**

An innovative SME may want to initiate a new standardization activity, because it needs standards to make its invention a market success. What happens if a committee has not been appointed yet? Is a new activity feasible? It is quite a barrier to start something from scratch!

3.3 Phase 2: Preferred solutions – developing a toolbox

3.3.1 Introduction

Several solutions may apply to each barrier. Solutions typically also relate to different stakeholders: the SMEs themselves, but also the standardization bodies at the national and European level, the European TCs, SCs and WGs and their national mirror committees (if any), trade associations at the European and national level, the EC and national governments, and possibly other stakeholders. Experience in a previous Dutch standardization awareness project shows that many solutions can be developed, each of which may address one or more of the problems.⁵² It is expected that, owing to differences between countries and business sectors, there will not be one common set of best practices. Therefore, a toolbox of possible solutions is provided and the ‘best’ combination of solutions will probably differ according to the situation.

Core activity in Phase 2 was a two-day workshop in which a group of standardization experts from different EU/EFTA countries discussed the solutions found in Phase 1, but also added new solutions because the information gathered in Phase 1 seemed to be incomplete.

On 16 and 17 March 2009, the workshop was held in the office of NEN, the Netherlands Standardization Institute in Delft. A total number of 15 representatives from SMEs, trade associations, standards bodies and researchers/experts reflected on ways to improve access by SMEs to standards and standardization. A group support system was used to facilitate the discussions.

3.3.2 The objectives and design of the workshop

The workshop’s overall objective was to obtain confirmation and, where needed, amendments and extensions of the problem analysis and the solution directions developed in the earlier steps of the project.

Partial objectives were to:

- test the problem analysis and underlying causes derived from the literature study;
- assess and operationalize the solution directions developed by desk research;
- increase the feasibility and potential for implementation of the solution directions.

The workshop was held over two days, in order to find a balance between achieving in-depth results and enabling invitees to find time to attend. The two-day programme also allowed for

⁵² Verheul and de Vries, 2003; de Vries *et al.*, 2004.

social activity which created an open and constructive atmosphere. The decision was made to designate the first day to SME access to standards utilization and the second day to standardization. This was done because it was recognized that the barriers to standards use are different from those the barriers to the standardization process and potential solution directions are expected to differ as well.

The barrier model served as the conceptual framework to identify and evaluate problem causes and solution directions. During the second day, however, a change was made in the programme: more focus was directed to the measures that different stakeholders could take to improve SME access to standardization, rather than the barrier model alone.

Group Support Systems were used to support the workshop. A Group Support System is a computer-based system used to support intellectual collaborative work. Workshop participants can use the system to have brainstorming sessions and vote on proposals in various ways. The advantages of Group Support Systems in workshops are:

- anonymity, which stimulates participants to be open and avoids unwanted group dynamics (the only visible distinction was between research team members and other participants);
- parallel input, which enables all participants to provide input;
- minutes are stored automatically.

During this workshop, Group Support sessions were alternated with plenary discussions and small group assignments.

3.3.3 Workshop participants

In selecting the participants to be invited, the following principles were adopted:

- representation of the most relevant parties: SMEs, trade associations, national and European standards bodies, and researchers/experts.
- representation of different European regions, because of the differences in industrial structure and the organization of standardization per country, and the length of CEN/CENELEC membership.

We aimed at maximal diversity in participants' backgrounds in order to increase the variety of problem perspectives and suggested solution directions. Annex 1 provides the list of participants. It shows quite an amount of variety but the number of people from small SMEs and their associations was limited and the balanced representation of different European regions could have been better.

3.3.4 Evaluation of the workshop

The causes of limited SME access were discussed extensively, and many additional solution directions were generated. Some specific remarks can be made:

- a) The barrier model appeared to provide a satisfactory framework to interpret causes of lack of access by SMEs. The comments and explanations showed that participants recognized and understood the barriers in the model.

- b) The solution directions provided by the workshop participants showed a broad variety. This is also reflected by the large standard deviation in the voting sessions regarding these solution directions.
- c) Participants' comments showed that the differences between the causes of lack of awareness of standards and of standardization were not well recognized.
- d) The solution directions provided by participants were remarkably broad and fragmented. This is partly because of the broadness of the topics raised and the assignments given. However, it also shows that a shared perspective is lacking and that strategies to improve SME access have not yet been articulated by the stakeholders.
- e) With regard to the process aspect of the workshop, it should be noted that some partners were dissatisfied with the open character of the workshop and the lack of content provided by the researchers to respond to. This latter criticism was related to the limited amount of appropriate literature and materials available; there are still very few systematic descriptions and evaluations of causes and solutions to the issue of SME access. Another explanation is that apparently different expectations had been raised; this might have been communicated more carefully. Nevertheless, the participants were enthusiastic and provided a wealth of information.

3.3.5 Designing solutions

The research team used the results from the workshop to prepare a set of solutions for each barrier, both for standards usage and for involvement in standardization. This was done by analysis and prioritization of solution directions. In addition to solutions for enabling SMEs to benefit from standards and from involvement in standardization, a third category of solution was added: enablers. These relate to the 'back office' of standardization organizations and standardization committees and are relevant both for standards and for standardization.⁵³ The total result is a set of 58 solutions.

3.4 Phase 3: Testing the solutions – establishing the toolbox

The proof of the pudding is in the eating – real testing of proposed solutions is only feasible after implementation of measures. Is this beneficial for SMEs? In this project, testing is limited to asking for feedback about the relevance and feasibility of the proposed solutions. This has been carried out in the form of a survey. We had two target groups for this survey:

- a) The 30 CEN and 30 CENELEC members (in many countries these are the same organizations or a fully integrated organization, the total number of different member bodies is 39).
- b) Trade associations.

⁵³ These stem from an earlier Dutch standardization awareness project (Verheul and de Vries, 2003; de Vries *et al.*, 2004).

Two questionnaires were designed:

- A long version containing questions about all 58 solutions. This was intended for NSBs, and for those trade associations willing to spend the time to complete the long list of questions.
- A short version containing questions about 13 of the 58 solutions, in particular those solutions where trade associations have a direct role. This was intended for trade associations, although in the accompanying letter they were invited to complete the long version instead.

The survey was carried out in the second half of May 2009. An invitation letter was prepared with a link to the online questionnaire.

- a) CEN and CENELEC sent a letter to their members.
- b) NORMAPME (the European Office of Crafts, Trades and Small and Medium-sized Enterprises for Standardisation) sent a letter to its members, approximately 200 national trade associations and some European trade associations for SMEs only.
- c) Orgalime (the European Engineering Industries Association representing the interests of the mechanical, electrical, electronic, metalworking and metal articles industries) also sent a letter to some of its members.
- d) Some NSBs forwarded the letter to sectoral standards bodies or trade associations in their country.
- e) In addition, the participants of the workshop (except, of course, the members of the research team) were invited to complete the questionnaire.

The overall number of distributed letters is not known, it is probably around 300. With the help of phone calls, the research team asked non-replying NSBs to fill out the questionnaire, which significantly helped to increase the response rate. NORMAPME phoned several of its members with the same purpose; the response of their members was lower. Orgalime phoned a few members and was rather successful in convincing members to take the effort to respond.

The two questionnaires were merged in the statistical analysis so that the answers from the short questionnaire are analysed together with the answers from the long version. At the beginning of the questionnaire, the respondents were asked to specify the organization (NSB or trade association) for which they work. With regard to the trade association, we asked the respondents to specify whether the organization is organized nationally or at the European level. Moreover, we asked the respondents to indicate whether they represent SMEs only or large and small companies. Finally, the representatives were asked to indicate whether their organization represents companies from one sector or cross-sectoral.

In total, 69 persons completed the questionnaire; 39 of them were members from different standards bodies, most other people represented trade associations. The standards bodies included 36 CEN/CENELEC members and three sectoral standards bodies. The response rate among CEN and CENELEC members was extremely high: 92 per cent. The other 30 respondents contained 22 sector-specific and four general organizations (four unknown). 18 were organized at the national level and seven at the European level. Twelve trade associations represent SMEs only and 13 both large and small companies. One organization

is a professional organization rather than a 'normal' trade association. Annex 2 shows the composition of the sample.

For each of the 58 solutions, the respondents were asked three elements:

- a) **Importance.** Is this an important solution to the problems for SMEs? Please rate this on a five-point scale (very low importance, low importance, medium importance, high importance and very high importance). Using a five-point Likert scale, the respondents were to specify their level of agreement to a proposed measure. For the subsequent calculations this registered from -2 (= very low importance) to $+2$ (= very high importance). We calculated mean values of the responses and presented those as bar charts. A positive value indicates that the majority of the respondents assess the proposed measure as important and a mean value close to $+2$ can be interpreted as a very important measure. Negative values or values close to 0 are of less importance.
- b) **Cost-effectiveness.** Is this solution cost-effective? Assume you have limited financial resources which you would like to spend in the best way to solve problems for SMEs. You probably prefer inexpensive solutions that you expect to be effective instead of the other extreme: costly solutions which have limited positive impact for SMEs. Please rate the solutions on a five-point scale. Again, a five point Likert scale was used for measuring.
- c) Third, the respondents should indicate **whether the proposed measure already exists in their country**. They could choose between 'yes' and 'no'.

In the last question, respondents were asked to mention measures in place in their country which might be regarded as a 'best practice'.

4 The solutions – a toolbox for standards bodies and trade associations

This chapter provides the list of solutions and a description of these solutions. In addition, for most of these solutions some practical examples are given and, in some cases, additional suggestions for improvement. Section 4.1 addresses solutions which should help SMEs to benefit from standards, Section 4.2 provides solutions which should help them to benefit from involvement in standardization, and section 3 provides ‘enablers’ – solutions that are expected to help SMEs in an indirect way to benefit from standards and/or involvement in standardization.

4.1 Solutions to enable SMEs to benefit from standards

4.1.1 Creating awareness of standards

Awareness of standards can be divided into awareness of standards (and standardization) in general and awareness of specific standards (and standardization processes). Insufficient awareness may originate from:

- (A) the SME and its employees who may lack the relevant knowledge – solution direction: Education
- (B) the ‘standardization world’ which may fail to communicate effectively to SMEs – solution direction: Communication.

(A) Education

Students should be made aware of standards (and standardization) within their education programmes since they are the future SME employees or SME founders.⁵⁴ Experience in Asia shows that two elements are crucial for the integration of standardization in the national education system: (a) a national policy of education in standardization, and (b) long-term availability of staff to support universities and schools by training teachers, developing materials, access standards, terms of exams, etc.⁵⁵

1. NSBs should stimulate and support their national government to develop a national strategy on education for standardization.

Most countries of the Asia Pacific Economic Co-operation (APEC) have a national standardization education strategy. This strategy can be broad (addressing many areas of education) or limited, and it can be detailed (specifying exactly what will be done when and by whom) or global. An empirical study suggests that the more broad and detailed the strategy, the more standardization education activities are in place in a country.⁵⁶

⁵⁴ Kurokawa, 2005; Orgalime, 2009.

⁵⁵ Choi, 2008; de Vries, 2009a ; Choi, de Vries and Kim, 2009.

⁵⁶ Choi, de Vries and Kim, 2009.

Typical elements of a national approach are:⁵⁷

- an inventory of needs for education;
- a steering group in which the most important stakeholders are represented (industry, standards body and government organizations in the field of education);
- an action plan;
- one or more dedicated staff members, available for a sequence of years;
- development of curricula and materials;
- a train-the-teachers programme;
- promotional activities;
- performing education;
- evaluation.

Current practice in Europe shows fragmented activities without a clear strategy. The only exception is Turkey where standardization education is included in the curriculum of secondary schools.

2. NSBs should invest in standardization education by making staff available to support it.

Having a strategy, both at the regional and at the national level, is not enough. The Korean example in standardization education and the case of successful implementation of education in the field of intellectual property rights in the Netherlands show that an investment in terms of time (and therefore money) is needed in the form of dedicated people who actively approach and support schools in implementing and maintaining education. One lady, Danbee Kim, employee of KSA, seems to have been essential for the Korean success.⁵⁸

(B) Communication

Clear and effective communication on standards increases SME awareness.

3. NSBs should develop a communication plan specifically for SMEs.

A survey among 7,600 SMEs shows that trade associations are the most important source of information on standards and standardization.⁵⁹

4. NSBs should use trade associations as their main communication channel to increase SME awareness of standards.

Spain: Important role for trade association

Therefore, NSBs should give general knowledge on standardization to national trade associations. These are experts in their sector and can then give advice in standardization to SMEs. In Spain, this functions over many years. The Asociacion de Fabricantes de Material Electrico (AFME) is a good example. AFME represents manufacturers of low-voltage products in Spain. AFME gives advice about product standards to its members, tries to stimulate their participation in national standardization committees and in European and international committees. Participants in national standardization committees usually share the economic costs of participation in European and international standardization committees.⁶⁰

⁵⁷ Choi, de Vries and Kim, 2009; de Vries, 2009a.

⁵⁸ De Vries, 2009a.

⁵⁹ European Network of Small Business Researchers, 2003.

⁶⁰ Information by AFME.

The Netherlands: Pilots confirm the importance of involvement of trade associations

Pilot projects on informing SMEs demonstrate that the involvement of trade associations is important. The starting point should be perceived SME problems rather than standards. Other intermediary organizations, such as chambers of commerce and innovation centres, may also be supportive.⁶¹

Other current solutions for creating awareness of standards

Czech Republic: Information points for entrepreneurs

The Economic Chamber of the Czech Republic runs 160 information points with information for SMEs, including issues regarding standards. The information points are said to help SMEs to increase the effective use of standards and stimulate their participation in European standardization.⁶²

Slovakia: Government funding for media campaign on standards and standardization

The Ministerstvo Hospodarstva Slovenskej Republiky (Ministry of Economy of the Slovak Republic) has provided money for a media campaign to increase attention for standards among entrepreneurs. The media used included financial newspapers, radio, TV and websites.⁶³

Denmark: Start kit for SMEs

Together with five regional 'growth centres', which support the ability of SMEs to grow, Dansk Standards (Danish Standards Foundation) has developed a 'start kit' for SMEs on standards and standardization. The 'start kit' is web-based and can be accessed directly, via the Dansk Standards' own homepage or via the homepages of the regional growth centres.⁶⁴

Germany: High-level conference to emphasize importance of standards for SMEs

In April 2008, the German Federal Ministry of Economics and Technology (BMWi) and the Federation of German Industries (BDI) hosted the conference 'Erfolgsfaktor Normung' (success with standardization). At the conference, representatives of the German government and industry emphasized the strategic importance of standards and standardization for SMEs. They called for a greater participation of industrial associations in the dissemination of standards-related knowledge and a more intense representation of sectoral interests.⁶⁵

SMEST Project: Tools for increasing SME awareness

The SME Standardization Toolkit (SMEST) project collected a useful set of tools for increasing SME awareness of standardization.⁶⁶

Netherlands: Information for start-up companies via Chambers of Commerce

Start-up companies have to register at the Chamber of Commerce. There they receive an information package about various important matters for entrepreneurs. The Dutch NSB NEN has arranged for an A4 information sheet about standards and standardization to be part of this package.

Netherlands: 'Flagship' standards projects

A 'flagship' standards project functions as an example for standardization in general. NEN uses important and/or prestigious projects as a communication tool to promote standardization and/or its own role. A 'flagship' standards project should be widely recognized without much explanation. It is worth checking to see whether flagship projects for specific sectors can be identified as this improves recognition. For each flagship project an A4 information sheet is prepared which includes the problem, the way it has been solved by developing and implementing a standard, the role of NEN in this project, and some general information about NEN plus contact details.⁶⁷

⁶¹ Van der Kolk and Dijkhuis, 2004.

⁶² EIM Business & Policy Research, 2006, pp. 58–60.

⁶³ EIM Business & Policy Research, 2006, pp. 128–130.

⁶⁴ Information from Danish Standards Foundation.

⁶⁵ Information from DIN.

⁶⁶ <http://www.smest.eu>

⁶⁷ Information from NEN; <http://www.smest.eu>

4.1.2 Creating awareness of the importance of standards for the SME's own company

Awareness of standards should include the ability to see their added value for the SME's own company. SMEs might see standards as a necessary evil rather than as a powerful tool to achieve their business objectives. The latter message should be clearly communicated to SMEs. Success stories may convince SMEs; SMEs themselves then become the ambassadors of standardization.

5. CEN/CENELEC and NSBs should develop or collect successful case studies and make these available on their website.

Belgium: NSB website includes company cases

The Belgian CENELEC member CEB-BEC (Comité Electrotechnique Belge/Belgisch Elektrotechnisch Comité) has spent considerable effort in a complete remake of its website in order to lower barriers to access for SMEs and others. In the perception of CEB-BEC, this communication tool has been proved to provide most results to all stakeholders. The website includes a series of case studies ('witnesses') of SMEs. However, several companies are reluctant to put the cards on the table.⁶⁸

UK: SME Guide to Standards, case videos

BSI has produced a specific SME Guide to Standards.⁶⁹ This guide is freely available in hard copy and online and includes video case studies about SMEs that have gained market advantage by using standards.⁷⁰

Germany: Collecting best practice cases by granting an award

The German Institute for Standardization DIN offers a yearly prize 'Benefits of standardization' for the best entries demonstrating the benefits of standardization. First place winners receive €15,000, second place winners receive €7,500, and €2,500 is given to the third place winners. The competition aims to use practical examples to publicize the broad effects of standards and increase public awareness.⁷¹

6. NSBs should use trade associations as their main communication channel to increase SME awareness of the business importance of standards.

7. NSBs should actively seek additional channels to get in touch with targeted (groups of) SMEs.

France: Standardization knowledge support for innovative companies

In France, 53 'centres of competitiveness' have been established to support innovation and competitiveness. Thanks to an agreement between AFNOR and the Direction Générale des Entreprises (DGE, General Directorate for Enterprises, part of the Ministry of Economy, Industry and Employment), a contact person for standardization is available for each centre of competitiveness. He/she can provide general information about standardization but also, more specifically, can help to identify standards and standardization activities that are important for the companies related to this centre of competitiveness, and for advice on how to relate standardization to the innovation process.⁷² DGE provides financial support (50 per cent) for representation of a centre in standardization activities.

⁶⁸ Information from CEN-BEC, <http://www.ceb-bec.be>

⁶⁹ BSI, 2009;

http://www.bsigroup.com/upload/Standards%20&%20Publications/WhitePapers/SME_Brochure_2009.pdf

⁷⁰ Information from BSI; <http://www.bsigroup.com/en/Standards-and-Publications/How-we-can-help-you/Business/Small-Businesses/Case-studies/>

⁷¹ <http://www.din.de/cmd?level=tpl->

[rubrik&menuid=47563&cmsareaid=47563&menurubricid=57942&cmsrubid=57942&languageid=en](http://www.din.de/cmd?level=tpl-rubrik&menuid=47563&cmsareaid=47563&menurubricid=57942&cmsrubid=57942&languageid=en)

⁷² Information from Bureau de Normalisation des Industries Textile-Habillement (BNITH – French Textile-Apparel Industry Standardization Office)

Portugal: Telephone contacts with companies

The Instituto Português da Qualidade (IPQ, Portuguese Institute for Quality) is the Portuguese NSB. Owners and managers of enterprises are telephoned. This is a type of 'missionary selling of standardization' addressing the benefits of standards and of involvement in standardization. More than 100 companies per year are telephoned.⁷³

UK: Guide for SMEs

BSI has developed a guide for SMEs to explain the importance of standards for their business and includes cases of SMEs.⁷⁴

Norway: Network forums

Eforum I Standard Norge is a Norwegian network of competence related to the NSB. It can be seen as a user community in a particular field of standardization, namely e-business. Its main purpose is to increase awareness of standards and to share know-how. Four sub-themes have been defined: electronic ID, e-business, RFID, and purchase and sales. Measures include a website, support meetings, seminars, consultancy and online publications.⁷⁵

Italy: National conventions

The Comitato Elettrotecnico Italiano (CEI, Italian Electrotechnical Committee) has organized 'Institutional Conventions'. These are events open to anybody interested in standards and safety but targeted at micro enterprises, SMEs and craft enterprises. Speakers emphasize the importance of standards and provide explanation. Part of the funding comes from government.⁷⁶

Italy: Meetings with top managers

CEI also organises meetings with stakeholder top management.⁷⁷

4.1.3 Tracing standards

Once an SME knows that standards exist and can be useful for its company, it should be able to find the relevant standards. Problems are related to:

- (A) the 'supply' side: the way standards are offered – Solution direction: Transparent presentation of available standards;
- (B) the 'demand side': the ability of SME employees to trace standards – Solution direction: Guidance on how to trace relevant standards;
- (C) the need to bridge the supply and demand side; SMEs might need assistance in finding the relevant standards.

(A) Transparent presentation of available standards

Searching for a document often starts with inserting some key words in Google or another search engine. In the top ten of findings for relevant standards for your product, service or process you would probably find the website of your national standards body or the ISO, IEC, CEN or CENELEC website and you may also find one or more standards. But are these standards really relevant? And is your set of standards complete?

⁷³ EIM Business & Policy Research, 2006, pp. 125–127.

⁷⁴ BSI (2005)

⁷⁵ EIM Business & Policy Research, 2006, pp. 112–114; <http://www.eforum.no>

⁷⁶ EIM Business & Policy Research, 2006, pp. 95–99.

⁷⁷ CENELEC, 2009.

8. CEN/CENELEC should ensure that searching for standards via their website is more user-friendly and should add links to NSB websites.

9. NSB websites should provide the opportunity to search for European and international standards in the national language(s) in a user-friendly way.

Several NSBs: Online standards search

Many NSBs provide an online search engine for standards. Examples include CYS, the Cyprus Organization for Standardization⁷⁸ and the Belgian CENELEC member CEB-BEC (Comité Electrotechnique Belge/Belgisch Elektrotechnisch Comité). In the latter case, the data for each standard includes the name of the responsible technical officer, which seems to be a user-friendly addition.⁷⁹

The focus point for tracing standards should be the NSB, because the SME should not be required to know from the start whether it is looking for a European or an international standard.⁸⁰ Moreover, at the national level, the site can be in the local language(s). However, because it is not easy for a small NSB to set up the entire infrastructure, easily accessible sites at the European (and international) level are also important.

10. NSBs should create sets of relevant standards for specific sectors, disciplines and types of organization.

Bulgaria: Sets of standards for specific target groups

BDS, the Bulgarian Institute for Standardization provides sets of standards for interested parties, stakeholders and BDS members in the sphere of construction products, Eurocodes, food industry and food labelling, translation services, and social responsibility.⁸¹

SMEST project: Master document per sector

SMEs need to know what they have to comply with. A master document for a sector in which the combination between regulations, standards, and conformity assessment is explained could be very helpful. In this way SMEs operating in a sector have a clear view of the relevant rules in their specific sector and the way in which they can comply with them.⁸²

Germany: Targeted information about sets of electrotechnical standards

The German Electrotechnical Commission (DKE) co-operates with interested SME associations by publishing information about relevant standards in its specific magazines and newsletters. Moreover, seminars and workshops are organized in close co-operation with these trade associations.⁸³

Netherlands: Electronic newsletters

NEN (Netherlands Standardization Institute, including Netherlands Electrotechnical Commission) offers focused and targeted electronic newsletters to 14 sectors for free. These newsletters (60,000 subscribers with 115,000 subscriptions) announce new standards and report standard-related events.⁸⁴

SMEST project: Annual report for each sector

In order to provide a good overview of all standardization activities in a sector, it is useful to produce an annual report. With this report, SMEs can be easily informed on all important issues. If there are particular aspects of interest, SMEs can request more detailed information. The SMEST website

⁷⁸ CENELEC, 2009.

⁷⁹ Information from CEN-BEC, <http://www.ceb-bec.be>

⁸⁰ Suggestion by SIS.

⁸¹ Information from BDS.

⁸² <http://www.smest.eu/publicaties/3030>

⁸³ Information from DKE.

⁸⁴ Information from NEN; experience research team.

includes possible elements of such an annual report and an example from the German machinery sector.⁸⁵

11. CEN/CENELEC should require TCs to prepare and send a generic press release for new standards to NSBs and trade associations, which can then translate them and inform targeted market segments in their native language.

NSBs and trade associations may lack the specific know-how to prepare such a press release themselves. Moreover, the same activity should take place in many countries. This should be done, therefore, at the European level.

(B) Guidance for SMEs on how to trace relevant standards

Searching using keywords on an NSB website will help to find standards but without any guarantee that the set is complete and that standards or normative documents from other standards-setting organizations are not also relevant. Therefore, a more sophisticated method is needed.

12. A generic method for tracing standards by product or service has been developed. CEN/CENELEC should make this method available on their websites.

The method is available in the Dutch language.⁸⁶ A second document applies the method in the case of standards for elevators.⁸⁷

13. NSBs should make this method available on their websites in their national language.

SMEs might use this method themselves, but this requires some effort. If staff of standards bodies and of trade associations are familiar with the method, they can use it to assist SMEs in finding the relevant standards.

(C) Tracing relevant standards by organizations other than the SME itself

14. Trade associations should inform their members about a set of standards relevant for their sector or discipline.

Spain: Trade association informs its members about standards

Asociación Mutisectoral de Empresas Españolas de Electrónica y Comunicaciones (Asimelec, Spanish association of enterprises in electronics and communication) aims to raise the awareness of the importance of standards by creating work groups for each technical topic to:

- assess information on various standards;
- develop a master document on these standards;
- disseminate this documentation to all enterprises in the sector.⁸⁸

Austria: Trade association informs its members about standards

The Austrian Electrotechnical Association (OVE) educates and informs its members and partner organizations by means of workshops, lectures, books, standards abstracts in its webshop, and monthly news about drafts and new publications.⁸⁹

⁸⁵ <http://www.smest.eu/publicaties/3029>

⁸⁶ De Vries, 2003; <http://www2.nen.nl/getfile?docName=185070>

⁸⁷ De Vries and Willemse, 2003; <http://www2.nen.nl/getfile?docName=185073>

⁸⁸ EIM Business & Policy Research, 2006, pp. 74–79; <http://www.kan.de>

Luxembourg: Creating and maintaining a company-specific standards catalogue

The Institut Luxembourgeois de la Normalisation (ILNAS) and the Centre de Veille Technologique et Normative (CVTN) of the Centre de Recherche Public Henri Tudor, Luxembourg, co-operate in support for SMEs in the field of standardization. Their support includes the development of a company-specific standards catalogue. First, CVTN experts assess the needs of the company. The CVTN searches for the applicable standards. These are listed. A dedicated person in the company is trained to be able to maintain the collection of standards. Standards monitoring is facilitated by IT tools.⁹⁰

15. NSBs should provide advice to trade associations and on request to individual SMEs on the relevant standards that are available for them.

Additional practices

Germany: Commission provides help to find standards

The German Kommission Arbeitsschutz und Normung (KAN, Commission for Occupational Health and Safety and Standardization) developed a search tool for OHS-related standards. The recommendations made by KAN are frequently implemented and produce improvements for SMEs. KAN Reports are published free of charge in German, English and French. Funding for KAN is provided by the German Government and the Association for the Promotion of Occupational Health and Safety in Europe.⁹¹

UK: NSB provides help to find standards

BSI provides a free Customer Service Centre which assists customers in finding the right standard. In addition to the Customer Service Centre, BSI has a Knowledge Centre which includes BSI's library service. The Knowledge Centre has a free helpline which can provide further detailed information about standards.⁹² BSI's services in tracing standards include standards in overseas countries.⁹³

France: NSB provides help to trace standards

AFNOR has developed a collection of forms that help SMEs to identify standards they may have to implement.⁹⁴ A description methodology for standards has been developed and tested on around thirty standards. It offers a rapid and relevant analysis of their content by stressing the essential points. After evaluation it can be made available to professional organizations for their own use.⁹⁵

4.1.4 Obtaining standards

Once an SME knows which standards it needs, it should be able to obtain them. The problems relate to:

- (A) the price of the standards: as long as the NSBs' business models do not allow provision of standards for free, the price may constitute a barrier;
- (B) information about the content of the standard: SMEs sometimes discover that they have bought the wrong standard. It should be possible to see in advance whether the content of the standard is really what the company needs.

⁸⁹ Information from OVE.

⁹⁰ Vidal *et al.*, 2009.

⁹¹ EIM Business & Policy Research, 2006, pp. 125–127.

⁹² <http://www.bsigroup.com/en/Standards-and-Publications/How-we-can-help-you/Custom-er-Services/>

⁹³ <http://www.ribaproductselector.com/company/7358/overview/British-Standards-Institution-Technical-Help-to-Exporters-BSI.aspx>

⁹⁴ EIM Business & Policy Research, 2006, pp. 70–73.

⁹⁵ http://www.smest.eu/dynamics/modules/SFIL0100/view.php?fil_Id=227

(A) Cost of standards

16. NSBs should seek to make (sets of) standards available for SMEs at low cost.

Different countries: Providing SMEs with standards at low cost

Business models of NSBs differ and therefore it is difficult to provide common advice on price issues. A benchmark study on this topic has been carried out by NEN.⁹⁶

- a) For an annual fee of € 58, the Malta Standards Authority provides standards at a reduced rate:
 - a 50 per cent discount on MSA standards;
 - e-mail update on developments in European and international standardization and MSA services;
 - e-mail notification on new and revised drafts and standards issues by subscriber TCs;
 - free drafts of European standards.⁹⁷
- b) Sweden: Standards in relation to legislation are offered at a reduced price.⁹⁸
- c) UK: Members of BSI receive a 50 per cent discount. The membership fee is based on the size of the company. Abstracts of standards are available for free. Standards are sold in packages/bundles at a special price targeted at sectoral organizations, including trade bodies and SME groups.⁹⁹

France: Mandatory standards for free

Mandatory standards in France may be accessed for free (decree dated 19 June 2009).¹⁰⁰

(B) Information relating to the content of the standard

17. NSBs should provide clear information for each standard on their website including a summary, the scope of the standard and a table of contents.

Business Europe and Orgalime: Summaries needed

Business Europe (the European union of national industry federations) and Orgalime (the European Engineering Industries Association representing the interests of the mechanical, electrical, electronic, metalworking and metal articles industries) advise that good quality summaries of standards should be prepared and published free of charge. The summaries should state whether items are covered directly in the standard or if they are covered only by normative references to other standards. In the case of a revision, a short summary of the main changes is required to facilitate uptake by the users.¹⁰¹

Other solutions for obtaining standards

Several countries: Standards in libraries

Several countries provide the opportunity to read standards for free in the relevant NSB office or in, for instance, libraries.¹⁰² In Germany, for example, reading standards for free is possible at 80 locations spread around the country.¹⁰³ During the workshop, this solution achieved a low rating because of the need to travel for access to these standards.

⁹⁶ NEN, 2003.

⁹⁷ EIM Business & Policy Research, 2006, pp. 103–105.

⁹⁸ NEN, 2003. p. 13.

⁹⁹ Information provided by BSI.

¹⁰⁰ Data from the Fédération des Industries Électriques, Électrotechniques et de Communication FIEEC.

¹⁰¹ Business Europe, 2009; Orgalime, 2009.

¹⁰² This was also a suggestion by Handwerkskammer Koblenz.

¹⁰³ Information from DIN.

4.1.5 Understanding standards

Once a standard has been obtained, the SME should be able to understand it. Difficulties in understanding may be related to the 'supply side' of the standards offered by standards bodies in relation to:

- (A) the technical content;
- (B) the technical language;
- (C) the non-availability of a version in the national language;
- (D) references to other standards;
- (E) insufficient information to highlight the differences from the previous version of the standard;
- (F) insufficient information relating to the context of the standard.

On the 'demand' side:

- (G) The SME may lack the knowledge and skills to understand the standard.

(A) Technical content of the standard

Most standards are written by technical experts familiar with the field and the sector(s) in which it is applied. The technical content of the standard should be clear to professionals in the relevant field. The technical requirements should be formulated unambiguously. Some participants, in particular consultants and certification bodies, may have a stake in making standards complicated. Nevertheless, this is the responsibility of the TCs and standards bodies should not intervene.

France: Testing of standards by SME panels

AFNOR's Comité de Concertation Normalisation et Artisanat (CCNA – Committee on Standards and the Craft Sector) intends to form so-called 'resource' enterprise panels to test certain preliminary draft standards, and hence highlight the good practices of small enterprises.¹⁰⁴

(B) Technical language of the standard

18. TCs should use the Guide to write standards taking into account the needs of micro, small and medium enterprises and specificities in standardization which are being developed by CEN/CENELEC BT/WG 208.¹⁰⁵

Another useful document is the IFAN Guide 3 'Guideline to assist members of standards committees in preparing user-oriented European Standards', developed by the International Federation of Standards Users IFAN.¹⁰⁶

¹⁰⁴ http://www.smest.eu/dynamics/modules/SFIL0100/view.php?fil_Id=227

¹⁰⁵ CEN/CENELEC, 2009.

¹⁰⁶ IFAN, 2009.

19. CEN/CENELEC should assess standards of user friendliness for SMEs, in terms of understanding and implementation, using this Guide.

If the threshold for SMEs and their associations to participate is so high that the position of the member countries is dominated by larger companies, then such an assessment may nevertheless force the TC to take the interests of SMEs into account.

(C) National translation of the standard

Translating standards into the national language(s) facilitates understanding. Typically, European standards are prepared in committees in which the majority of the participants do not have English as their mother tongue but nevertheless they prepare a document in English language. The French and German translation may provide feedback on the quality of this document. This document has to be read by the user who wants to implement the standard. He may be able to read English, German or French but it will be easier for him to read in his own language, provided the quality of the translation is good. Typically, a combination of linguistic and technical skills is needed for a good translation.¹⁰⁷ The European Union can provide financial support for national translations of European standards.¹⁰⁸

20. NSBs should encourage the early availability of the national translation of standards.¹⁰⁹

Slovakia: Government funding for translations

The Ministerstvo Hospodárstva Slovenskej Republiky (Ministry of Economy of the Slovak Republic) provides money for professional translations of European and international standards in the Slovak language.¹¹⁰

Netherlands: Translation stimulates standards sales

Analysis of sales of management system standards in the Netherlands shows that, once a translation in the Dutch language becomes available, sales of standards triple.¹¹¹ These data underpin the need for translation: if this is the case in a country where most professional people are able to read English, translation is even more important in countries where professionals have fewer English language skills. In some cases, the cost of translation may be outweighed by additional income from sales of standards.

(D) References to other standards

Cross-references are a particular area of difficulty for users of standards. In the EIM report, 'Access to Standardization',¹¹² it is in the top three of barriers to using standards.

¹⁰⁷ Teichmann, de Vries and Feilzer, 2006.

¹⁰⁸ In this project's Steering Committee, the European Commission's delegate emphasized the importance of this facility. See http://ec.europa.eu/enterprise/contracts-grants/calls-for-proposals/grants-work-programme-2009/index_en.htm

¹⁰⁹ Practices in providing standards in the national language differ for each NSB. Van Elk and van der Horst (2009, p. 45) report that out of 46 NSBs, eight provide translations for all standards, eight for 76–99 per cent of the standards, 2 for 51–75 per cent, 3 for 26–50 per cent and 21 for 1–25 per cent of the standards that have been adopted as national standards.

¹¹⁰ EIM Business & Policy Research, 2006, pp. 128–130.

¹¹¹ Information from NEN.

¹¹² Van Elk and van der Horst, 2009.

21. TCs should create a meta-document for each set of interrelated standards in which the structure of cross-referenced standards is presented. This provides SMEs and other stakeholders with a clear picture of the available standards in a certain area. CEN/CENELEC should make this document available for free on their website.

Such a meta-document would have several additional advantages. First, the TC may discover that its set of standards is not coherent and take appropriate action. Second, NSBs may use it to inform the market in general and buyers of one or more of the applicable standards in particular – the same buyers might also need the other standards.

22. If it is impossible to understand the technical content of a standard without using another standard, CEN/CENELEC should include the reference to this standard in the free information pack relating to that standard.¹¹³

CENELEC has agreed with Normapme that this information should be limited to first order referencing.¹¹⁴

(E) Information relating to differences from the previous version of the standard

Organizations become used to working with a certain version of a standard. In the case of a revision to this standard, it is often unnecessary to study the new version in depth. It is only the changes that are of interest. Having a listing of these changes would make implementation much easier. This might be included in a national foreword or in a separate document.¹¹⁵

(F) Information relating to the context of the standard

A standard provides technical requirements. However, these have been developed to address certain market needs which are not visible in the main text. Some background information about these needs and how the standard addresses these needs makes it easier for SMEs (and other stakeholders) to understand and value the standard. Such information can be included in a 'why document'. This document may also give reasons for the main choices made and may contain possible links to legislation such as European Directives.

23. CEN/CENELEC should require TCs to provide a short 'why-document' with background information about the standard.

Netherlands: Industry use of 'Why documents'

The 'why document' provides underpinning of the most important choices made during the development of a standard. Some multinational process industries established in the Netherlands use this solution for their company standards and see it as a best practice because it helps the reader of the standard to understand its context and content.¹¹⁶ In the company standardization practice, this why document was a separate document connected to the standard; in the practice of a European standard it might be included in the preface.

¹¹³ This solution has been proposed by Müller and Kramer (2008).

¹¹⁴ Information from CENELEC.

¹¹⁵ <http://www.smest.eu/publicaties/3038>; Orgalime, 2009.

¹¹⁶ De Vries, 2006a.

(G) Lack of knowledge and skills

The technical content of the standard should be clear to professionals in the technical field. Nevertheless, additional training could be helpful for some standards.

24. Trade associations should provide information on the content of standards relevant to their members.

UK: Trade association helps to explain standards

Gambica is the British organization representing the interests of companies in the instrumentation, control, automation and laboratory technology industries in the UK. Gambica issues guides to explain standards, for instance a guide on BS-EN 60439-1 *Low-voltage switch gear and control gear assemblies*¹¹⁷ and a guide on *CE marking and technical standardization – Guidelines for application to electrical power drive systems*.¹¹⁸

Austria: Trade association informs its members about standards

The Austrian Electrotechnical Association (OVE) educates and informs its members and partner organizations by means of workshops, lectures, books, standards abstracts in its webshop, and monthly news about drafts and new publications.¹¹⁹

Italy: Trade association helps its members to understand CE marking and related standards

CE marking and related standards confuse many employees. To solve this problem, Confartigianato has established an ad hoc Technical Work Group on CE marking, together with experienced territorial partners who have already been applying the standards for a long time. This group has developed guidelines on three types of product that mainly interest the small craftsman enterprises. See Section 6.1.¹²⁰

Other current solutions for improving the understanding of standards

Luxembourg: 'Downsizing' standards for information security

The Ministère de l'Economie et du Commerce Extérieur (Ministry of the Economy and Foreign Trade) in Luxembourg has set a project with the objective of facilitating the use of standards in the field of information security. This project includes 'downsizing' the standards ISO 27000 – ISO 27009 so that SMEs can implement a 'lighter' version of these standards.¹²¹ Incidentally, this initiative is remarkable since the British standards that were the predecessors of the main standards ISO/IEC 27001 and ISO/IEC 27002 were developed with the needs of SMEs in mind.¹²²

Germany: Helpdesk to help SMEs interpret European standards

DKE, the German CENELEC member, has a helpdesk to help SMEs interpret European standards relating to the electrical installation of buildings.¹²³

France: Guide for SMEs to understand European textile standards

The French Bureau de Normalisation des Industries Textile-Habillement (BNITH – the French Textile-Apparel Industry Standardization Office) has created a guide for SMEs for the use of the main important European textile standards.¹²⁴

¹¹⁷ http://www.gambica.org.uk/web_images/documents/publications/GAMBICA%20Guide%20to%2060439-1%2004Dec06.pdf

¹¹⁸ http://www.gambica.org.uk/web_images//documents/publications/GAMBICA_CE_Marking_Guide_3rd_Edition.pdf

¹¹⁹ Information from OVE.

¹²⁰ Information from Confartigianato; <http://www.confartigianato.it/index.asp>

¹²¹ EIM Business & Policy Research, 2006, pp. 100–102.

¹²² Verheul and de Vries, 2003, p. 21.

¹²³ Information from DKE; CENELEC, 2009.

¹²⁴ Information from BNITH.

Denmark: Campaigns for specific areas of standardization

Dansk Standards (Danish Standards Foundation) organizes campaigns on specific standardization areas rather than on standardization in general. The campaigns focus on encouraging SMEs and other stakeholders to participate in the standardization activities and/or to be helped to use the standards through training sessions or consultancy.¹²⁵

4.1.6 Implementing standards

SMEs may have difficulties with implementation because of the complexity of some standards and lack of resources. This may be solved by providing SMEs with education, training, and assistance so that they have the relevant knowledge and skills to implement the standard.

25. NSBs should provide education and training to SMEs to support their implementation of standards.

Examples include Hungary¹²⁶ and Slovenia.¹²⁷

26. Trade associations should provide education, training and advice to SMEs to support their implementation of standards.

Poland – training on environmental management standards

Związek Rzemiosła Polskiego (ZRP, Polish Craft Association) is a national professional association for craft enterprises and small entrepreneurs (< 50 employees). It provided trainings and seminars on ISO 14001 (environmental management). The National Fund for Environmental Protection and Water Management provided financial support.¹²⁸

27. NSBs should create an online user panel for each standard to enable discussion and interpretation as to how standards can be implemented, how SMEs can make use of the standards, etc.

Other current practices

Croatia – Support for management system standard implementation

Croatia provides support for the implementation of management system standards such as ISO 9001 (quality management), ISO 14001 (environmental management), ISO 17025 (competence of testing and calibration laboratories) and HACCP (food safety management: Hazard Analysis Critical Control Points) in the form of government subsidies for:

- consultancy services or education when implementing a quality management system (up to 75 per cent of the cost, to a maximum of €2,740)
- certification system (to a maximum of €2,055)
- product certification (up to 75 per cent, to a maximum of €5,480)
- buying standards (up to 50 per cent, to a maximum of €2,055).¹²⁹

Poland - Training and Seminars 'Welding standards'

The Instytut Spawalnictwa (Welding Institute) offers various training options to welding personnel of all levels of production, supervision and control of welding processes and products. As a result of this training, knowledge of particular welding standards is being transferred to enterprises represented by the participants of the training courses.¹³⁰

¹²⁵ Information from Danish Standards Foundation.

¹²⁶ EIM Business & Policy Research, 2006, pp. 86–89.

¹²⁷ EIM Business & Policy Research, 2006, pp. 131–132.

¹²⁸ EIM Business & Policy Research, 2006, pp. 120–124.

¹²⁹ EIM Business & Policy Research, 2006, pp. 52–57.

¹³⁰ EIM Business & Policy Research, 2006, pp. 115–119.

4.1.7 Evaluating the implementation of standards

The reason for SMEs to implement standards is to achieve business goals. Subsequently they may wish to evaluate the implementation. Does it provide the intended benefits? Can the company learn from this for the future implementation of standards? Is there any reason to modify the implementation process? Does the company have any feedback for the developers of the standard?

(A) Evaluating the implementation of the standard – lessons for future implementation

There is no need for specific recommendations for CEN/CENELEC and NSBs.

(B) Evaluating the implementation of the standard – feedback for a revision of the standard

Evaluation in terms of understanding and implementing standards should be used as a source of information for a revision.

28. NSBs should systematically evaluate standards by sending a questionnaire to buyers of standards.

29. NSBs should include a short text in each standard explaining how to give feedback on standards and how to participate in standardization work.

Swedish suggestion: Questionnaire in each standard

Elstandard (SEK – Swedish Electrotechnical Commission) suggests that each standard should contain a simple survey for obtaining the buyer's reaction after obtaining the standard.¹³¹ Of course, this only makes sense if the responsible national TC is prepared to use the feedback to better prepare for a possible revision of the standard.

4.2 Solutions to enable SMEs to benefit from involvement in standardization

4.2.1 Creating awareness of the process of standardization

SMEs may be aware of standards in general but may not realize that they can actively participate and influence the development process of standards. Again, this problem has two sides:

- (A) The SME and its employees: the main solution is to increase awareness by education.
- (B) The 'standardization world' which may fail in sending out signals to SMEs in order to create awareness: the main solution to increase awareness by communication.

These solutions have already been addressed above.

CENELEC: Brochure on SME involvement

CENELEC prepared a brochure explaining how SMEs can become involved in European standardization.¹³² NSBs might use it as an example for providing a brochure and/or web pages at the

¹³¹ Comment by SEK.

¹³² CENELEC, 2009.

national level. It would be even more convincing if trade associations were to provide such information targeted at the specific situation of their members.

JISC: Support for holding international meetings in the country

An ISO/IEC/CEN/CENELEC meeting organized in the country may be a reason for additional publicity about the importance of involvement in European/international standardization. It broadcasts that national stakeholders are interested. Additionally, an event could be organized in which non-participants can meet both national and international participants.¹³³

4.2.2 Creating awareness of the importance of involvement in standardization for the SME's own company

Once SMEs are aware of the fact that they can become actively involved in standardization, they may experience difficulty in assessing whether their involvement would be worth the investment.

30. NSBs should communicate the main reasons for becoming actively involved in standardization (e.g. to influence the content of the standard, to receive information, to establish contacts with interested partners).

Several countries: Courses

Some NSBs (DIN, BS) provide courses which address the benefits of participation in standards development, the relation to legislation, and the benefits of the implementation of standards in the company.

Denmark: Campaigns for specific areas of standardization

Dansk Standards (Danish Standards Foundation) organizes campaigns on specific standardization areas rather than on standardization in general. The campaigns focus on encouraging SMEs and other stakeholders to participate in standardization activities and/or to be helped to use the standards through training sessions or consultancy.¹³⁴

31. NSBs should develop case studies of SMEs that have successfully participated in standardization.

Belgium: NSB website includes company cases

The website of the Belgian CENELEC member CEB-BEC (Comité Electrotechnique Belge/Belgisch Elektrotechnisch Comité) includes a series of case studies ('witnesses') of SMEs.¹³⁵

Sweden and the Netherlands: Publications with company cases

The NSBs of Sweden and the Netherlands (SIS and NEN) have provided brochures containing cases of successful SME participation.¹³⁶ These now appear to be rather outdated; publication on the website would now seem to be a better idea, with perhaps an accompanying hard-copy version.

4.2.3 Tracing standardization projects

Once SMEs are aware and interested in standards development, they should be able to trace the relevant standards development projects. The problems are related to:

(A) the 'supply' side: the way in which information about standardization projects is offered;

¹³³ Inspired by <http://www.smest.eu/publicaties/3050>

¹³⁴ Information from Danish Standards Foundation.

¹³⁵ Information from CEN-BEC; <http://www.ceb-bec.be>

¹³⁶ SIS, 1997; Nederlands Normalisatie-instituut, 1999.

- (B) the 'demand side': the ability of SME employees to trace relevant projects;
- (C) to bridge the supply and demand sides, SMEs might need assistance in finding the relevant projects.

(A) Presentation of current projects

32. CEN/CENELEC should improve the user friendliness of their websites and provide a better overview of all current standardization activities including the responsible TCs, SCs and WGs and their business plans.

CENELEC Technical Bodies do not yet have business plans. This may be related to a culture of the sector in which standardization activities are more self-evident than in other sectors. Nevertheless, business plans are also recommended for CENELEC.

33. NSBs should provide a clear and transparent overview of all TCs, SCs and WGs and their relation to CEN/CENELEC/ISO/IEC, and define a clear and single point of contact.

34. CEN/CENELEC should require TCs to prepare a generic press release for new standardization projects and should send it to NSBs and trade associations, which can then translate and inform targeted market segments in their native language.

NSBs and trade associations may lack the specific know-how to prepare such a press release themselves. Moreover, since the same activity should take place in many countries, this should be carried out at the European level.

(B) Ability of SMEs to trace relevant standardization projects

The generic method for tracing standards by product or service (see recommendations 12 and 13 above) can be also used for tracing standardization projects.

(C) Tracing standardization projects relevant for SMEs

35. Trade associations should inform their members of standardization projects relevant for their sector or discipline.

VDMA: German machinery industry

The German trade association for this industry (VDMA) is closely connected to the national standards committee responsible for standardization issues in the machinery industry in Germany. VDMA provides SMEs with information on standards and new draft standards developed at the European and international level. It selects comments of SMEs on draft standards and formulates a common strategy. Information exchange is provided by an electronic system online. In addition, NAM also provides SMEs with standardization information through face-to-face conversations in committee meetings, telephone contacts, newsletters, workshops, their own internet website, brochures, CD-ROMs and through articles in professional journals. For more information, see Section 6.5.

36. NSBs should advise trade associations on standardization projects relevant for their (SME) members.

37. NSBs should provide on request advisory services to individual SMEs on relevant standardization projects.

4.2.4 Becoming involved

An important reason for non-participation is simply not being aware of the standardization activity. Lack of resources (money, time, skills or knowledge) is another reason. Solutions include:

- (A) inviting SMEs to get involved;
- (B) providing SMEs with the resources they currently lack;
- (C) making it easier to get involved;
- (D) involving other organizations which represent the SME.

(A) Inviting SMEs to get involved

In order to be able to invite SMEs (and other stakeholders), NSBs need proper information from CEN/CENELEC about the project and a method for systematically mapping relevant stakeholders (including SMEs and their associations). Such a method has been developed.¹³⁷ A stakeholder analysis should also reveal whether the smallest SMEs also have an interest in the standard(s).

38. CEN/CENELEC should require an accompanying feasibility study, to include relevant stakeholders and their interests, of those who propose new projects.

Business Europe asks for an impact assessment

Business Europe, the European union of national industry federations, has asked for an assessment of the market relevance of new projects. Moreover, any new project should be part of an overall standardization strategy.¹³⁸

39. NSBs should use the method for stakeholder analysis to perform a check on stakeholders at national TC/SC/WG level and invite missing stakeholders to participate.

Netherlands: Ensuring balanced representation

NEN applies the method for stakeholder analysis to its new and existing TCs, SCs and WGs. If stakeholder analysis reveals a discrepancy between potential and actual stakeholder representation, missing stakeholders are invited to participate. Since the start of this effort, the average number of participants per committee has increased from 8.45 to 11.36, which also provided NEN with healthy financial figures. If invited stakeholders are unwilling to participate, for whatever reason, this is registered. In such a case, NEN has to accept a situation in which not all stakeholders are represented.¹³⁹

¹³⁷ De Vries, 2003; de Vries, Verheul and Willemse, 2003. A less sophisticated version and explanation can be found at <http://www.smest.eu/publicaties/3051>

¹³⁸ Business Europe, 2009.

¹³⁹ Practice at NEN.

(B) Providing SMEs with the resources they currently lack

Several countries provide financial instruments for SME participation. However, business models of NSBs are different in each country and therefore no general recommendations can be given.

40. NSBs should seek mechanisms to ensure that cost is not a barrier to SME participation in standardization.

Many countries: Money for attending European meetings

- The Cypriot NSB (CYS) provides a subsidy for SME representatives participating in European TCs.¹⁴⁰
- The Spanish NSB (AENOR) provides grants to enable SMEs to attend European meetings. The subsidy amounts to approximately €1,000 per participant. In the perception of AENOR, these grants have enhanced SME participation.¹⁴¹
- The Finnish CENELEC member (SESKO Standardization) pays special allowances for travel expenses to companies participating at the international level. The money is provided by the Ministry of Trade and Industry. SMEs consider the amount of money (€500 when travelling in Europe, €1,000 when travelling outside Europe) quite small but still significant enough to encourage them to participate in international meetings. Additional self-financing is needed, which increases the commitment of the experts.¹⁴²
- The Svenska Elektriska Kommissionen (SEK) gives enterprises and representatives from committees an allowance to cover the travel costs to participate in national or international standardization meetings. The participant prepares a report about the meeting which is published in the SKE magazine; this magazine is distributed to SEK members and stakeholders. The maximum budget per person is approximately €1,270. SEK believes that the measure has broadened participation in general and increased international participation. However, the number of new participants is modest.¹⁴³
- The UK Government provides a fund to contribute to the travel costs of UK experts travelling to international meetings. This scheme – the Assisted International Travel Scheme (AITS) – is available to the lead delegate attending a European or international committee meeting and is heavily used by SMEs in particular.¹⁴⁴
- In Slovakia, the Government provides funding for creating European or international standards for new technologies. The Ministerstvo Hospodarstva Slovenskej Republiky (Ministry of Economy of the Slovak Republic) has a complex funding programme for standards and standardization, which includes support, covering 65 per cent of the eligible costs, for activities related to the creation of European and international standards.¹⁴⁵

Some countries: Participation in national TCs, SCs and WGs for free

Some SDOs – for instance, the German CENELEC member DKE, ON (Austria) and UNMZ (Czech Republic) – offer free participation in TCs, SCs and WGs at the national level.¹⁴⁶

France: Tax credit on standardization related to research, free participation in standardization for SMEs

France has a tax credit for research. If the expenses of an organization for research rise within a year, these expenses can be subtracted from general taxes. Expenses in relation to standardization are accepted as research.¹⁴⁷ France offers free participation in standardization for SMEs (decree dated 16 June 2009).¹⁴⁸

¹⁴⁰ CENELEC, 2009.

¹⁴¹ CENELEC, 2009; EIM Business & Policy Research, 2006, pp. 139–142.

¹⁴² EIM Business & Policy Research, 2006, pp. 65–69.

¹⁴³ EIM Business & Policy Research, 2006, pp. 143–145

¹⁴⁴ Information provided by BSI.

¹⁴⁵ EIM Business & Policy Research, 2006, pp. 128–130.

¹⁴⁶ NEN, 2003; information from DKE.

¹⁴⁷ NEN, 2003, p. 17.

¹⁴⁸ Data from the Fédération des Industries Électriques, Électrotechniques et de Communication FIEEC.

(C) Making involvement easier

Participation in committees is time-consuming and costly. NSBs may offer other opportunities for obtaining information and to allow comments (on which the committee should decide).

41. NSBs should provide the opportunity to submit comments on draft standards on a website for each of these standards and also allow for discussions for each of these standards via the web.

UK: online input on draft standards

New draft British Standards are available online for the public to comment on their content. This facility is currently only available for purely British Standards. Roll-out to European and international standards is foreseen. BSI perceives that online commenting on draft standards will be very important to ensure that broad stakeholder views are inputted.¹⁴⁹

42. CEN/CENELEC should support the use of ICT tools to optimize the use of resources (time, money) in committees.

Such ICT systems may include electronic discussion forums, ERP systems, CRM systems, group support systems, and facilities for electronic meetings.¹⁵⁰

(D) Involving other organizations which represents the SME

43. NSBs should stimulate representation of groups of SMEs via their trade association

UK: Trade association supports participation in standardization

Gambica (the organization representing the interests of companies in the instrumentation, control, automation and laboratory technology industry in the UK) informs its members about the opportunities to participate in standardization and offers financial support for SMEs to participate. Moreover, it provides forums for inputs for those who are unable to contribute directly to standards development.¹⁵¹

4.2.5 Being involved effectively

Simply being involved does not imply that such involvement will be effective. Other participants may ignore an SME simply because it is an SME. Issues presented by a multinational may carry more weight, consciously or unconsciously. However, research shows that the role of individuals in standardization can be decisive.¹⁵² Therefore, an SME which is able to delegate a highly-qualified person, in terms of both knowledge and skills, could make the difference.¹⁵³ Lack of knowledge and skills is the main problem at this stage. This may be resolved by providing training and support to the SME or by inviting an expert from another organization (e.g. a trade association) to participate (see Solution 43).

44. NSBs should provide training in and support for effective participation in standards development.

¹⁴⁹ Information provided by BSI and emphasized by BEAMA Ltd, the British Electrotechnical and Allied Manufacturers' Association.

¹⁵⁰ Verheul and de Vries, 2003; Gottlieb, 2003.

¹⁵¹ EIM Business & Policy Research, 2006, pp. 146–148; <http://www.gambica.org.uk/>

¹⁵² Teichmann, 2001; Isaak, 2006.

¹⁵³ Simons and de Vries, 2006.

Several countries: Courses for participants

Some NSBs offer courses for participants in standardization committees, to support them in their role as committee member. In some cases, these courses are paid for by the government.

- DS: Seminars for participants
Denmark offers a series of one-day seminars on standardization. These should be seen as an eye-opener, a first step to highlight potential problems and ways to address these. Topics include both European and international standardization. Participation is free of charge.¹⁵⁴
- Italy: Help participants to understand procedures
CEI, the Italian CENELEC member, organizes meetings with and provides assistance to TC members with reference to national, European and international working procedures.¹⁵⁵
- UK: On-line training for participants
BSI provides online training for committee members. BSI's training for committee members is often free of charge and includes face-to-face training courses as well as e-learning courses.¹⁵⁶
- SMEST Project: easy-to-use information for participants
The SME Standardization Toolkit (SMEST) includes information for participants.¹⁵⁷

Other current practices of enhancing the effectiveness of involvement

Italy and the Netherlands: R&D to support SME input in standardization

Sections 6.3 and 6.6 show examples of trade associations that manage to organise R&D to support the SME input into European standardization. Because discussions in standardization committees, in particular in WGs, are based on technical arguments, having underpinning from research places any participant in a much stronger position.¹⁵⁸

4.2.6 Evaluating

Involvement in standardization is a long-term investment. Cost precedes benefits but continuous focus on benefits is needed during the process. Experience shows that participants tend to ignore this, which results in decreasing company support for their involvement and sub-optimal priority setting.

(A) Evaluate involvement in standardization – lessons for future involvement

45. A method is being developed to evaluate the rate of return on resources committed to participation in standardization. CEN/CENELEC should make this method available to enable SMEs and other stakeholders to evaluate their involvement.¹⁵⁹

BSI provides guidance on strategic benefits of participation in standardization.¹⁶⁰ It is not limited to SMEs.

¹⁵⁴ EIM Business & Policy Research, 2006, pp. 61–63.

¹⁵⁵ CENELEC, 2009.

¹⁵⁶ Information provided by BSI.

¹⁵⁷ <http://www.smest.eu>

¹⁵⁸ The following are additional sources on R&D and standardization: Anthony, 2008; Behrens and Blind, 2007; Blind, 2007b; de Vries, 2006c; INTEREST, 2008a/b; Kertesz, 2008; Narula, 2004; Tassej, 2000.

¹⁵⁹ De Vries, 2009. Some cases which provide results but without the method description can be found in de Vries, 2006b.

¹⁶⁰ Munden and Bolin, 2005.

Orgalime: Need for tools to calculate benefits

In order to make the benefits of participation transparent, tools should be developed for the calculation of benefits at micro level.¹⁶¹

(B) Evaluate involvement in standardization – feedback for CEN/CENELEC and their national members

46. CEN/CENELEC should require TCs to perform *ex-ante* impact assessment as already used for all EU Directives, which should be partly replicated for standards.

47. CEN/CENELEC should develop a sound methodology to evaluate standardization projects including the involvement of stakeholders.

48. CEN/CENELEC should require TCs to evaluate their standardization projects using this methodology.

4.2.7 Initiating new activities

An innovative SME may wish to initiate a new standardization activity because it needs standards to make its invention a market success. What happens if a committee has not yet been appointed? Is a new activity feasible?

49. NSBs should have a contact point to provide assistance to SMEs (and other stakeholders) to initiate new activities.

Netherlands: Government funding for assessing feasibility of new activities

NEN's Task Force Business Development is NEN's contact point for new activities. Until recently, the Ministry of Economic Affairs in the Netherlands provided a yearly amount of money for NEN to carry out feasibility studies to explore the market support for proposed new standardization activities. A method for carrying out these feasibility studies has been developed. A point of attention is 'handing over' the project to other departments once it turns out that there is a market need for the standardization activities.¹⁶² Based on the Dutch experience, the SMEST website provides a set of documents that NSBs can use to develop a structured approach to the start of new standardization activities.¹⁶³

4.3 Enablers to benefit from standards and/or involvement in standardization

The earlier Dutch project¹⁶⁴ concluded that standardization organizations at both European and national level need to develop a set of measures to address SMEs (and other market) needs and to provide them with the tools to improve performance. The extent to which these measures are needed will differ for each standardization organization. These include measures that address quality management, the performance of committees, the process of standardization, the technical officers, and the relation with trade associations.

¹⁶¹ Orgalime, 2009.

¹⁶² Source: own experience of research team members.

¹⁶³ <http://www.smest.eu/publicaties/3074>

¹⁶⁴ Verheul and de Vries, 2003; de Vries *et al.*, 2004.

4.3.1 Quality management

The above solutions in respect of each barrier have in common that they require the standards bodies to address systematically the needs of SMEs (and other stakeholders). Such an approach can be supported by a quality management system. ISO 9001 is the appropriate standard.

50. CEN and CENELEC should implement ISO 9001.

51. Each NSB should implement ISO 9001.

Several NSBs: ISO 9001 implementation

Several NSBs have implemented ISO 9001 – for example, NEN and ON.

Dutch awareness project: extend scope of the ISO 9001 system

Implementing an ISO 9001 quality management system forces the NSB to think in terms of its customers and their needs, the services it delivers to these customers, and improvements in order to enhance customer satisfaction. 'Customers' should include not only the buyers of standards and the participants in standardization committees but also the organizations on behalf of which the standard is bought or on behalf of which the committee member participates. Given that the NSB policy is open to all interested parties, the customer concept may be further extended with the inclusion of stakeholders who so far are not involved in order to get them involved.¹⁶⁵

4.3.2 Committees

Many of the above-mentioned solutions require the committees, both at European and national level, to address the needs of SMEs (and other stakeholders) more explicitly. This requires investment and should ensure that the committees really meet market needs¹⁶⁶ and act according to the principles that should distinguish official standards bodies from, for instance, consortia. European and national TCs should not only address the development of standards but also their subsequent implementation and use. Business plans should be developed to include all of these issues.

52. CEN/CENELEC should ensure that each TC has a business plan which includes an inventory of stakeholders (including SMEs) and their needs and indicates how the TC intends to address these needs.

53. NSBs should ensure that each national TC has a business plan which includes an inventory of stakeholders (including SMEs) and their needs and indicates how the TC intends to address these needs. These business plans should be available on the NSB website.

4.3.3 Standardization process

The process of standardization centres on designing standards and reaching a consensus-based decision about these standards in a structure of committees at national and European level, with the involvement of all interested parties. This is a strength of the system also from the SME point of view. A barrier for SMEs, however, is that they may be interested in only one standard whereas the committee may be in charge of hundreds of standards. Therefore,

¹⁶⁵ Verheul and de Vries, 2003.

¹⁶⁶ See also Business Europe, 2009.

the current system should be extended by an option of involvement for each standard, giving SMEs more opportunity to influence the process or to obtain targeted information, while leaving the decision-making power to the committees (see Solutions 27 and 41). It is expected that these facilities will also enhance awareness and in this way contribute to the sale of standards and, subsequently, the business impact of the standard. Moreover, an online user panel is expected to provide input for future revision of the standard.

4.3.4 Technical officers

Highly qualified technical officers at European and national level are essential for the success of the European standardization system and thus for the way in which SMEs can benefit from this system and from the resulting standards. Therefore, it is not surprising that many of the barriers are related to the role played by technical officers. Research shows that they are the weakest link in the standardization chain.¹⁶⁷ If necessary, they should have the authority, skills and knowledge to actively address the needs of SMEs and other 'weak' stakeholders, in line with the principles of standardization, in cases where the majority of the participants are not interested. Ability to act in this way can result from training.

54. CEN/CENELEC should ensure the professionalism of their staff via (obligatory) training.

55. CEN/CENELEC should ensure the professionalism of the technical officers that are members of secretariats of European TCs, SCs and WGs via (obligatory) training.

56. NSBs should ensure the professionalism of their technical officers via (obligatory) training.

4.3.5 Trade associations

Trade associations play an essential role in informing, strengthening and representing SMEs. However, it is not self-evident that these organizations take this responsibility. This may be related to a lack of awareness or to a lack of resources (time, money or knowledge). Contacts with trade associations may be structured in the form of a specific SME committee.

57. NSBs should maintain contacts with relevant trade associations.

SMEST project: SME committee

A specific committee for SMEs can be established to directly represent the interests of SMEs in standardization. This SME committee could consist of several representatives from several different sectors, combined with standardization experts. This SME committee could develop a strategy and action plan dedicated to the involvement of SMEs in standardization. A specific SME committee could have the following tasks:

- take into account the needs of SMEs within the context of standardization;
- develop tools/solutions to facilitate their access to standards and standardization;
- provide a contact point for SMEs to express their concerns/give input on standardization;
- suggest improvements in the standardization process for SMEs;
- create and execute an action plan to meet the needs of SMEs.

An important 'success factor' for such a committee is the chair, who should feel at home in the SME world and standardization world. The main advantage of this measure is that there is a clear contact

¹⁶⁷ Verheul and de Vries, 2003

for SMEs and their associations in standardization. At the same time, SMEs are able to have a real impact on the NSB's policy level.¹⁶⁸

France: Committee on Standards and the Crafts Sector

In France, the Ministère des Petites et Moyennes Entreprises, du Commerce, de l'Artisanat, et des Professions Libérales (Ministry of SMEs, trade, arts and craft, and liberal professions) took the initiative to address the needs of SMEs in the field of standards. It first established a superior council, presided by the Minister of SMEs, to identify the main issues. This council was dismissed in 1997 but activities have continued and AFNOR is now in charge of these activities. In 2003, a committee on standards and craft enterprises was established: AFNOR's Comité de Concertation Normalisation et Artisanat (CCNA – Committee on Standards and the Craft Sector).¹⁶⁹ CCNA has highlighted 11 priority actions to meet the needs of SMEs, in accordance with the objective defined in the French standardization strategy for 2010.¹⁷⁰

Germany: Advisory board for SMEs and standardization

In November 2009, the German Federal Ministry of Economics and Technology (BMWi) and the German NSB (DIN) established the Kommission Mittelstand (KOMMIT – Commission for SMEs) for dealing with the needs of SMEs. The commission's task is to continue the dialogue with SMEs by formulating strategic recommendations relating to the high-priority goals of standardization of SMEs. KOMMIT provides advice to the director of DIN for the special needs of SMEs in the field of standardization. Members of KOMMIT are high-level representatives of German head sectoral and intersectoral associations. The Commission is chaired by the Ministry of Economics and Technology.¹⁷¹

UK: SME Policy Committee

BSI has an SME Policy Committee which includes key SME business associations. This committee reports to the main standards board and advises on SME-related issues.¹⁷²

Finland: Trade associations performing standardization activities

Finland has a decentralized standardization system, where most of the TC actions and responsibilities are delegated to 13 so-called 'Standard Writing Bodies'. Nine of these are trade associations. In this way, there is a very close co-operation between SFS and the most important trade associations.¹⁷³

58. NSBs should provide these trade associations with standardization information in order to enable them to support their members.

Spain: Important role for trade association

NSBs should use national associations in every sector to obtain awareness in standardization. NSBs work with standards related to many sectors and it is impossible that NSBs can have technical knowledge in every sector and about every product standard. Therefore, NSBs should give general knowledge on standardization to national associations. National associations are experts in their sector. They can then easily give advice on standardization to SMEs. In Spain, this procedure has worked for many years. The Asociacion de Fabricantes de Material Electrico (AFME) is a good example. AFME represents manufacturers of low-voltage products in Spain. AFME gives advice about product standards to its members, tries to stimulate their participation in national standardization committees and in European and international committees. NSC usually shares the economic costs of participation in European and international standardization committees.¹⁷⁴

¹⁶⁸ http://www.smest.eu/dynamics/modules/SFIL0100/view.php?fil_Id=227

¹⁶⁹ EIM Business & Policy Research, 2006, pp. 70–73. A video has been made available (CMA, 2008).

¹⁷⁰ http://www.smest.eu/dynamics/modules/SFIL0100/view.php?fil_Id=227

¹⁷¹ Information from both DIN and DKE.

¹⁷² Information from BSI.

¹⁷³ Information by SFS.

¹⁷⁴ Information by AFME.

5 Survey results – Feedback on the proposed solutions

This chapter provides results from the survey we carried out to obtain feedback from NSBs and trade associations on the proposed solutions (See Section 3.4 for a description of the research approach). Section 5.1 provides the main results: the rating of the solutions based on importance and on cost-effectiveness. Next, in Section 5.2, we provide ratings for each set of solutions, grouped according to each of the barriers. In Section 5.3, we then distinguish results per type of organization. In Section 5.4 we relate the ratings to the experience, if any, of the respondents in using this solution. The chapter concludes with a short summary.

5.1 General assessment

The overall assessment of all of the respondents concerning all of the proposed measures is, in general, positive in relation to both relevance and cost-effectiveness. Figures 1, 2 and 3 (below) make this obvious. Figure 1 shows the rating of the proposed solutions to benefit from standards, Figure 2 from involvement in standardization, and Figure 3 the results for other, more general recommendations ('enablers') to enable SMEs to benefit from standards or involvement in standardization.

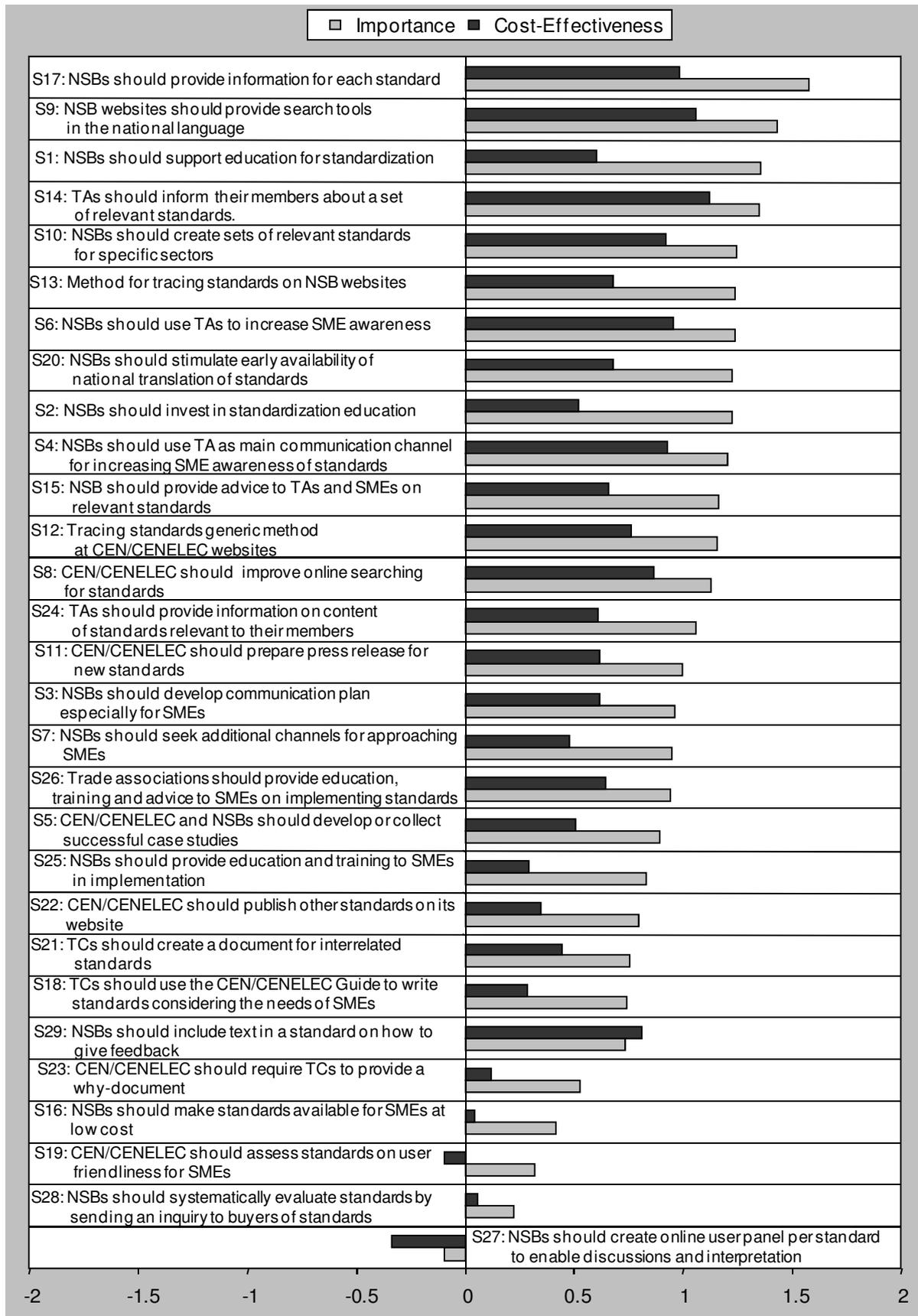
The top three solutions in terms of their importance for benefiting from standards are:

1. **S17.** NSBs should provide clear information for each standard on their website including a summary, the scope of the standard, and a table of contents.
2. **S9.** NSB websites should provide the opportunity to search for European and international standards in the national language(s) in a user-friendly way.
3. **S1.** NSBs should stimulate and support their national government to develop a national strategy on education for standardization.

In terms of cost-effectiveness, the top three solutions are:

1. **S14.** Trade associations should inform their members about a set of standards relevant for their sector or discipline.
2. **S9.** NSB websites should provide the opportunity to search for European and international standards in the national language(s) in a user-friendly way.
3. **S17.** NSBs should provide clear information for each standard on their website including a summary, the scope of the standard, and a table of contents.

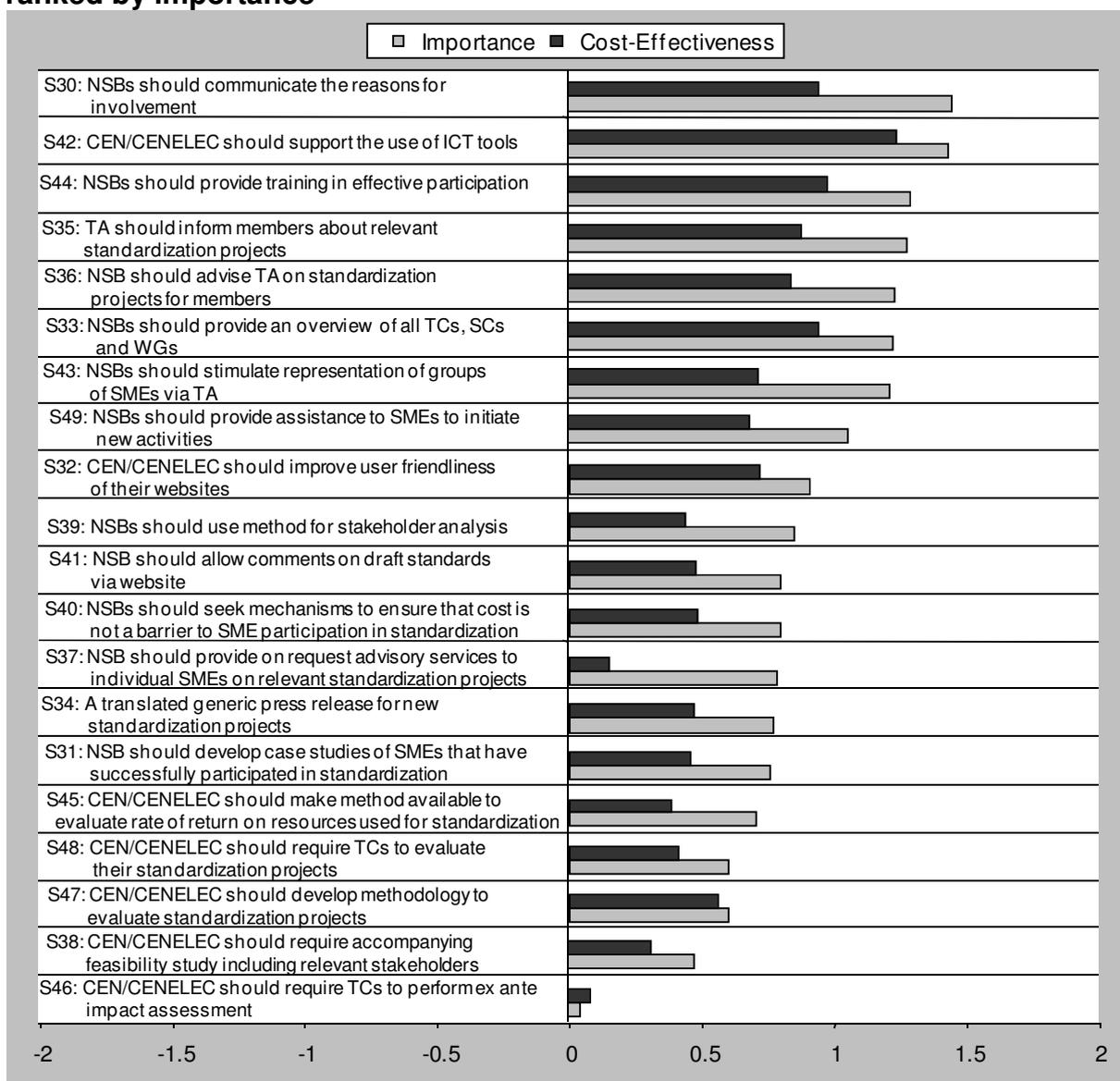
Figure 1: Proposed measures to benefit from standards ranked by importance



According to the respondents, the most important solutions for improving involvement in standardization are:

1. **S30.** NSBs should communicate the main reasons for becoming actively involved in standardization (e.g. to influence the content of the standard, to receive information, to establish contacts with interested partners).
2. **S42.** CEN/CENELEC should support the use of ICT tools to optimize the use of resources (time, money) in committees.
3. **S44.** NSBs should provide training in and support for effective participation in standards development.

Figure 2: Proposed measures to benefit from involvement in standardization ranked by importance



In terms of cost-effectiveness, the top three solutions for involvement in standardization are:

1. **S42.** CEN/CENELEC should support the use of ICT tools to optimize the use of resources (time, money) in committees.
2. **S44.** NSBs should provide training in and support for effective participation in standards development.
3. **S33.** NSBs should provide a clear and transparent overview of all TCs, SCs and WGs and their relation to CEN/CENELEC/ISO/IEC, and define a clear and single point of contact.

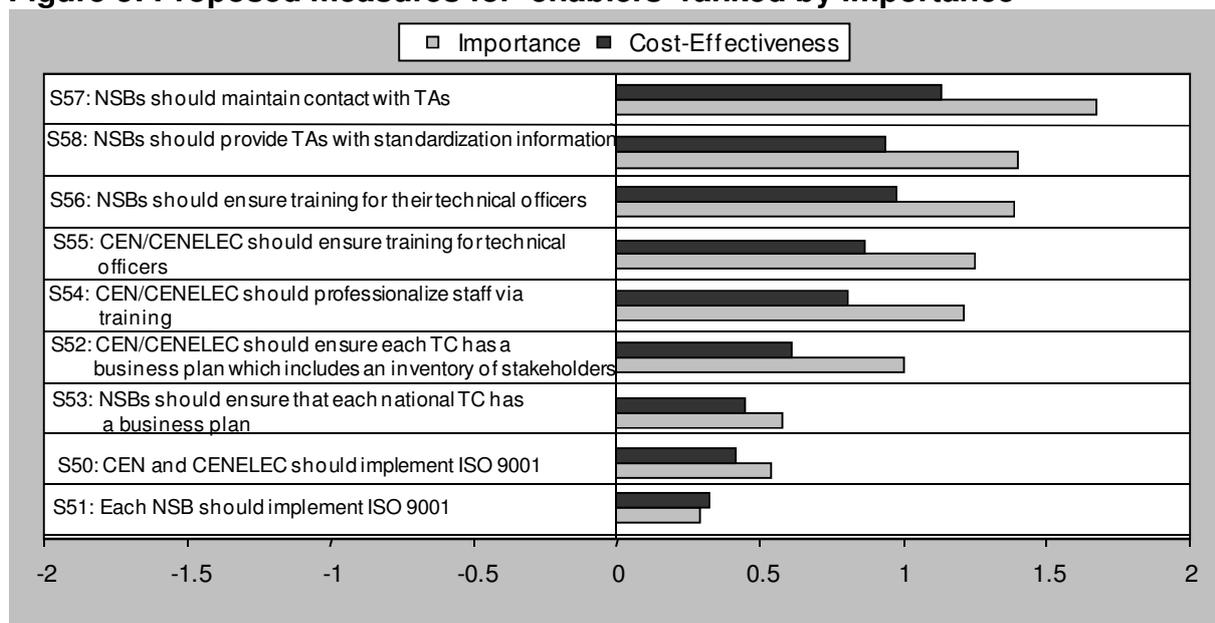
The top three of the important enablers are:

1. **S57.** NSBs should maintain contacts with relevant trade associations.
2. **S58.** NSBs should provide these trade associations with standardization knowledge in order to enable them to support their members.
3. **S56.** NSBs should ensure the professionalism of their technical officers via (obligatory) training.

The top three cost-effective enablers are almost identical:

1. **S57.** NSBs should maintain contacts with relevant trade associations.
2. **S56.** NSBs should ensure the professionalism of their technical officers via (obligatory) training.
3. **S58.** NSBs should provide these trade associations with standardization knowledge in order to enable them to support their members.

Figure 3: Proposed measures for ‘enablers’ ranked by importance



More than half of the proposed measures were assessed as being of high relevance and high cost-effectiveness.

Only the following solutions are below the importance value of 0.5 with regard to solutions for benefiting from standards:

- **S16.** NSBs should seek to make (sets of) standards available for SMEs at low cost.
- **S19.** CEN/CENELEC should assess standards of user friendliness for SMEs, in terms of understanding and implementation, using this Guide.
- **S27.** NSBs should create an online user panel for each standard to enable discussion and interpretation as to how standards can be implemented, how SMEs can make use of the standards, etc.
- **S28.** NSBs should systematically evaluate standards by sending an inquiry to buyers of standards.

Two solutions are rated below an importance value of 0.5 with regard to solutions for benefiting from involvement in standardization:

- **S38.** CEN/CENELEC should require an accompanying feasibility study, to include relevant stakeholders and their interests, of those who propose new projects.
- **S46.** CEN/CENELEC should require TCs to perform *ex-ante* impact assessment.

One 'enabler' solution has an importance value of below 0.5.

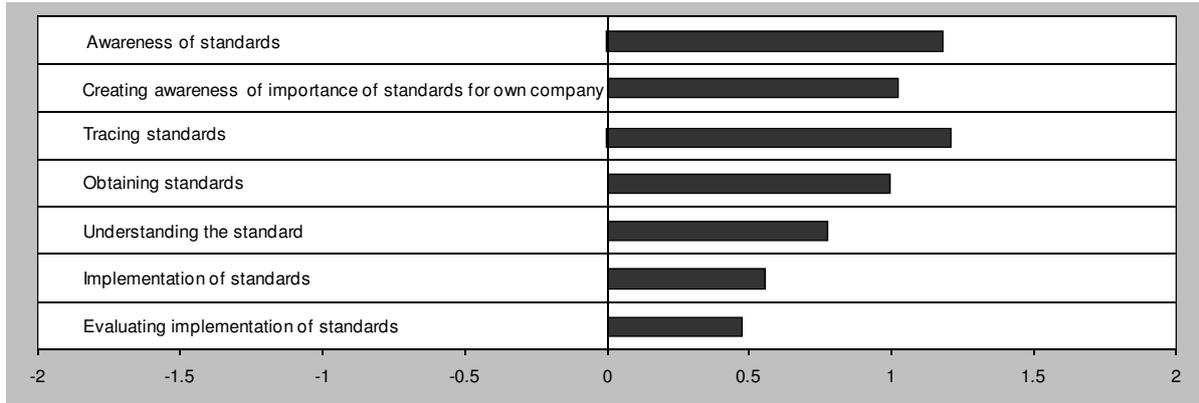
- **S51.** NSBs should implement ISO 9001.

Besides S16, S19, S27 and S28, S23 (CEN/CENELEC should require TCs to provide a short 'why document' with background information about the standard) is rated below 0.3 in terms of cost-effectiveness for solutions to benefit from standards. With regard to solutions for benefiting from involvement in standardization and more generic measures in addition to the above mentioned solutions, S37 (NSBs should provide on request advisory services to individual SMEs on relevant standardization projects) is also below 0.3 in the cost-effectiveness ranking. However, these are only single solutions, which do not allow us to present an overall picture following the conceptual model of barriers. Therefore, we address in the following section the solutions clustered according to the different types of barrier, followed by further separations of the sample.

5.2 Assessment by type of barrier

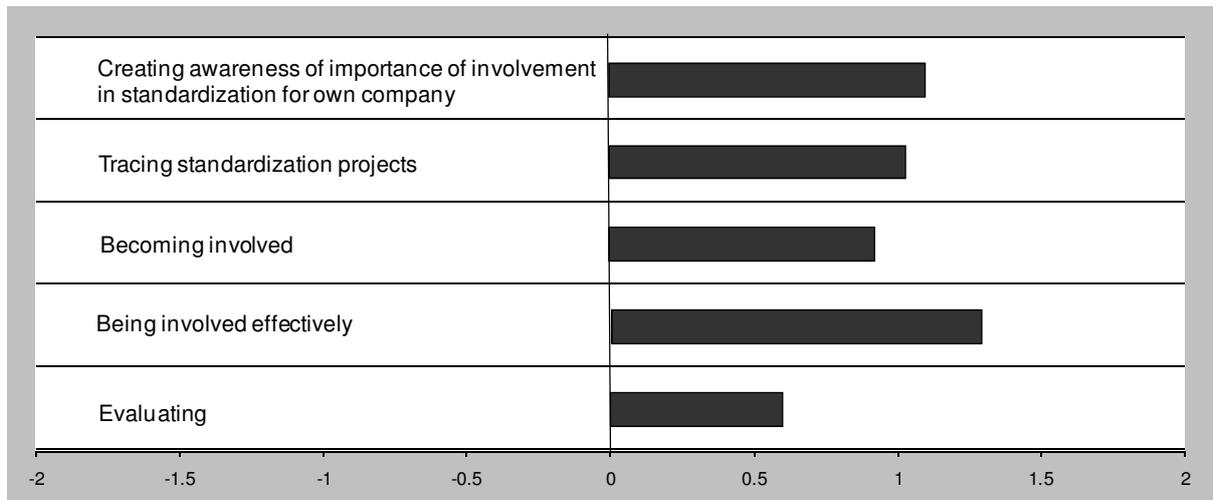
The assessment of the respondents by type of barrier with regard to obtaining benefit from standards and from standardization reflects very well the structure of the barrier model. The highest relevance category has solutions for tracing standards which are just ahead of ways in which to raise awareness of standards, solutions for creating awareness of the importance of standards for the SME's own company, channels for obtaining standards and support schemes to understand standards (see Figure 4). The importance of solutions to implement standards and for evaluating their implementation is ranked the lowest.

Figure 4: Importance of ‘solutions to benefit from standards’



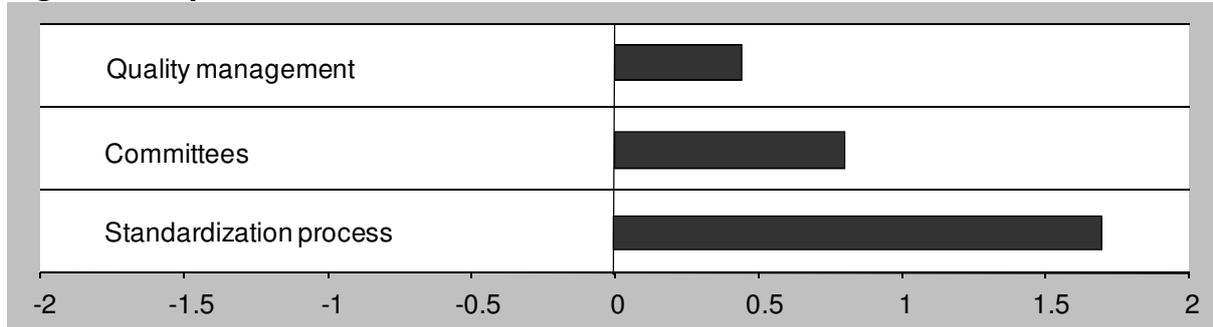
We face similar structures in the assessment of the solutions promoting involvement in standardization (Figure 5). The highest ranked are those solutions which support effective involvement. Medium assessment is given to instruments to create awareness of the importance of being involved, options for tracing processes, assistance in becoming involved, and committees (i.e. the importance of business plans for Technical Committees). Proposed evaluation schemes are of lowest importance.

Figure 5: Importance of ‘solutions to benefit from involvement in standardization’



In Figure 6 the assessment of the groups of the more general solutions, those addressing the standardization processes, are also very important among all of the proposed solutions, whereas quality management is perceived to be of rather low relevance.

Figure 6: Importance of ‘enablers’



In summary, the more general assessment raising and transparency increasing instruments are highly appreciated, whereas support schemes for implementation, quality management issues and evaluation schemes receive rather low support. Here, there seems to be a deficit, or a generally different perception, prominent among the respondents.

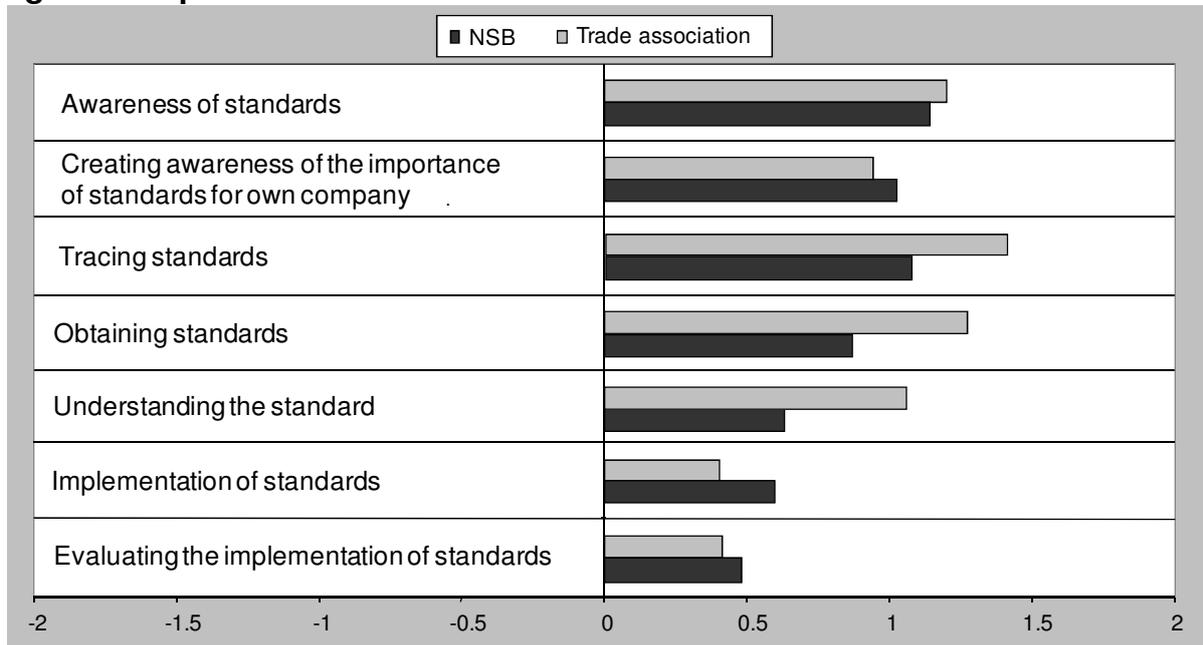
In order to shed light on this rather clear structure, we shall make a distinction between the responses from NSBs and from trade associations in the next section.

5.3 Assessment by type of organization

Since NSBs and trade associations are the major target groups for the proposed solutions and the two groups of respondents, we need to look at their assessments separately in order to detect the differences, if any, between the perceptions of the two subsamples and also in order to derive more differentiated conclusions.

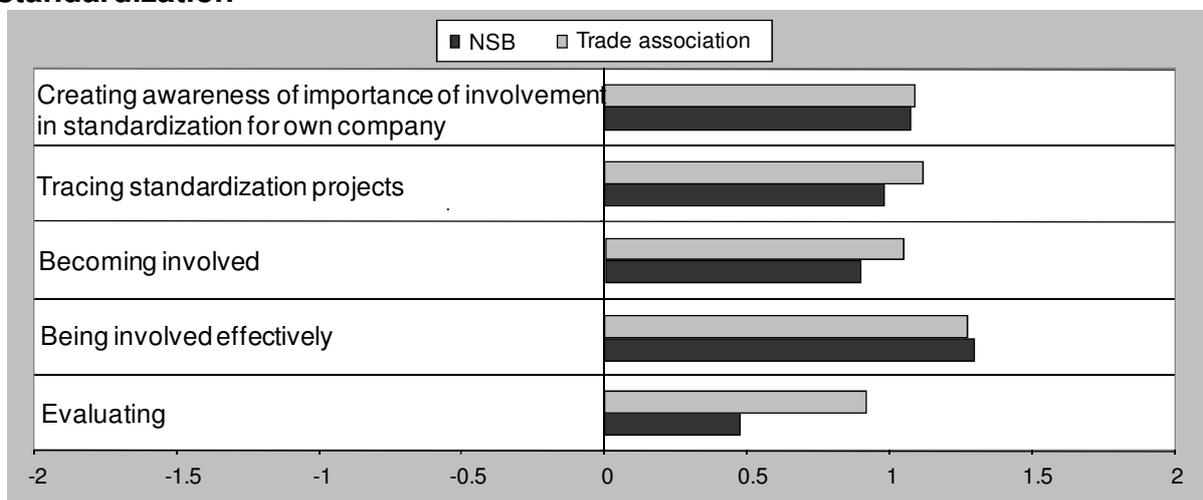
First, we must look again at the assessment of the bundles of solutions ranked according to the different types of barrier to benefit from standards (Figure 7). The trade associations emphasize strong support for tracing, obtaining and understanding standards, whereas the NSBs have a stronger focus on the implementation aspect. This structure reflects the fact that trade associations perceive there to be a higher demand for those aspects that are the responsibility of the NSBs, whereas implementation is more closely connected to the realm of the trade associations.

Figure 7: Importance of ‘solutions to benefit from standards’



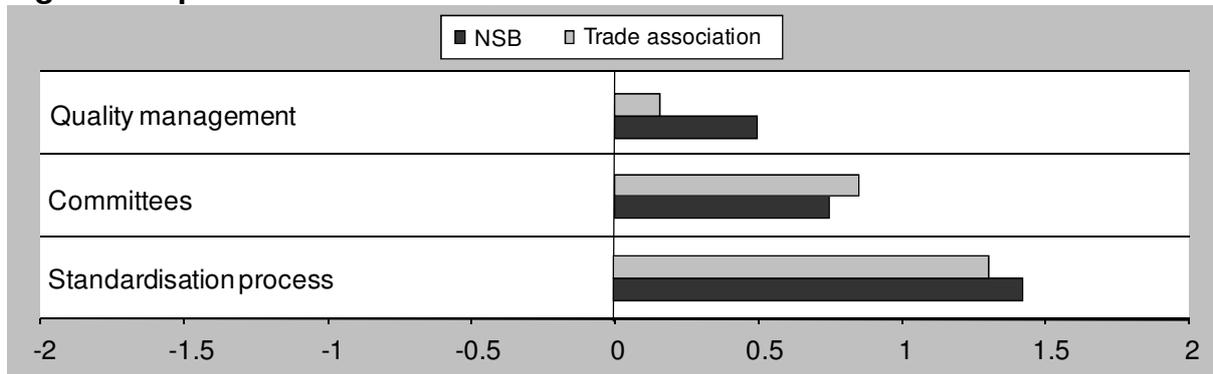
In terms of support for standardization processes, the trade associations perceive only a much stronger need for solutions concerning evaluation (Figure 8).

Figure 8: Importance of ‘solutions to benefit from involvement in standardization’



Among the ‘enablers’, it is only the solutions that focus on quality management that are perceived as being significantly more important by the NSBs than by the trade associations.

Figure 9 Importance of ‘enablers’



In order to explain the differences between single solutions, we will also focus on the list of all solutions. The differences in the assessment of the importance of single solutions by NSBs and trade associations reveal a further distinction between the two (see Figure 10). Trade associations assess the majority of solutions to benefit from standards which are the responsibility of CEN and CENELEC to be much higher, both in terms of importance and cost-effectiveness, than do the NSBs. Here, it becomes obvious that the NSBs are rather reluctant in shifting responsibilities to the European level. The only remarkable exception is the relatively strong emphasis of NSBs on using a method of stakeholder analysis, whereas the trade associations are not convinced by this solution. This is a further indication that the assessment of solutions depends strongly on their impact on the influence of the particular institution. For information, Figure 11 presents the ranking of the solutions according to their cost effectiveness.

Figure 10: Solutions to benefit from standards: importance

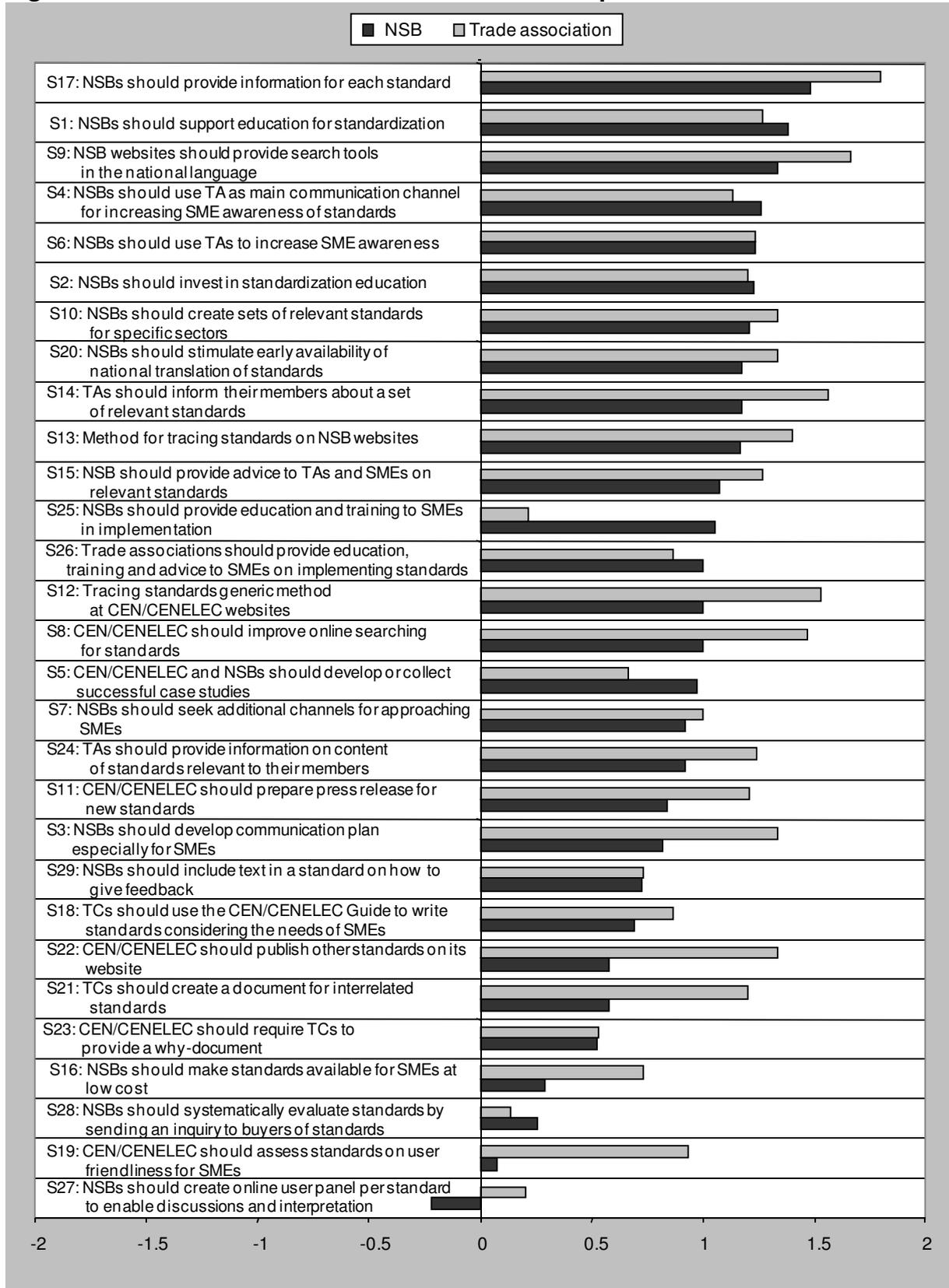
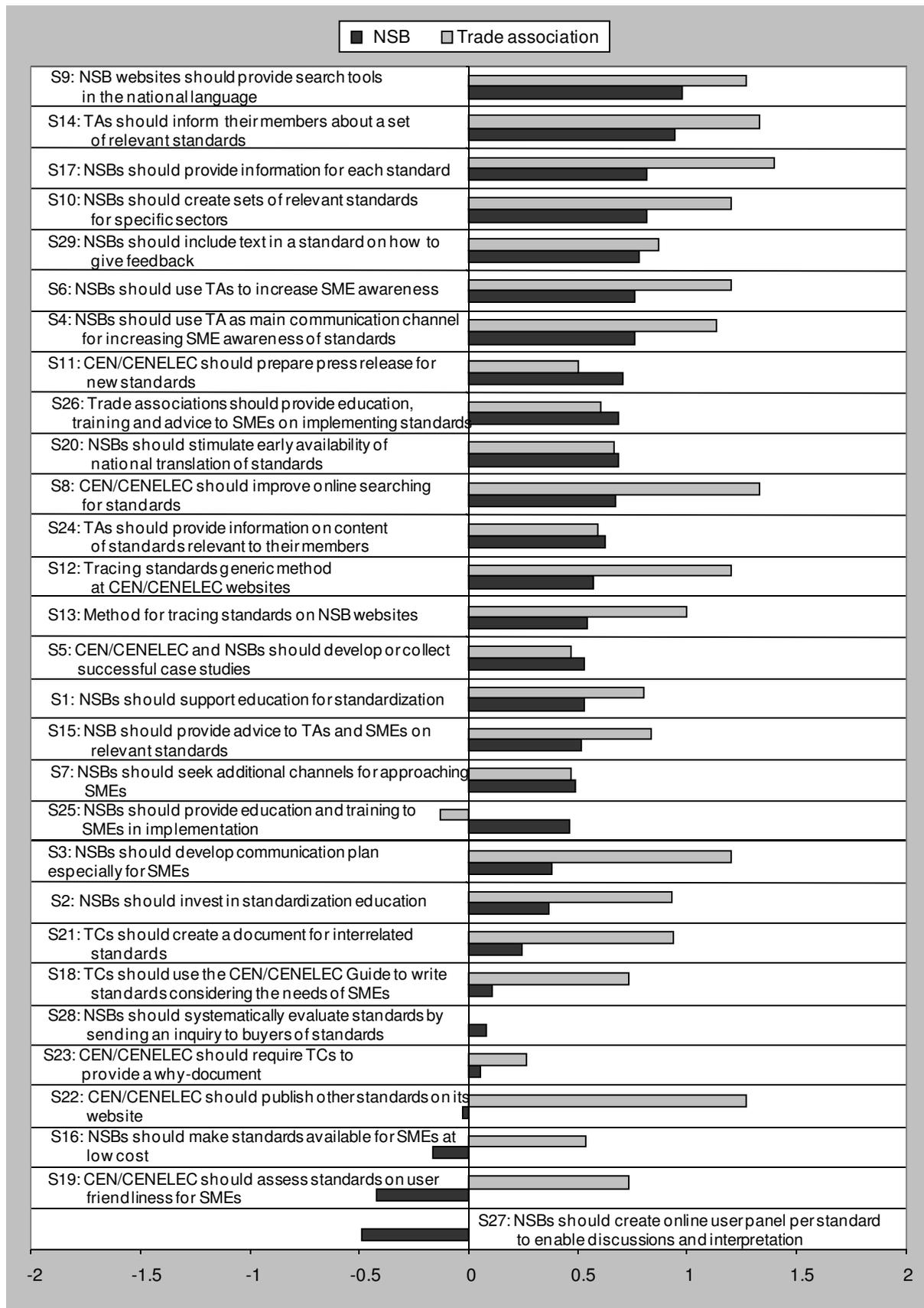


Figure 11: Solutions to benefit from standards: cost-effectiveness



In contrast to the numerous significant differences between NSBs and trade associations in their assessment of solutions to benefit from standards, the divergence is slightly less with regard to solutions to benefit from involvement in standardization (Figure 12). However, the trade associations emphasise, for example, that the NSBs should establish mechanisms to ensure that cost is not a barrier for SME participation in standardization. Here again, the trade associations attribute much higher relevance to solutions addressed to CEN and CENELEC, whereas the NSBs see their role and the related actions of much lower priority. In addition, all types of *ex ante* and *ex post* impact assessment issues are ranked much higher by the trade associations than by the NSBs.

Figure 12: Solutions to benefit from involvement in standardization: importance

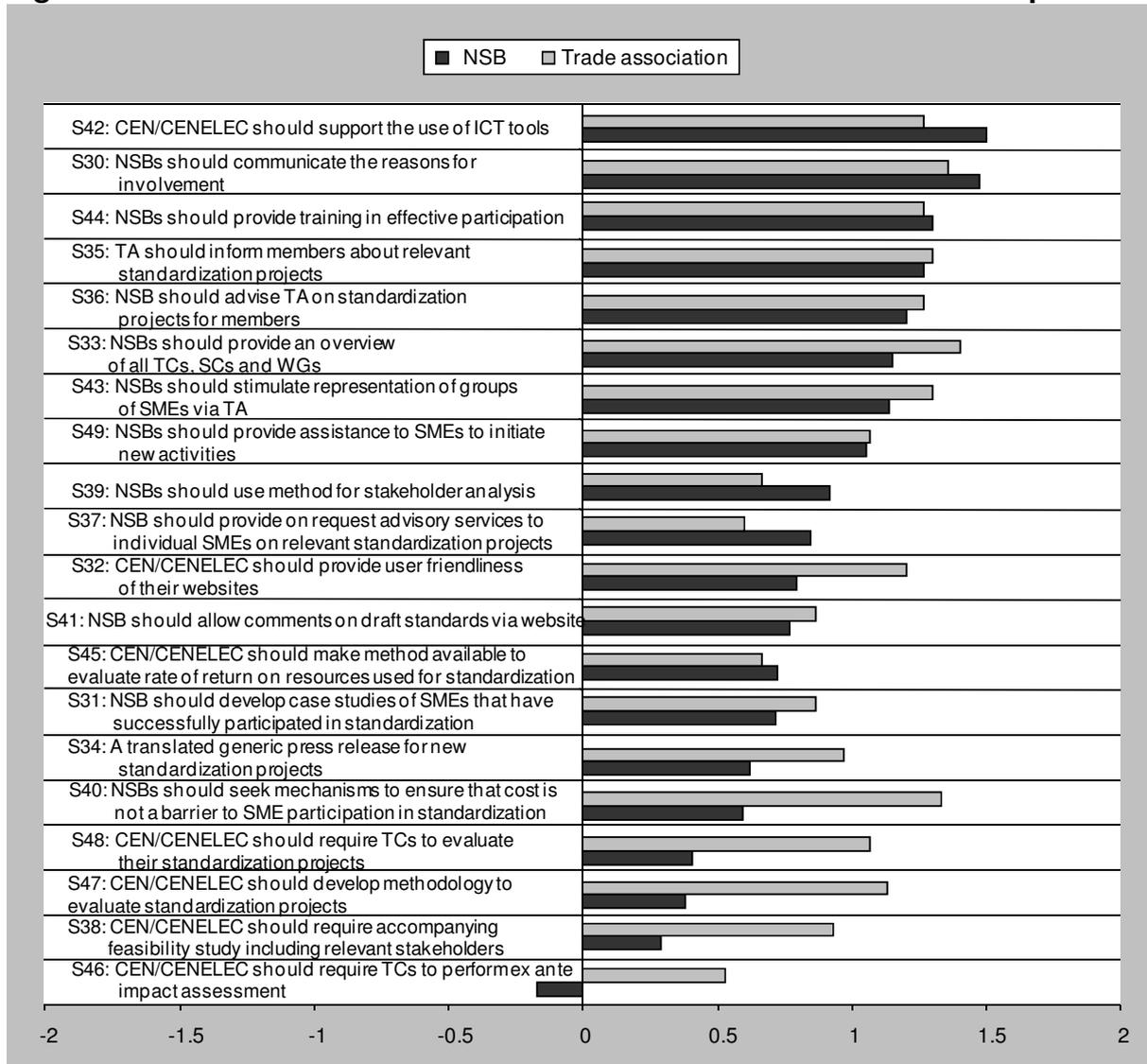
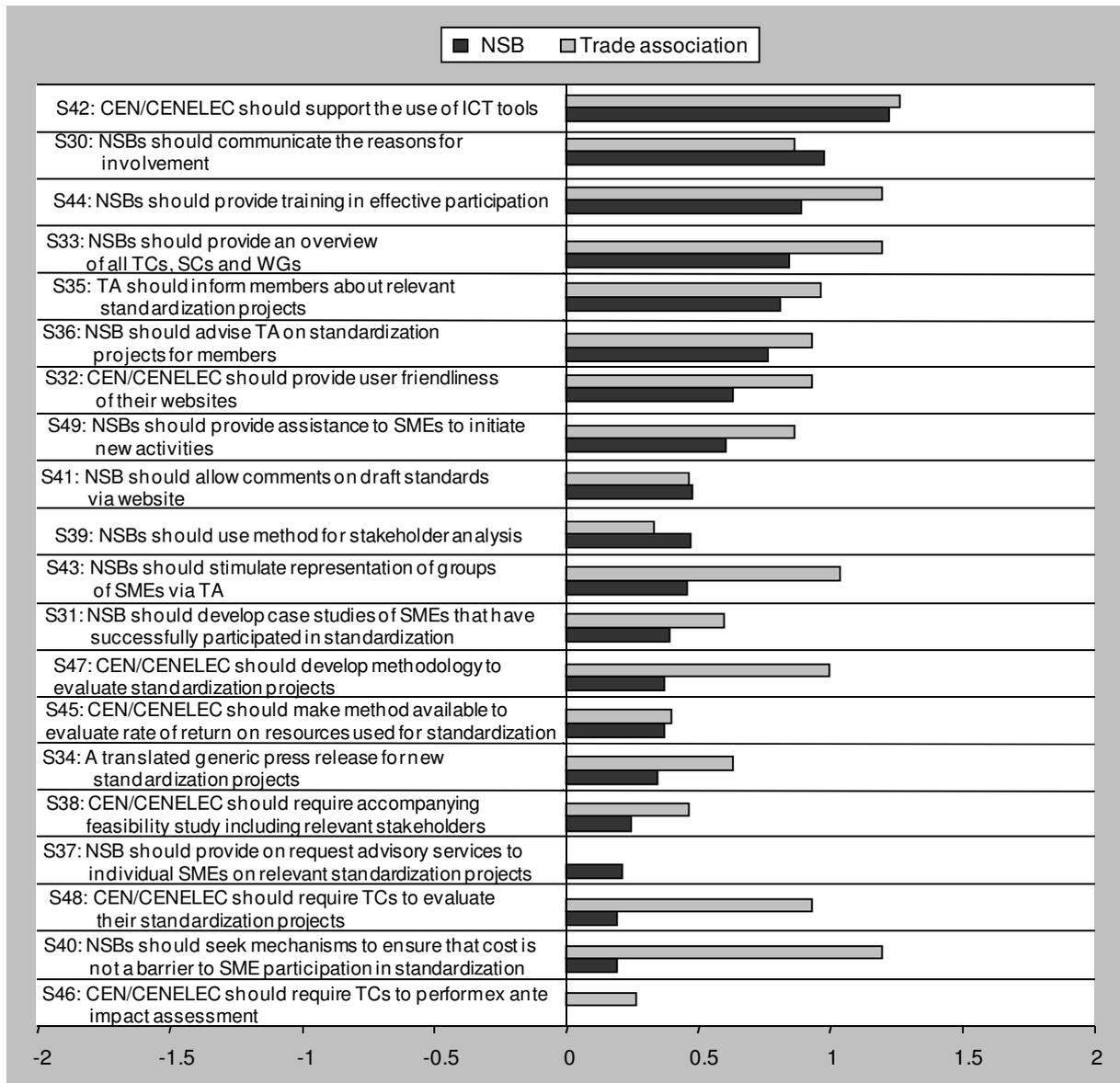


Figure 13: Solutions to benefit from involvement in standardization: cost-effectiveness



Considering the solutions for ‘enablers’ (Figure 14), it can be seen among the most important solutions that NSBs should maintain contact with trade associations and provide them with information. Examples of heterogeneous assessments are the general proposals that CEN and CENELEC should professionalize their staff and the introduction of ISO 9001, which receives only low scores by the trade associations; the NSBs, on the other hand, are in favour of CEN and CENELEC, but not for their own institutions. The structural differences between NSBs and trade associations are, in general, rather similar to their assessment of the importance and the cost-effectiveness of the proposed solutions.

Figure 14: Solutions for ‘enablers’: importance

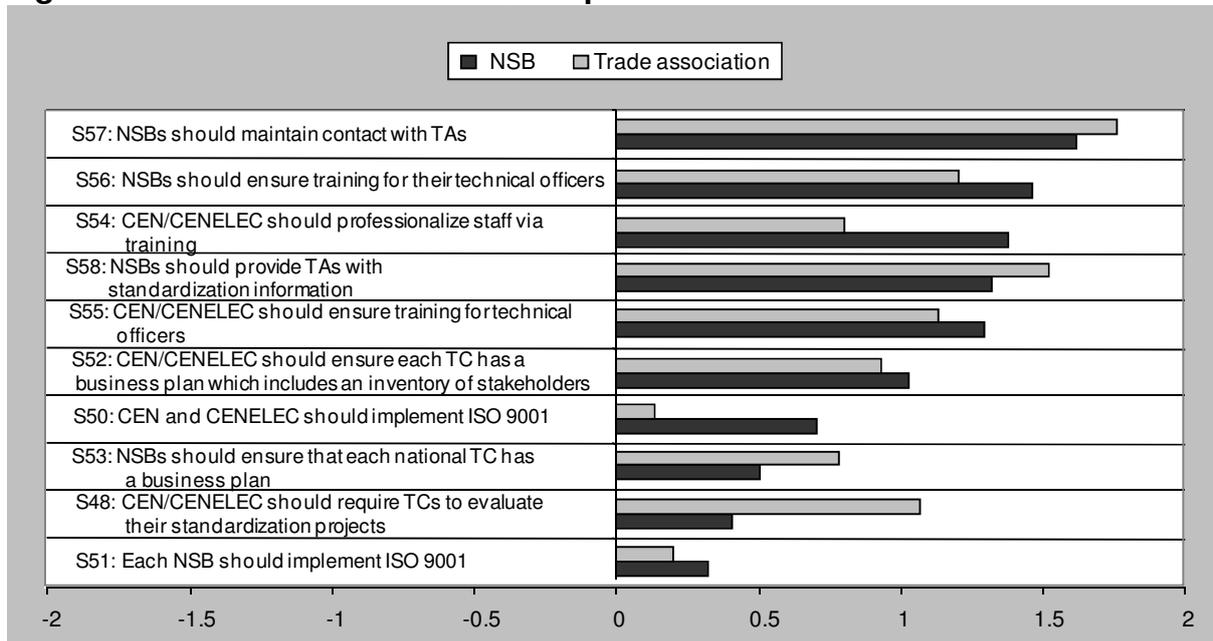
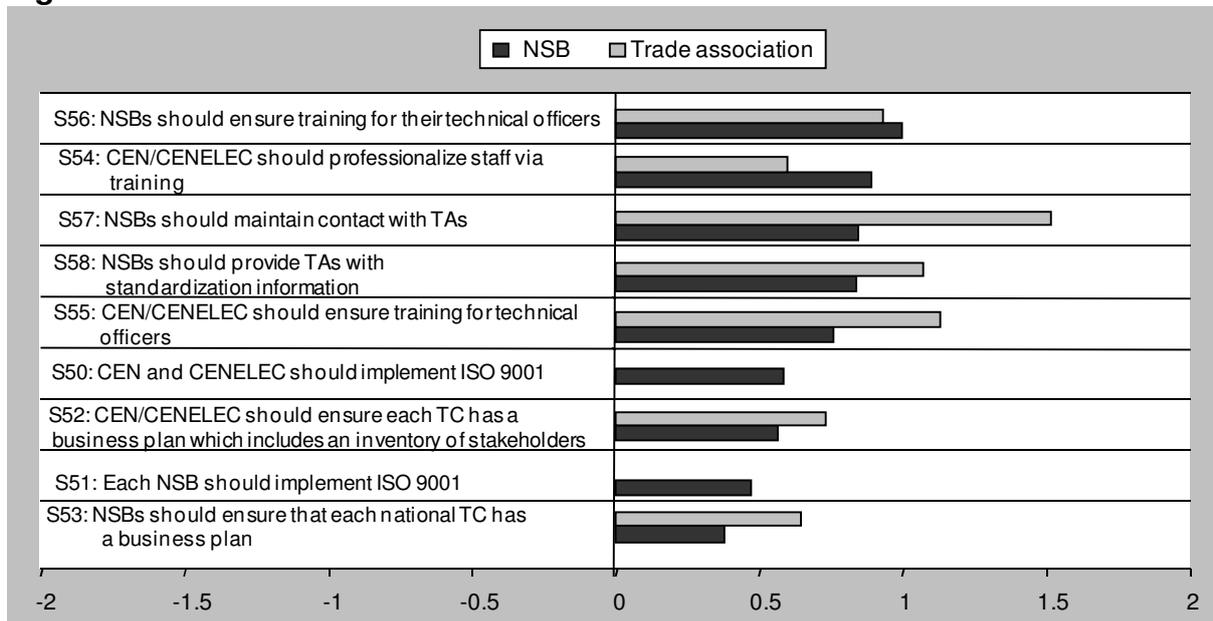
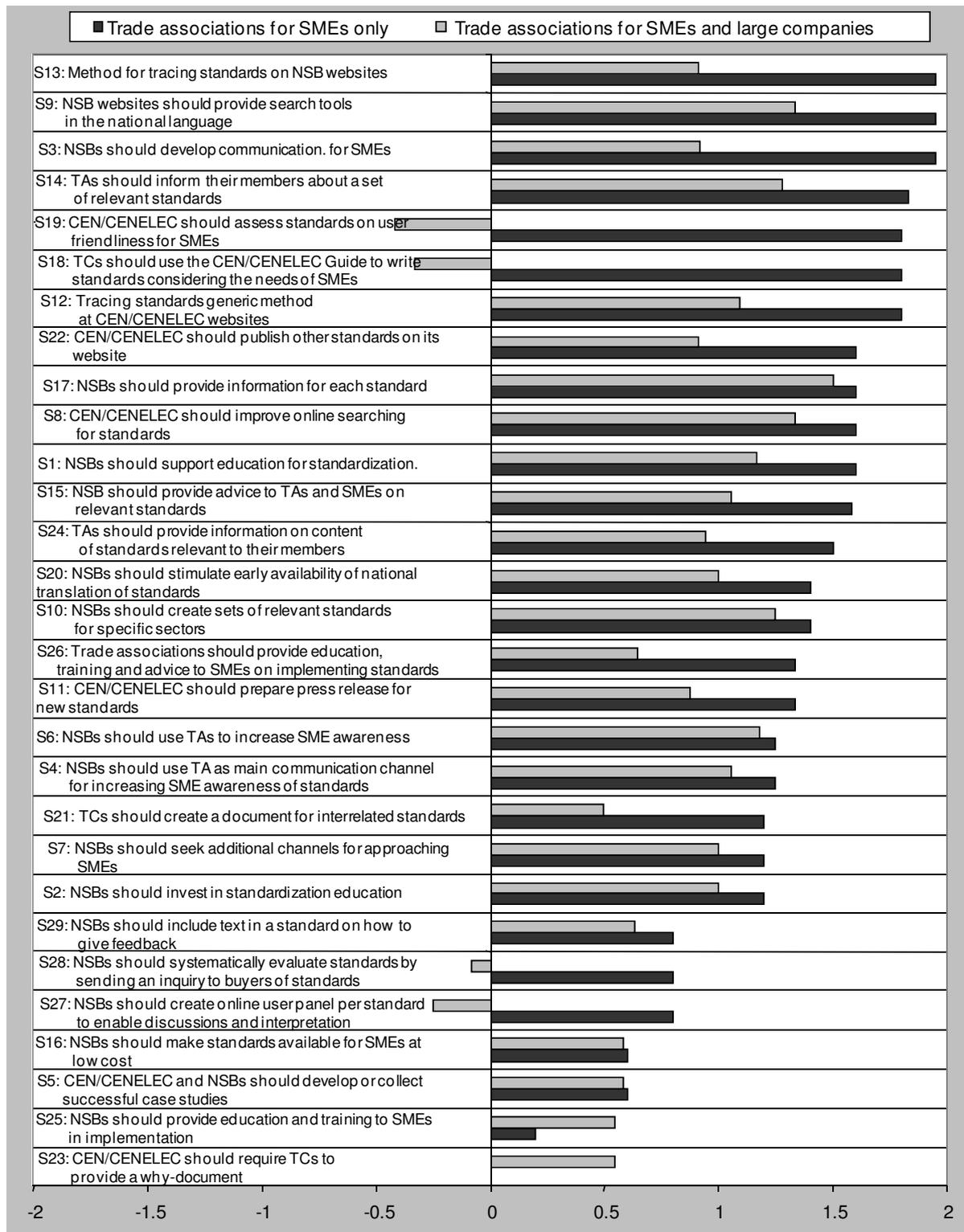


Figure 15: Solutions for ‘enablers’: cost-effectiveness



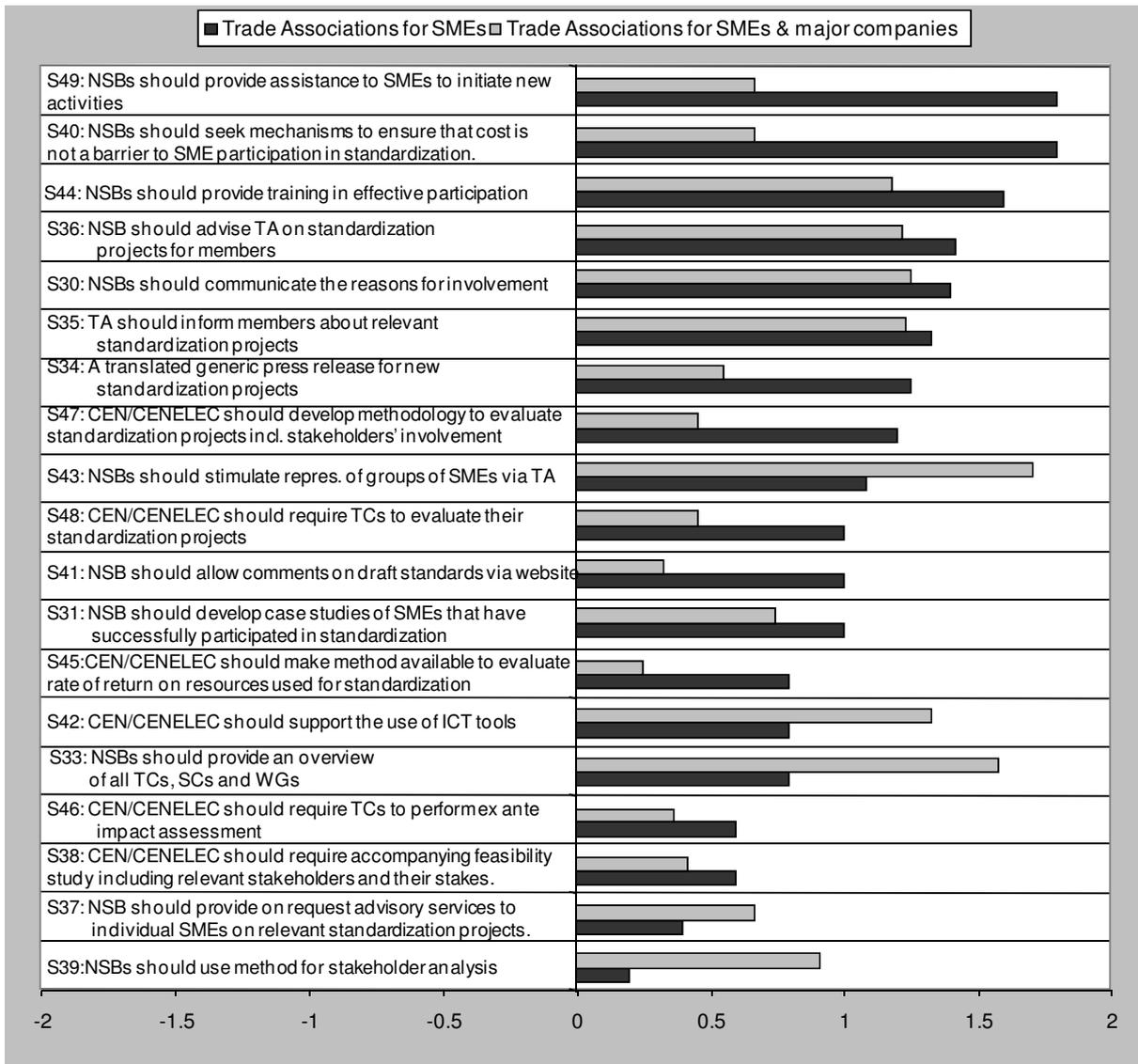
As well as the differentiation of responses given by the two organizations, trade associations can be divided into those that represent all types of enterprise and those that just represent small enterprises. In the vast majority of the solutions to benefit from standards, we see a more positive assessment by the trade associations that represent only small enterprises (Figure 16). It is only for some of the proposals concerning CEN and CENELEC that the support is stronger by trade associations that also represent large companies. The associations that represent SMEs only favour, in particular, solutions for tracing and for understanding standards.

Figure 16: Solutions to benefit from standards: TAs for SMEs only vs. TAs for small and large companies



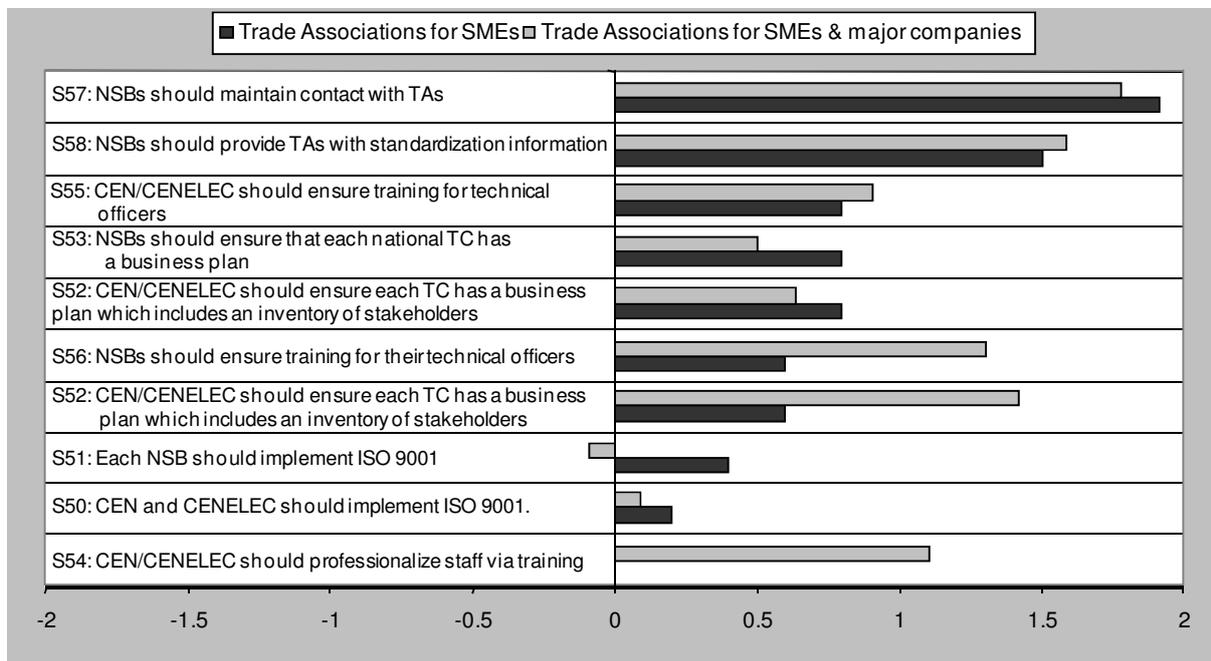
In addition, for most of the solutions to benefit from involvement in standardization, the trade associations for SMEs give higher ratings, except for some solutions relating to improvement of the system rather than improvement of the direct services to SMEs (Figure 17).

Figure 17: Solutions to benefit from involvement in standardization: TAs for SMEs only vs. TAs for small and large companies



All trade associations strongly favour contact and knowledge transfer between NSB and trade association. The trade associations for SMEs only give little support for other 'enablers' whereas associations that also represent large companies see a more important role for CEN and CENELEC.

Figure 18: Solutions for ‘enablers’: TAs for SMEs only vs. TAs for small and large companies



5.4 Assessment by degree of experience

The assessment of the solutions depends also on the experience gained by the organizations concerned. Therefore, the answers were differentiated according to those who have implemented a solution and those who have not.

First, it appears that there is a large discrepancy in the level of implementation (see Figures 19, 20 and 21). The most popular solution is that NSBs should maintain contact with trade associations followed by providing them with information. In addition to this rather evident and rather general solution, around 75 per cent of NSBs provide training in effective participation, train their technical officers, provide websites with search tools in the national language and communicate the reasons for participation in standardization. The more general solutions are also far more often implemented than the solutions addressing either standards or standardization. In contrast, only 2 per cent of the organizations have implemented an online tool to comment on drafts of standards. Furthermore, all the methods to evaluate the impact of standards and the possible return on investment are implemented by less than 10 per cent of the responding organizations. Of course, having implemented a solution does not mean that this implementation cannot be improved; the ‘best practice’ examples in Chapter 4 could be used for that.

Figure 19: Proposed measures in place: standards

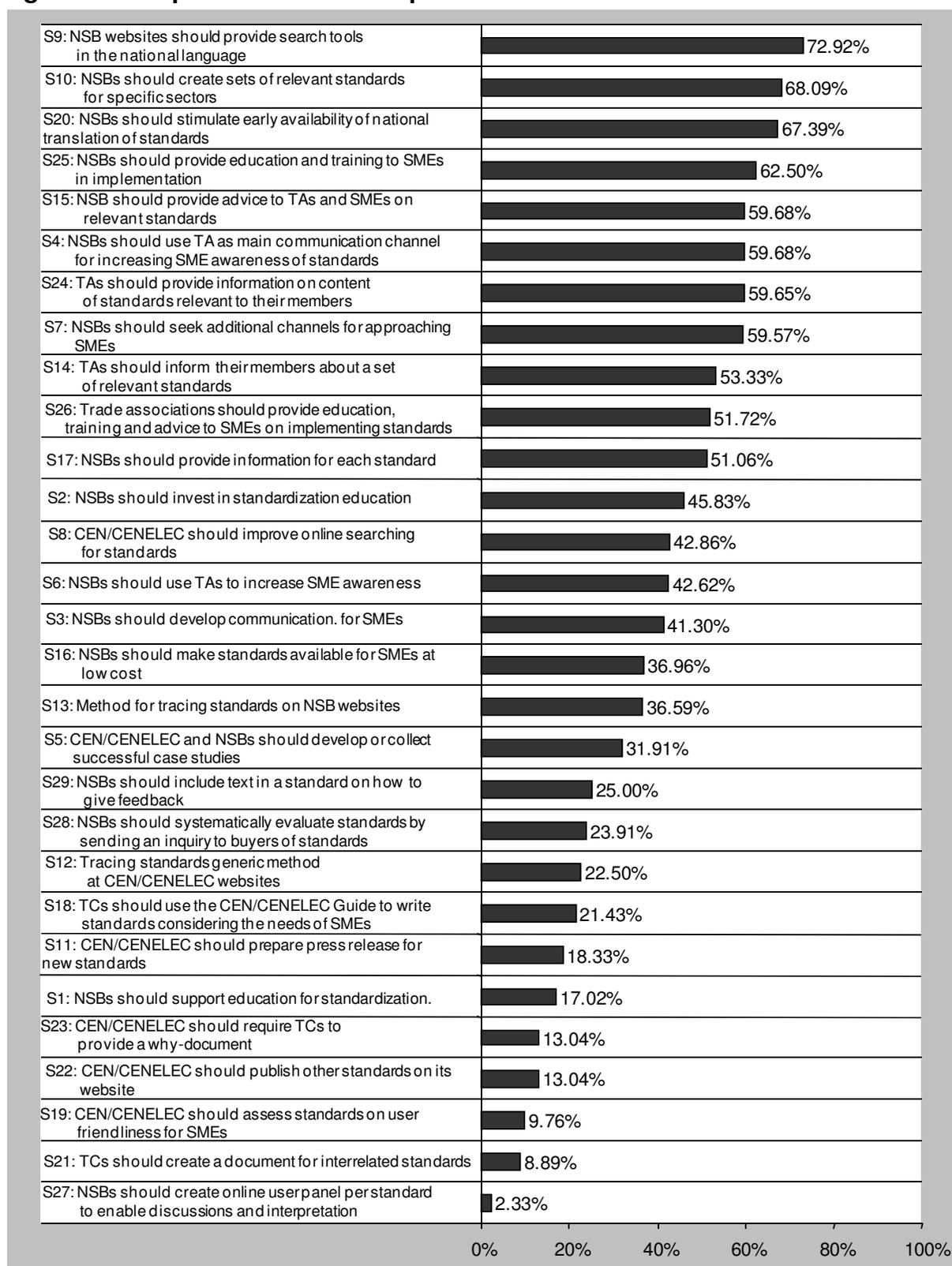


Figure 20: Proposed measures in place: standardization

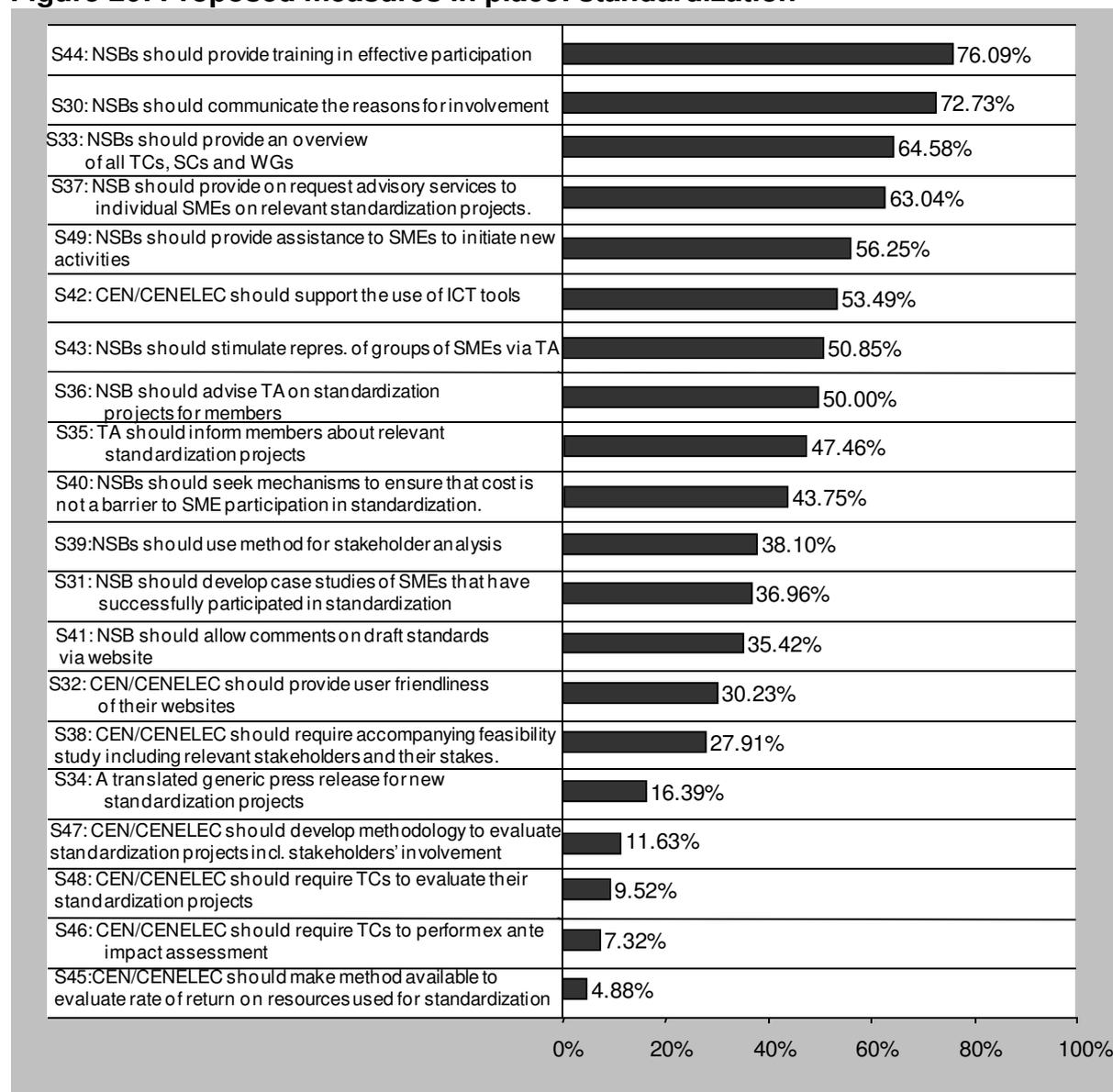
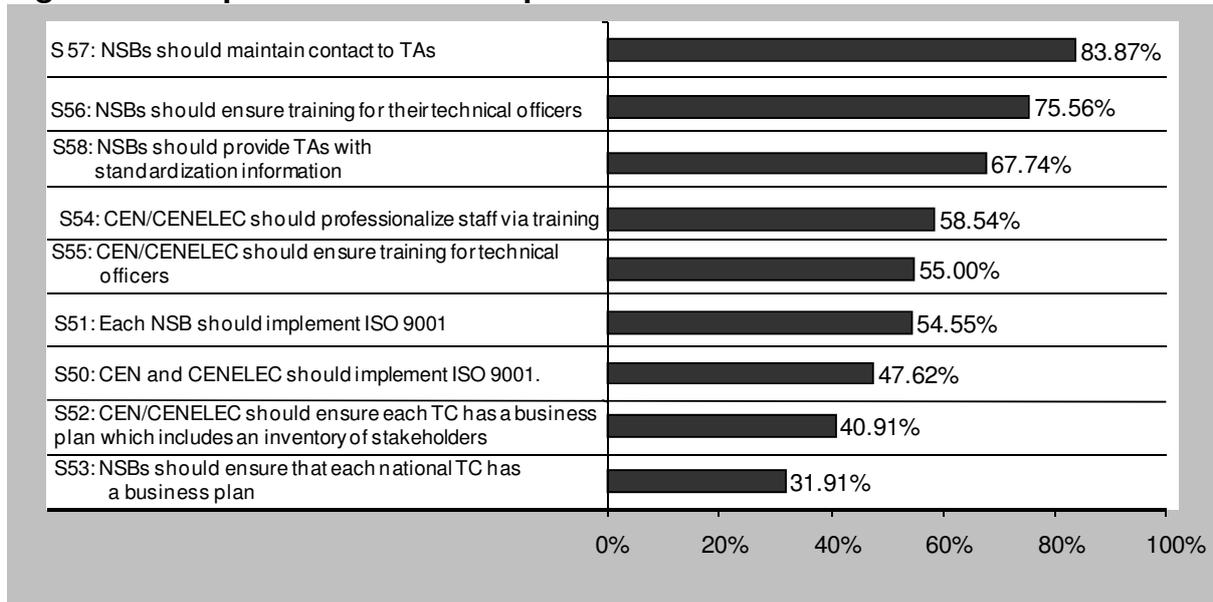


Figure 21: Proposed measures in place: ‘enablers’



Second, those organizations which have implemented solutions assess their importance far more positively than those organizations which have not been through the implementation process (Figure 22, 23. and 24). It turns out that the more generic solutions – such as providing education on standardization, or information on standards, or facilitating the tracing of standards – are the most favoured solutions among those aimed at benefiting from standards. If we turn to the solutions regarding participation in standardization, only three solutions achieve high assessments among the ‘inexperienced’ respondents. NSBs should communicate the benefits of an active involvement, CEN and CENELEC should support the use of ICT tools and the trade associations should inform their members about ongoing standardization processes. Since most of the general solutions are reported to have been implemented, we observe only two issues with some significant assessment. CEN and CENELEC are invited to professionalize and train their staff.

Figure 22: Importance of solutions to benefit from standards assessed by NSBs: implemented vs. not implemented

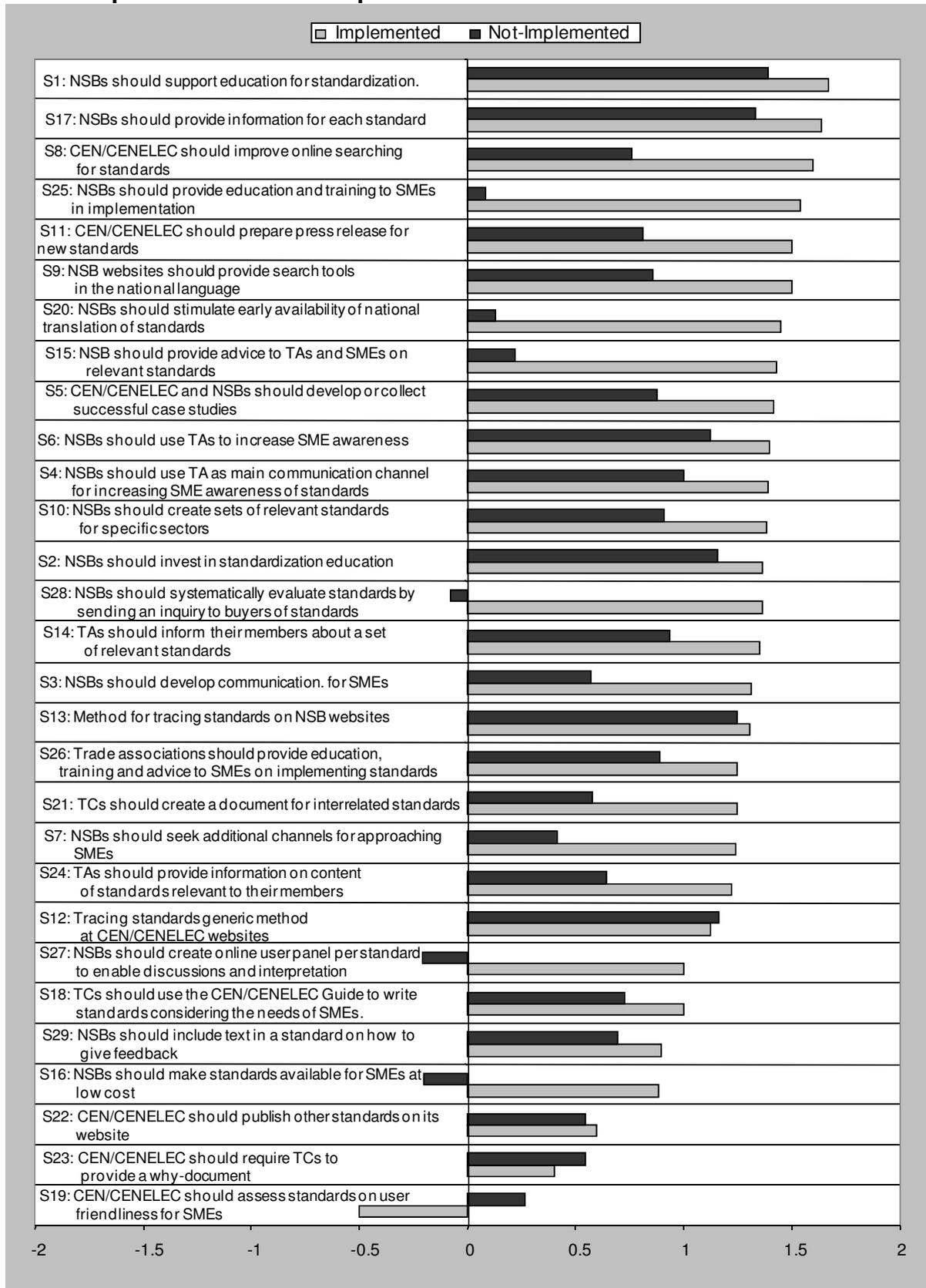


Figure 23: Importance of solutions to benefit from involvement in standardization assessed by NSBs: implemented vs. not implemented

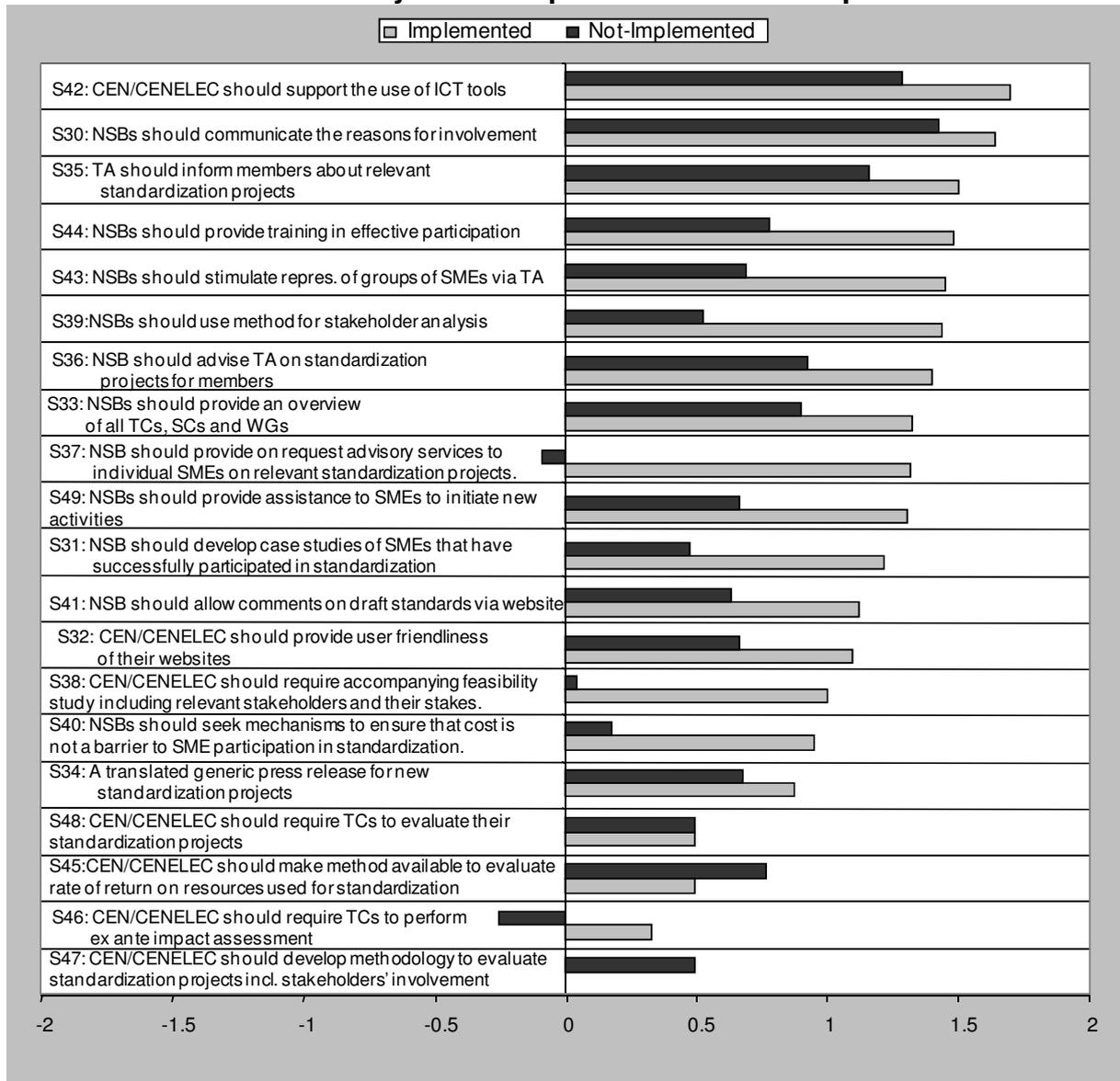
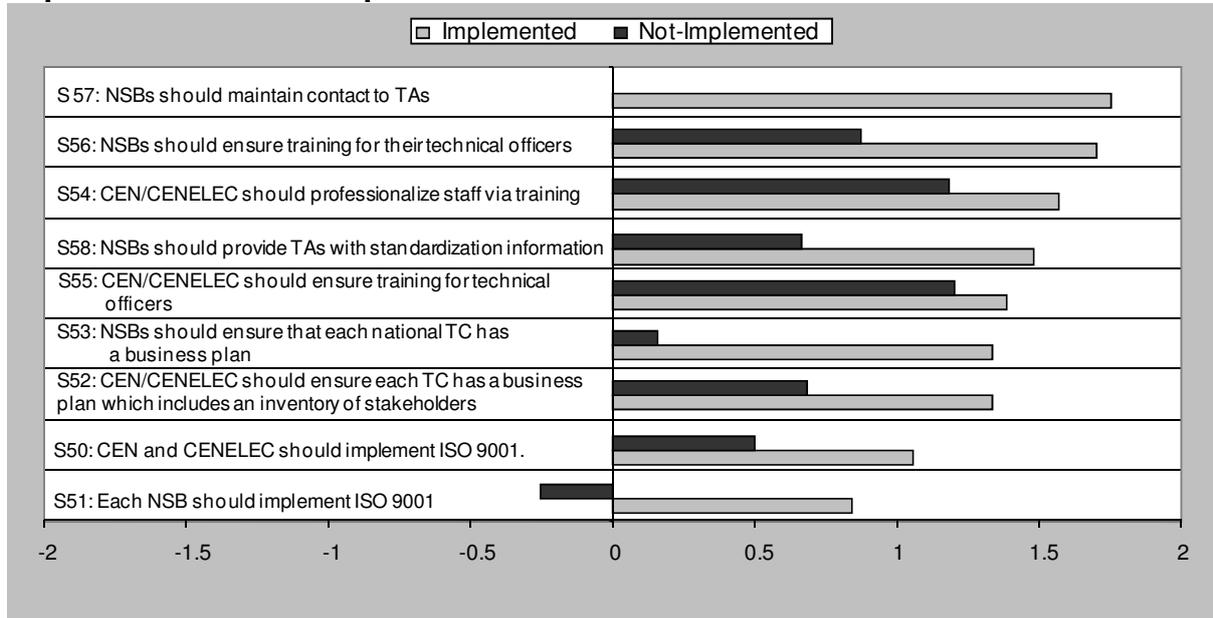


Figure 24: Importance of solutions for ‘enablers’ assessed by NSBs: implemented vs. not implemented



5.5 Summary of the assessment

Summarising the assessment of the proposed solutions, the following conclusions can be drawn.

First, the vast majority of the proposed solutions are assessed to be both important and cost-effective. Only a very few measures addressing the evaluation of standards use and the evaluation of involvement in standardization, and some generic quality aspects receive ambivalent responses.

Second, there are some differences in perception by the NSBs and the trade associations. Whereas the latter assess the relevance of almost all solutions at a higher level (and especially the access, tracing and evaluation-related solutions) the NSBs see some solutions focusing on CEN and CENELEC to be of lower relevance and less effective. The differentiation between different types of trade association reveals no important further insights. These answers suggest that a discussion on the division of work between NSBs and trade associations – but also especially between NSBs and CEN or CENELEC – has to take place.

Third, those organizations having already implemented some solutions underline both their relevance and cost-effectiveness. Therefore, the focus on the feedback by those having not implemented the proposed solutions provides some insights about priorities among solutions and their feasibility. In general, the more generic solutions are assessed to be most relevant by those organizations which have not implemented them yet. Furthermore, we also see a positive correlation in the assessment of solutions by those not having implemented them and, where implemented, the degree of their implementation.

6 Trade associations – how they can optimally serve their members

Because of inherent weaknesses of many SMEs (in particular, lack of time, money and knowledge) they may need help in the area of standards and standardization. Trade associations are the natural organization to offer such help. In addition to the suggestions already made in earlier chapters, this chapter adds some 'best practice' case studies.

The first case study (in Section 6.1) describes the activities of a national trade association, most of the members of which are very small companies. Sections 6.2 and 6.3 describe European trade associations for SMEs. In these three cases the focus is on the general interests of SMEs in relation to standards and standardization. Section 6.4 is about highly-innovative SMEs. In that case, the trade association also helps in addressing company-specific needs. Section 6.5 describes the role of a trade association in a powerful business sector in a large country where large companies are among its members. Strictly speaking, Section 6.6 does not fit under the heading 'trade association' – it describes the role of a national knowledge organization which combines support in the field of standards and standardization with research. In the final section (Section 6.7) we describe the possible role of a trade association. This section is structured using the barrier model.

6.1 Confartigianato Imprese

Confartigianato Imprese¹⁷⁵ is an Italian trade association representing the interests of Italian crafts, trades and SMEs.

Guidelines to help to implement the CE mark

Many SMEs face problems with the implementation of New Approach directives, in this case the Construction Products Directive, and related standards. These confuse many employees. To solve this problem, Confartigianato has established an ad hoc Technical Work Group on CE marking, together with experienced territorial partners who have already been applying the standards for a long time. This group has developed guidelines on three types of product that mainly interest the small craft enterprises:

- industrial, commercial and/or garage doors and gates (standard: EN 13241-1)
- shutters and blinds (EN 13659)
- windows and gates (EN 14351-1)

The publications are:

- a guideline addressing topics covering technical guidance to concrete operating instructions;
- a Frequently Asked Questions (FAQ) document in which some of the most important issues are explained in such a way that artisan entrepreneurs can easily understand the three possible methods of CE marking;
- reports with 'best practice' descriptions based on consulting services on CE marking offered by some territorial associations;

¹⁷⁵ <http://www.confartigianato.it/index.asp>

- Standards Manuals on Factory Production Control (FPC) which provide the producer with tips on controlling the production process, thus allowing him/her to guarantee that the performance verified from the beginning of the tests (Initial Type Testing – ITT) continue to be valid and equal for all subsequent products, including innovations in the production process.

These guides can be used by Confartigianato colleagues in their consultation service on CE marking offered to various enterprises.

6.2 IFD – International Federation for the Roofing Trade

The International Federation for the Roofing Trade¹⁷⁶ (Internationale Föderation des Dachdeckerhandwerks (IFD)) represents the interests of the roofing trade on behalf of 17 national associations of roofers in Europe. It organizes an annual roofing conference and takes initiatives for European standardization and guidelines.

Input into European standardization and avoiding unnecessary European standardization

IFD drafts guidelines and recommendations through its own technical committees. Those guidelines such as the IFD 'Recommendation for Sealed Roofs' were the basis of the decision taken by the EU Commission and by CEN neither to initiate nor to arrange for a performance standard in this field. IFD has suggested product and test standards in Europe, and many of its proposals have been implemented in the meantime. Two CEN working groups, initiated by IFD, drafted a test procedure for rainproofing and resistance to wind load. Both issues had their origin in the working groups of IFD. CEN Report 833 (which deals with the essential requirements and basics for roofing and is relevant for every standardized European roofing product) is based, to a large extent, on the work of an IFD Commission on Pitched Roofs. IFD participates on the CEN Committees CEN/TC 254 (Flexible sheets for waterproofing) and CEN/TC 128 (Roof covering products for discontinuous laying and products for wall cladding).

Influencing and explaining common European legislation

IFD monitors European guidelines and directives which impact on individual national rules and legislation. This means that IFD represents the interests of both small and medium-sized roofing enterprises, but also and in particular those of the roofing trade. In addition, the interests of the manufacturers who are partner-members of IFD are integrated in the general reflections so that they too have the opportunity to express their interests towards the Commission. IFD also helps member organizations to implement the directives on a national level in such a way that the roofing trade can continue to work efficiently. This is valid, for instance, in the context of workers' protection against asbestos in the workplace, in relation to anti-fall guards and with prequalification. IFD has been asked frequently by members of the Commission and of the European Parliament to draft statements, to present reports and to transfer information.

Information exchange

The IFD Rules and Regulations are the basis for national rules and regulations which are commonly applied by the members of IFD in their daily work in their respective countries. IFD also fosters the mutual know-how transfer between the various member countries, including the establishment of organizations and/or structures for vocational training, in particular in new member countries.

¹⁷⁶ <http://www.ifd-roof.eu>

6.3 ECAP

ECAP¹⁷⁷ is a service consortium for European SMEs which produce fixing systems: mechanical, chemical and plastic anchors and powder actuated tools. ECAP was founded in 2001 and has 19 members from eight EU member states. ECAP is 100 per cent funded by its members. ECAP is a member of NORMAPME.

Representing SMEs in EOTA and CEN committees

ECAP represents its national members and indirectly the SMEs in EOTA¹⁷⁸ working groups on anchors, in three technical CEN working groups, in CEN/CLC BT/WG 208 Guidance on SME needs and has a liaison with CEN/TC 351 'Dangerous substances in construction'. In the EOTA and CEN technical working groups the quality of ECAP's input is enhanced by a co-operation with the Department of Structural Engineering, University of Milan, Italy. University experts join meetings, read documents, discuss possible consequences and, if necessary, carry out tests and research in their lab.

Informing members

ECAP informs its members about developments in standardization in several ways. An internal ECAP working group, consisting of technicians from the technical departments of ECAP members, analyzes and discusses draft standards. The collected inputs originate from research projects, position papers and proposals, including proposed strategies for the next CEN and EOTA meetings. All drafts and relevant documents are available on the website in the ECAP members' area.

6.4 SPECTARIS

SPECTARIS¹⁷⁹ is a German industry association for high-tech medium-sized companies in the areas of medical technology, optical technologies and analytical, biological, laboratory, and ophthalmic devices. Innovation and growth characterize the different industry sectors with 235,000 employees. SPECTARIS pools the interests of around 400 member companies from Germany, associated in three different sector-specific associations. SPECTARIS supports its members in the field of standards and standardization in several ways.

Access to a predefined set of standards

SPECTARIS is preparing to offer its members access to a set of standards which are of importance to the members. SPECTARIS staff made a first proposal about which standards were assumed to be important; this set was then checked and added to by the members. Beuth Verlag (the publisher related to the German NSB DIN) will provide SPECTARIS with these standards. SPECTARIS pays Beuth a yearly licence fee. All SPECTARIS members can obtain copies of any standard they need for free (this applies to a subset of the set of standards) or for a small fee (less than the original price). This service includes all updates of the standards.

Representation of member companies in standardization

SPECTARIS represents its members in national, European and international standardization. First, their wishes, thoughts and ideas are discussed in a meeting at the national level. There it is determined in which standardization committees SPECTARIS should participate. SPECTARIS has one staff member to do this. Because he has an industry background, he is able to participate in discussions on the main technical issues. If a topic is too specific, or if a

¹⁷⁷ <http://www.ecap-sme.org>

¹⁷⁸ European Organization for Technical Approvals; <http://www.eota.be>

¹⁷⁹ <http://www.spectaris.de/english/print.html>

specific interest of one of the member companies is at stake, he invites this company also to participate. But, in general, he performs the main participatory role, which saves the members the cost and inconvenience of being away from the office. This staff member reports the outcome of such meetings in the national meetings and discusses this with the representatives from the member companies. Attending a national meeting may be too much of a burden to the other members and therefore, in addition, the staff member also visits member companies to make sure he is aware of their needs and to discuss standardization matters with them.

Assistance with implementation

The same staff member also assists member companies on a bilateral basis as a consultant with the implementation of some standards and European directives and regulations. Because of a lack of expertise and time, he is able to do this for only a limited number of products produced by a small number of member companies. The consultancy activity provides him with a more effective background for representing the members in standardization committees.

6.5 VDMA

Verband Deutscher Maschinen und Anlagenbau (VDMA¹⁸⁰) is a non-profit federation, representing the local machinery and industrial equipment manufacturers. It is a network of around 3,000 engineering industry companies in Europe. At VDMA's office, 400 industry experts support this network.

Involving industry in national standardization activities

One of the 70 DIN standardization departments focuses on mechanical engineering; 90 to 95 per cent of its work is in relation to international and European standards, and 5 to 10 per cent with national standards. It has 27 'Fachbereiche' (main committees) reflecting 27 sectoral associations of the VDMA and 220 'Gremien' (subcommittees). These VDMA committees prepare German national standards and the German input in European and international standardization. The committees are supported by 40 'Normungsreferenten' (standardization engineers and supporting staff) who also have technical expertise. Activities are open to non-members of VDMA.

The standardization consultants thoroughly analyze new draft standards, highlight the most important points and thus make them 'digestible' for SMEs which, in general, do not have the time, personnel or financial capacity to analyze all the documents themselves. Thus their work includes not only administrative tasks but also professional/technical work. SMEs (and also larger enterprises) are thereby relieved from comprehensive screening work and can concentrate on the professional/technical core aspects of standardization and bring in their special expertise. SMEs and large enterprises (which, however, often have their own standardization departments and experts and do not rely as much on the work provided by the standardization engineers) can then comment on the newly drafted standards either by e-mail/post or in person during committee meetings. The committee considers all comments and opinions, formulates a common statement (paying particular attention to SME interests) and transfers it back to the standardization bodies at international or European level. This process ensures that the interests and experiences of German SMEs are represented adequately at the national and supra-national level. The 'national reflection/mirroring' is thus a process taking place in two directions: (1) from the international level to the national level, and (2) back from the national level to the international level.

¹⁸⁰ Information from VDMA; <http://www.vdma.org>; EIM Business & Policy Research, 2006, pp. 80–85; VDMA, 2008.

Informing industry about standards and standardization

SMEs are kept informed by discussions in committee meetings, telephone contacts, newsletters, workshops, their own websites, brochures, CD-ROMs and through articles in professional journals.

6.6 ISSO – Dutch Building Services Knowledge Centre

ISSO¹⁸¹ is a non-governmental organization in the Netherlands, founded by professional organizations in the building services sector.¹⁸² ISSO is a non-profit organization, a foundation under Dutch law, founded in 1974. Its main goal is to organize research and knowledge transfer to satisfy the needs of the members of ISSO's constituent parties. ISSO bridges the gap between research, standards and daily practice of designers, installers and other professionals in the building services sector. The aim is to improve the quality of the services and installations delivered by the enterprises in this field. Most of these enterprises are SMEs.

Publications

Since 1974, ISSO has published more than 100 technical guidelines, handbooks and other information products. Many of these are based on standards and explain how to work with certain standards – without additional explanation it can be difficult to understand some standards. Additionally, ISSO develops guidelines for topics for which no national, European or international standards exist – having common procedures and guidelines improves the productivity of the sector and improves the overall quality of the works delivered. ISSO publications are developed in close co-operation with the target group; all projects for the preparation of these technical guidelines are monitored and supported by representatives from the professional sector.

Close link between ISSO and NEN committees

The composition of some ISSO committees is identical to the committee of the Dutch NSB NEN. In this way, the same people prepare both national standards and ISSO publications and prepare the Dutch input for European standards.

Funding

Funding of ISSO's activities is project-based. Money comes primarily from the constituent organizations. Several projects are (co-)financed by national (Dutch) and sometimes European authorities because ISSO's activities also support national interests such as energy saving, safety, and health and comfort issues for the users of buildings.

6.7 The possible role of a trade association

By combining the previous sections with the solutions and practices described in Chapter 4, we can make a systematic description of the possible role of a trade association: that of linking the practices and barriers that SMEs may face. In general, trade associations can perform a bridging function between the markets and the standardization processes. First, we will describe the possible role of trade associations in enabling their members to benefit from standards, and then from involvement in standardization. NSBs have an important role

¹⁸¹ <http://www.isso.nl>

¹⁸² The constituent organizations are: UNETO-VNI (the Dutch association for installation companies), TVVL (the association for professionals in the building services industry), ONRI (the Dutch association for consulting engineering companies), and VABI (organization for software for the building services sector).

in relation to trade associations which could be seen as professional account management. We end this section with some concluding remarks.

6.7.1 Support for benefiting from standards

1. Awareness of standards

Trade associations may inform their members about the importance of standards. Better than separate activities is the integration of 'standards' in the existing communication channels with the members. Additionally, trade associations may stimulate others to undertake activities – for example, government (regular education), innovation centres, Chambers of Commerce. It is more convincing if trade associations take this approach than for standards bodies to seek attention for their own business. NSBs will have a supporting role, providing the necessary information and explanation.

2. Awareness of the importance of standards for the SME's own company

A trade association might be better equipped than an NSB to relate standards to the specific position of companies in their branch of business. This applies to standards which are of common interest to many of the member companies, although the SPECTARIS case shows that it is also possible for the specific needs of individual companies. Trade associations may encourage the forming of 'communities' in relation to a set of standards, or they may use their own member-community to integrate standards into what they do.

3. Tracing standards

In co-operation with the NSB, the trade association can create sets of standards which are expected to be important for many of its members. It can inform its members about new standards in their field. If the trade association staff have learnt to apply the method of tracing standards, they can help their members to find the relevant standards for that company.

4. Obtaining standards

In some countries, price agreements with the NSBs may be feasible. In Germany, the trade association's website can be linked to the standards publisher which makes it easier for members to find and order standards in their field. This can be combined with price reduction.

5. Understanding standards

Trade associations may help their members understand standards by providing, for instance, course manuals, or easy-to-read versions of the standard. This may include information about the 'context' of the standard, such as CE marking. NSBs can provide the necessary input and even make 'co-productions'.

6. Implementing standards

Trade associations may provide education, training or advice to SMEs to provide support in implementing standards.

7. Evaluating the implementation of standards

Trade associations may collect feedback from their members to be used in a revision of those standards or as a trigger to provide extra guidance on how to interpret and implement the standard, which may include best practice cases from member companies.

6.7.2 Support for benefiting from involvement in standardization

1. Awareness of the process of standardization

Communication about the importance of standards may be complemented with information about the possibilities to become involved in standardization.

2. Awareness of the importance of involvement in standardization for the SME's own company

Cases of successful participation by members may convince others also to get involved.

3. Tracing standardization projects

If (as referred to above) the trade association informs its members about new standards and planned standards (ongoing projects) in their field and helps them to trace specific standards, they could additionally inform them about standardization activities that might be of interest. The standardization infrastructure could also be made clear. The SPECTARIS case shows that, if needed, a trade association may inform a member company about a possible company stake in getting involved in the development of a certain standard. Other practices show that annual reports and master documents are effective methods of communication.

4. Becoming involved

The trade association may represent its members in standardization. This applies at the national level but, in the case of European standardization, a liaison between the TC and a European trade association is another option; both may be used. The trade association may pay for the standardization activity so that participation is free (Section 6.5). Active participation is crucial to be able to influence and is to be welcomed. It eases the information function to the members.

5. Being involved effectively

In European standardization, the underpinning of arguments is important. If a trade association manages to integrate research findings in the input, then the participation is expected to be more effective (see Sections 6.3 and 6.6 on how this may be realized). Trade association employees are used to operate in a complex environment with different stakes, which helps them to be able to represent their members in standardization. Nevertheless, effective participation will require additional education.

6. Evaluating

The trade association may integrate member feedback in studying the business importance of standards for its members and use such studies for future activities, which may include initiating new standardization activities or revision or withdrawal of existing standards

7. Initiating new activities

A trade association may support members who want to initiate a new standardization activity.

6.7.3 Concluding remarks

Trade associations are essential for resolving standardization problems for SMEs but may be part of the problem as well. Trade associations are funded by their members and therefore tend to do what their members ask them to do. If these members are not aware of the importance of standardization, they will not ask for it. Some trade associations themselves are insufficiently aware. NSBs should understand this and be sensitive in the way they

approach trade associations. This report might be a trigger for seeking contact. SME case studies may be convincing, in which case SMEs themselves can be the ambassadors of the message.

Close co-operation between trade association and standards body is needed to create optimal support for the members. The British, French and German examples (Section 4.3.5) show that such co-operation may be prepared and managed in the form of a policy committee for SMEs and standardization. A similar mechanism does not exist at the European level.

The most extreme form of co-operation is where the trade association itself carries out standardization activities, as in the Finnish case (Section 4.3.5). This solution may seem attractive but might be at the cost of, for instance, co-ordination between different standardization activities and the bundling of standardization expertise at the national level. A benchmark study showed no problems of centralization.¹⁸³

¹⁸³ Bonner and Potter, 2000.

7 Conclusions, some further analysis and recommendations

7.1 Conclusions

The goal of this study is to come up with recommendations to the Administrative Boards of CEN and CENELEC on how to improve access to European standardization for small and medium-sized enterprises (SMEs). The ultimate aim is to provide solutions to improve the value of standardization and standards for SMEs and to reduce their financial impact.

In this study, we first addressed the need for such solutions. Most available studies fail in providing real evidence about the problems for SMEs, but such problems are probable and sometimes are really manifest and, moreover, it is not only a question of solving problems but also of enabling SMEs to benefit more from standards and from involvement in standardization.

The feedback we received from CENELEC and several of its National Committees, as well as from trade associations and companies in the field of electrotechnology, suggests that in the electrotechnical area SMEs face fewer problems than in other areas. This may be related to the long tradition of standardization in this area, to the strong need for standards (for safety and interoperability), to the better inclusion of standards in technical education, and to the culture of both the industry and its standards bodies. The electrotechnical sector is over-represented in the 'best practices' we received; other sectors can learn from this field but have to keep in mind that solutions that work in the electrotechnology sector may not necessarily work in other branches of business.¹⁸⁴

It must be concluded that, indeed, SMEs could benefit more from standards and standardization, or may even face problems in relation to standards. This situation is related to the inherent weaknesses of many SMEs, in particular their lack of strategic resources. Solutions may focus on these resources, for instance by compensating for a lack of time, money or knowledge. They may also focus on making the 'supply side' of standards and standardization more easily accessible. The third option is to focus on the role of intermediary organizations to bridge the gap between SMEs and the 'standardization world'. Trade associations, in particular, may play this role.

We have developed a set of 58 solutions: to benefit more from standards, to benefit more from involvement in standardization, and a third category of general solutions to enable these solutions to barriers.

It turned out to be useful to develop a 'barrier model'. SMEs may face the following sequence of barriers to obtaining benefit from standards:

- a) awareness of standards;
- b) awareness of the importance of standards for the SME's own company;
- c) tracing standards;
- d) obtaining standards;
- e) understanding standards;
- f) implementing standards;
- g) evaluating the implementation of standards.

¹⁸⁴ Previous research in which six branches of SMEs were investigated showed remarkable differences in attitude towards and practice of standards and standardization (De la Fuente and de Vries, 1995).

Standards may be relevant for many SMEs; in contrast, the number of SMEs that would benefit from involvement in standardization is much smaller. Such SMEs may face the following sequence of barriers to benefit from involvement in standardization:

- a) awareness of the process of standardization;
- b) awareness of the importance of involvement in standardization for the SME's own company;
- c) tracing standardization projects;
- d) becoming involved;
- e) being involved effectively;
- f) evaluating.

We have related solutions to the barriers and added examples of such solutions. We included a third category, 'enablers', to address solutions needed in the 'back office' to enable the solutions for the barriers. This set of 58 solutions may be seen as a 'tool box' from which standards bodies as well as trade associations can select the appropriate subset to support SMEs in their country.

In improving the situation for SMEs, the role of trade associations is crucial. We have added some best practice examples of trade associations and used the barrier model to systematically describe how trade associations can help their members to obtain greater benefit from standards and standardization.

In a survey among both NSBs and trade associations we asked for feedback on our set of solutions. We received an almost 100 per cent response to our survey from the NSBs. They had only a limited number of days in which to complete a long questionnaire. In survey research, such a response rate is exceptional and it seems to be an illustration of the commitment of the NSBs to this project and to the issue.

The main conclusion is that we received support for almost the entire set of solutions, which were assessed to be both important and cost-effective. Only a very few measures addressing the evaluation of the work of the NSBs and some generic quality aspects received ambivalent responses.

The results show some differences in the perceptions by the NSBs and the trade associations. Whereas the trade associations assess the relevance of almost all solutions at a higher level (and especially the access, tracing and evaluation related solutions), the NSBs see some solutions focusing on CEN and CENELEC to be of lower relevance and less effective. These answers lead to the conclusion that a discussion on the division of work between NSBs and trade associations, and especially between NSBs and CEN or CENELEC, has to take place.

Many proposed solutions are in place already in a substantial number of NSBs. Those organizations that have already implemented some of the solutions underline both their relevance and cost-effectiveness. The feedback by those having not implemented the proposed solutions provides some insights into the priorities among the solutions and their feasibility. In general, the more generic solutions are assessed to be most relevant by those organizations which have not yet implemented them.. 'Having implemented' does not exclude the possibility of improving upon this implementation, using the 'toolbox' provided in Chapter 4.

The issue of free standards, often considered to be the core issue for SMEs,¹⁸⁵ does not have a prominent place in our study. The price of standards is just one of the issues relating to the barrier to obtaining standards. 'Free standards' is not a reasonable solution given the current business models of most NSBs.

SMEs need support in their nearby environment: i.e. at the national level. The major role, therefore, is for the NSBs and the national trade associations. An effective co-ordination between the two is a prerequisite. Of course, the national level depends on the efficient functioning of the European level, but the NSBs are not in favour of measures for further improvement at that level; the trade associations, in particular those for small SMEs, see more importance and cost-effectiveness in such solutions. In summary, CEN and CENELEC could have at least a co-ordinating role.

7.2 Some further analysis and discussion

7.2.1 European or national level solutions?

The strength and legitimacy of the European standardization system is related to the involvement of all stakeholders in the system and it should prove its value by the proper implementation of standards and the societal and business benefits resulting from this implementation. Companies are the main parties to implement standards and the vast majority of them are small or medium-sized, so improving implementation of standards by SMEs should be a top priority for CEN and CENELEC. This emphasis on standards implementation should also be reflected in standards development where the involvement of SMEs is in line for improvement.

Our project shows many solutions. For the implementation of these solutions, the national level seems to be more important than the European level and the survey answers confirm that NSBs see it in this way. However, the trade associations, in particular those representing SMEs only, give more emphasis to the European level.

NSBs differ a lot in their infrastructure and services. Large countries, in particular those who are CEN and CENELEC members from the outset, have strong institutions with a large number of staff and many possibilities to implement solutions in so far as these have not yet been implemented. Other countries, in particular the small ones, have NSBs with fewer resources and/or less experience. NSBs in rich small countries (such as Finland or Luxembourg) may face problems in serving the market because of a lack of critical mass for each sector of industry. The European standardization system depends on all of these, and companies, especially SMEs, depend on their national institution. Therefore, we recommend that CEN and CENELEC, despite some hesitation on the part of NSBs, should play a co-ordinating and facilitating role. The more measures that are implemented or prepared at the European level, or are developed at the national level but become available via the European level, the easier it will be for the weaker NSBs to implement them.

7.2.2 Best-sellers or niche standards?

The next question is: how can NSBs set priorities? This is more than just changing the sequence in the list of solutions, because the solutions are interrelated. An important distinction seems to be which measures are fit for which standards. Here we see two main categories. A normal publisher makes 80 per cent turnover from the 20 per cent best-selling

¹⁸⁵ For instance, Van Elk and van der Horst, 2009.

books, the remaining 20 per cent turnover coming from the remaining 80 per cent of the books. In the sale of standards this is even more extreme: 95 per cent of sales comes from 5 per cent of the standards. The majority of standards are rarely sold but this does not imply that they are unimportant. The number of users may be limited, for instance, hardly more than the small number of companies that produce the product to which the standard relates. This company might be an SME. The greater part of the 58 solutions relates to the 5 per cent of standards in which many organizations are interested. In that case, a press release can be issued, a course organized, etc. For the other 95 per cent of standards, this is not efficient.

Tailor-made solutions

Which solutions apply for those SMEs that may be in need of one or more of those 95 per cent of standards (and thus also for the better selling standards), or might even be interested in influencing the development of those standards? General awareness measures apply to all standards but, because of the characteristics of SMEs, they may have little effect; entrepreneurs in SMEs probably pay little or no attention. If the measures are sector-specific and come from an organization they tend to involve in their business activities, such as the trade association, then there is more chance that awareness measures will have impact. However, such measures in general do not address specific standards from the set of the 95 per cent. In this sense the SPECTARIS case can serve as a best practice example: the trade association's consultant visits the company and is aware of the specific needs of that company and, if needed, helps it to become aware of certain specific standards and, in the most extreme case, introduces it to the unknown world of standards development and assists the company to become involved (Section 6.4).

For this 95 per cent of standards, user-friendly search facilities are of the utmost importance. The current websites are in this sense insufficient but, in combination with the more sophisticated methods for searching standards, it should be possible to help SMEs to find the standards they need and also the standardization activities in the specific area. This requires that, as a once-only activity, a company profile is made and that this is related to standards and to standardization. By adding ICS (International Classification of Standards) codes,¹⁸⁶ and also with the help of the proposed 'maps' of interrelated standards, it should be possible to provide them automatically with updates about new standards and even to inform them about new standardization activities – they might be interested to participate because in particular such specific standards may relate to the core activities of the company. In that case, neither the price of the standard nor the cost of participation in standardization will be a real problem. Understanding the standard will also mostly be achievable but lack of linguistic skills may hinder; the more specific the standard, the less cost-effective is the measure of its translation in the national language.

Some other measures may also benefit SMEs with an interest in one or more of the '95 per cent' standards. A first is the stakeholder analysis, both at the European and at the national level. This analysis should reveal companies, including SMEs, with a specific stake. However, for small NSBs such an analysis is not feasible at the national level and therefore the stakeholder analysis at the European level is important.

The role of trade associations in this case is limited unless they manage to implement the 'SPECTARIS approach'. In some cases, however, professional associations may play a role, both at the national and at the European level. European associations may acquire a liaison

¹⁸⁶ The ICS code (ISO, 2005) has the disadvantage that it mixes the (mostly technical) topic of the standard with the (mostly business) field of use/users of the standard. Therefore, most standards have to be placed in two or more ICS categories (See De Vries, 1999, Section 9.2.2). So far, it is the only available classification method and, despite its limitations, it can be used.

status and thus influence can take place both via the national level and via (first) the national and (then) European association. Here the IFD and ECAP cases (Sections 6.2 and 6.3) may serve as examples, although in those cases the number of companies is considerable.

Standard-related communities

Most measures apply for the 5 per cent of the other standards. Many of these solutions can be seen as a form of establishing a ‘community’ around the standard. In most cases, this community is very loosely coupled (for example, a mailing list to inform people, a website to give comments and to react on each other’s comments) but tighter forms are possible as well, such as the Norwegian Network Forum in the field of e-business (Section 4.1.2). A standardization committee as such is a real community around a standard: ‘real’ because it includes responsibility for the standard itself. Just by analyzing their sales figures, NSBs can see which areas are the best candidates for establishing such communities and they can use this report to see the range of possibilities to form such a community, loosely coupled or more tightened. NSBs can do this themselves, in particular for ‘horizontal’ standards (for which there is no trade association) or can do this in close co-operation with a trade association (the VDMA case, Section 6.5, is an extreme example of this).

7.2.3 Unknown, unloved?

There are significant differences if we separate those institutions which have implemented the measure and those which have not yet. Now it becomes clear that the former group assesses almost all measures as being more important than does the latter. It shows that experience is necessary: once a NSB has implemented a certain solution, it will see that it leads to a better performance in relation to SMEs. Consequently, one might suggest to the NSBs which have not yet implemented the important solutions that they should implement them because the survey data shows that it is important and efficient for NSBs who already use it. Thus, it makes sense to say that NSBs should learn from each other in terms of their experiences from their solutions.

7.2.4 Mutual support

We received ‘best practice’ stories from most member countries. A huge variety exists. This implies that countries can learn more from each other. The SMEST project¹⁸⁷ can be seen as an example of such information exchange.

The differentiation between old and new EU members does not reveal significant results in terms of assessing the importance of the proposed measures. Moreover, this distinction is not identical to that between NSBs with more and those with fewer resources. Nevertheless, instead of ‘just’ information exchange, closer forms of co-operation between NSBs might be considered (‘twinning’) in order to upgrade the service level also in countries with fewer facilities. Knowledge and experience sharing between NSBs is important and prevents ‘re-inventing the wheel’; many good practices can be copied to other countries. Such an approach also promotes also cohesion of the European standardization infrastructure.

¹⁸⁷ <http://www.smest.eu>

7.2.5 Cost-effectiveness

There are few real reliable figures available about SME use of standards, SME representation in standardization, SME benefits, SME costs and SME problems in relation to standards. This makes it difficult to assess the effectiveness and, more specifically, the cost-effectiveness of the measures. We recommend a more thorough investigation of this problem and to accompany the implementation of solutions with research on their impact. Incidentally, a set of solutions which was easy to implement by the Dutch standardization body NEN, and which brought it substantial financial benefits thanks to an increase in the number of participants on each committee, was rated rather low in terms of both importance and cost-effectiveness in our survey. This seems to be related to the above-mentioned 'unknown-unloved' issue.

The number of SMEs that could benefit from standards exceeds the number of SMEs that would also benefit from involvement in standardization to a large extent; the latter applies in particular to pro-active innovative SMEs. This difference suggests that it is more cost-effective to focus on solutions for barriers to benefit from standards rather than on improving involvement in standardization. Therefore, trade associations might emphasize support for standards rather than standardization. Nevertheless, they may have a common stake in that the trade association represents them in influencing the contents of standards to avoid because they would not meet SME requirements. For NSBs, their legitimacy related to the involvement of all interested parties is at stake so they have an additional strong argument for paying attention to all aspects of the solutions.

7.2.6 ISO and IEC

From a company's point of view the distinction between the European and the international level is of little interest. However, NSBs and also CEN and CENELEC depend to a large extent on the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). Suggestions for CEN and CENELEC probably apply also to ISO and IEC.

7.2.7 ETSI

The third official European Standardization Organization (ETSI) is not included in this research project. We have no data about the problems SMEs may face in terms of benefiting from ETSI standards or from involvement in ETSI standardization activities. ETSI has no national delegation model, which might be a huge disadvantage for many SMEs. However, future research should reveal this.

7.2.8 Lack of research

The list of references to this report contains few scientific publications. Standardization is an under-investigated area of research. In fact, we have little data about SME use of standards and SME involvement on standardization, about the benefits it brings them in relation to cost, and about problems in relation to standards and standardization. Data about the effectiveness and cost-effectiveness of solutions is also lacking. In our survey we asked for an assessment of the solutions on cost-effectiveness, but this is simply the perception of the respondents; it does not provide real evidence.

7.2.9 Standards users' organization

This report is about SMEs in their potential role of users of standards and also about their potential involvement in standardization. Several countries have a national standards users' organization, a member of the International Federation of Standards Users (IFAN).¹⁸⁸ Most members of these national organizations are standards officers of large enterprises rather than SMEs. Nevertheless, these organizations can serve as a customer panel for NSBs and help them to improve the user-friendliness of NSB services. In countries without a standards users' organization, the NSB might try to establish one. Standardization is developing in the direction of a profession and the establishment of professional societies is a necessary step in this maturity process.¹⁸⁹

7.3 Recommendations

7.3.1 Recommendations for CEN and CENELEC

Activities that CEN and CENELEC could undertake include, in particular:

- a) formulating measures to further improve the process of European standardization (for example, better business plans, stakeholder analysis);
- b) further improvements to their own professionalism (for example, quality management, education of staff);
- c) formulating measures to ensure that information about the development of European standards becomes available (by way of, of example, business plans, 'maps' of interrelated standards, bibliographical information for each standard including summaries and references, press releases about the start of new activities and of draft or definitive European standards);
- d) making all relevant information easily accessible via improved websites that link to the NSB websites;
- e) providing members with all relevant information to help them improve their national stakeholder analysis, national websites, national press releases, etc.;
- f) co-ordinating information exchange between NSBs. CEN and CENELEC could function as a platform for the follow-up of the implementation of the tools from the toolbox: which are deployed, which give best results and in which case, etc.;
- g) inclusion of SME focus in CEN's and CENELEC's strategies and governance structures, in one way or another, to ensure continuous attention for issues that affect SMEs. This might include monitoring the progress of the use of the toolbox at national level and continued gathering of examples of best practice;
- h) initiating research to test the effectiveness of the solutions for SMEs.

¹⁸⁸ <http://www.ifan.org>

¹⁸⁹ Other elements of this maturity process are the establishment of research communities, professional and academic journals, and academic and professional training; see de Vries, 1999, Section 1.1.3.

GEN and CENELEC could initiate a discussion with their members about the division of work between the national and the European level.

7.3.2 Recommendations for NSBs

Our project has resulted in a set of 58 solutions, most of which apply to NSBs. A preliminary task for the NSBs is to assess the current situation of their institute: Which solutions are in place already, which are not? To which barriers do they relate? National priorities could relate to:

- a) the distinction between ‘standards’ and ‘involvement in standardization’ – what should have priority? (‘Less developed’ member countries might focus first on promoting the use of standards and then on involvement, whereas the more ‘mature’ members could place more emphasis on broadening the involvement);
- b) the distinction referred to in Section 7.2.2 between ‘best-sellers’ and ‘niche standards’: the more resources the NSB has, the more it can invest in developing targeted programs for different stakeholder groups. An NSB with fewer resources might focus more closely on the set of solutions that apply to all standards. An in-between option is to select a small number of stakeholder groups which relate to national areas of priority;
- c) the sequence of barriers. The barrier model may serve as a ‘maturity model’: if the awareness barriers are too high, it makes little sense to implement the solutions related to ‘later’ barriers;
- d) national industry priorities: which branches of business should receive special attention?

In any event, the top priority is to further improve or establish relationships with trade associations, to discuss with them who will take which role, and to provide them with information and materials. Our study reveals many solutions and good practices in this context. This is not an easy task for NSBs. Previous attempts to establish co-operation with trade associations have sometimes failed. This report might serve as a basis for the discussion, in particular Chapter 6. If there is no trade association, the standards body could approach the sector directly and try to establish a community of standards users in that sector.

Another priority area seems to be education in standardization. It is the fundamental starting point for solving the problem of lack of awareness of standards and standardization. Several of the CEN/CENELEC member bodies pay attention to education in one way or another but this is not carried out in a systematic way. Meanwhile, it is clear where to start – namely, with the development and deployment of policy in combination with a long-term investment in staff. This requires money, and the question, therefore, is the extent to which the NSBs can afford this.

7.3.3 Recommendations for trade associations

In most branches of business, standards play an important role and can be decisive for the competitive position of companies. Therefore, companies may need to use standards and, in some cases, may also wish to influence the contents of these standards. Because of the inherent weaknesses of SMEs (in particular, the lack of resources in terms of time, money

and information) they may need help in the area of standards and standardization. Trade associations are the natural organization to offer this help.

Some trade associations are very active in this field and may serve as a benchmark (see Chapter 6). Others may need to be made aware of the importance of standards and standardization themselves before they can start to support their members.

Such support might start with an analysis of the present situation in the relevant branch of business. In other words, the strengths and weakness of the member companies should be related to the opportunities and threats presented by standards and standardization. This could be a common exercise carried out by NSB and trade association. Based on the results, the trade association can select the proper set of solutions from the list in Section 6.7. A long-term form of co-operation with the NSB needs to be defined to facilitate this.

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Annex 1

Participants in the SME Access Workshop, 16–17 March 2009

SMEs

Name and country	Affiliation	Representing
Jaap Dammer the Netherlands	Honeywell Home and Building Control ¹⁹⁰	Association FME-CWM – Association of enterprises in the technological industrial sector
Lennart Jansson Sweden	Firefly	Teknikföretagen (The Association of Swedish Engineering Industries)

Standards bodies

Name and country	Affiliation	Representing
Wim De Kesel Belgium	Legrand SA	CENELEC
Alain Millot France	AFNOR	AFNOR
Karl Gruen Austria	ON	CEN
Mrs Zdenka Buresova Czech Republic	Czech Office for Standards, Metrology and Testing	Czech Office for Standards, Metrology and Testing
Haluk Dağ Turkey	TSE-SHMB-İG	TSE

Trade associations

Name and country	Affiliation	Representing
Carsten Leutloff Germany	SPECTARIS	SPECTARIS - German Industry Association for Optical, Medical and Mechatronical Technologies
Sebastiano Toffaletti Belgium (17 March only)	NORMAPME	NORMAPME
Barabara Sorgato Italy (16 March only)	European Consortium of Anchors Producers (ACEP)	NORMAPME

¹⁹⁰ Large company, small plant.

Research team members

Name	Affiliation
Gijs Duivenvoorde	Delft University of Technology, Delft, The Netherlands
Axel Mangelsdorf	Technical University Berlin, Berlin, Germany
Hugo Verheul	Stenden Hogeschool, Leeuwarden, The Netherlands
Henk de Vries	Rotterdam School of Management, Erasmus University, Rotterdam, The Netherlands
Jappe van der Zwan	NEN, Delft, The Netherlands

Annex 2

Respondents to the survey¹⁹¹

NSBs

Austria
 Austria (electrotechnical)
 Belgium
 Belgium (electrotechnical)
 Bulgaria
 Cyprus
 Czech Republic
 Denmark
 Estonia
 Finland
 Finland (electrotechnical)
 France
 France (electrotechnical)
 France (materials products)
 France (mechanical engineering)
 France (textiles)
 Germany
 Germany (electrotechnical)
 Greece
 Hungary
 Iceland
 Italy
 Italy (electrotechnical)
 Latvia
 Lithuania
 Luxembourg
 Malta
 Norway
 Poland
 Portugal
 Romania
 Slovenia
 Sweden
 Sweden (electrotechnical)
 Switzerland
 Switzerland (electrotechnical)
 the Netherlands (incl. electrotechnical)
 UK

National Trade Associations

Belgium (technology industry)
 Canada
 Denmark
 Finland (technology industry)
 France (crafts)
 France (electrotechnical)
 Germany (crafts)
 Germany (machinery)
 Germany (tourism)
 Germany (windows)
 Germany (wood)
 Italy
 Portugal (clothing)
 Portugal (refrigeration)
 Slovenia
 Spain (electrical industry)
 Sweden
 the Netherlands (technology industry)
 UK (electrotechnical industry)

European Trade Associations

Producers of anchors
 Builders
 Elevators
 Fibres
 Food solutions
 Lifts
 SMEs

¹⁹¹ Some respondents omitted to mention their name or country and therefore could not be included in this list.