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Access to Standardisation

Study for the European Commission,
Enterprise and Industry Directorate-General

Final Report

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Summary

Introduction

Private voluntary standardisation developed in Europe over the last 100 years. The system mainly developed from the need of private enterprise to increase efficiency. The ongoing development of international markets created a need for international communication about and harmonisation of national standards. So after the emerging of National Standards Bodies in the 1920's, European Standards Organisations emerged: CEN[1] in1961, CENELEC in 1973, and ETSI in 1988.

Using voluntary standards as reference documents in legislation exists already for a considerable time (e.g. national building codes), however the relationship between legislation and standardisation became more prominent after the introduction of the New Approach by the European Commission in the eighties. Standards are still (de jure) voluntary, but economic players get the presumption of compliance with the law (based on European directives) if products and services are in line with the European standards to which the directive refers.

These new harmonised standards aim to support achieving a range of public policy goals like health and safety at the workplace, safety of toys, and energy efficiency. The most obvious stakeholders needed around the table – in addition to industry - are environmental interest groupings[2], consumers, trade unions and market surveillance agencies.

The fact that harmonised European standards have an important role to play in European legislation warrants an additional concern of the European Institutions as democratic legitimacy and free access become even more important.

The project

The objectives of the study were defined as:
– to determine to what extent the European standardisation system in its present form can guarantee appropriate access to all interested parties;
– to recommend avenues for exploration by the standards bodies, the Commission and interested parties with a view to improving the conditions of access to standardisation activities.

The focus is both on access to the European standardisation processes (drafting standards) and on access to standard documents (use). The study covers 30 countries: the 27 Member States of the EU and the EFTA countries Norway, Switzerland and Iceland. The study was implemented in five major steps:
Step 1 - View of European Standards Organisations: CEN, CENELEC, and ETSI.
Step 2 - View of European interested parties.
Step 3 - View of National Standards Organisations: NSOs.
Step 4[3] - View of NSBs and NSOs in 12 selected countries.
Step 5 - View of national interested parties in selected countries.

These views are whenever possible supported by facts and figures. 'Stakeholders' as used in the report refer to (1) Large enterprises; (2) Small and me-

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[1] CEN was created as de facto association in 1961 and converted in a de jure association in 1975.

[2] In this report "environmental organisations" refers to environmental non-profit citizens' organisations representing civil society.

[3] Step 4 and Step 5 are implemented in a group of 12 countries that have been selected considering characteristics as old versus new Member States, small and large economies and geographical location.

dium-sized enterprises (SMEs); (3) Employers' federations and trade associations; (4) Consumer associations; (5) Trade unions; (6) Environmental organisations (private NGOs); (7) Public authorities; (8) Universities and research organisations. Wherever possible, the category of certifiers, consultants and laboratories has been considered separately (9).

European standardisation, its importance

Every year, some 1,500 European standards are adopted by the European Standards Organisations. The European Standards Organisations, consist of the European Committee for Electrotechnical Standardisation **CENELEC**; the European Telecommunications Standard Institute **ETSI**, and the European Committee for Standardisation **CEN** (covering all other fields). Although the model of CEN and CENELEC is different from the ETSI model, in both models, National Standards Organisations in all Member States of EU and EFTA play an important role in the development of EN harmonised European standards.

Standardisation, participation of stakeholders

The standards making process has been described as an open process based on a collaborative, balanced and consensus-based approval process for the promulgation of domestic or international standards. Participation of all stakeholders to the process of standard making is important because it fosters the credibility of standards being developed and which has a positive impact on the use of standards and the important role standards play in society.

In practice however there might be a range of factors that hamper the full participation of the various types of stakeholders. These factors may both be related to characteristics of the stakeholders themselves and to the characteristics of the standardisation system. The organisation and business models, the procedures, the culture and the regulations, all affect access and may result in a less than optimal participation of stakeholders and use of standards in society.

The most obvious factors that are linked to the characteristics of the stakeholders themselves – but not to be seen in isolation from the characteristics of the system at large – relate to limited awareness of the importance of standards; to technical knowledge and knowledge of the system and to resources in terms of staff, time and money.

This study has been initiated by the European Commission in order to find out whether there is indeed a gap between declared principles of openness and actual conditions of access as experienced by stakeholders.

Structure of the report

Part I consists of Chapter 2 providing an overview of European standardisation to serve as a framework and Chapter 3 presenting the main findings, conclusions and recommendations. Part II consist of the Chapters 4 -7 that provide detailed information collected in the various research steps from standardisers and stakeholders at European and national level.

Much information collected and presented

As the terms of reference of the study focussed to a large extent on collection of information and views from the different players, the contribution of the study consists for a large part of reporting in a detailed manner on a wide range of issues. A large number of tables and charts in the main report present this information collected from standardisers as well as stakeholders; it is however hardly possible to summarise this information in a few lines. In the main report there is a section 'main findings' that takes the long list of questions formulated by the Commission in advance[1] as a guide to present an overview of these results. Below some highlights of these findings are presented.

Main findings

Both large and small enterprises are believed to have a rather high commitment to standardisation in general and to have the required knowledge to participate meaningfully in standardisation (as assessed by the standards organisations). Public authorities get a high score only with commitment, whereas universities and research organisations get only a high score with knowledge. Consumers, environmental organisations and trade unions receive relatively low scores on both accounts.

When the various stakeholders make a self assessment of their awareness about standardisation, business representatives score very high, but public authorities, universities, consultants and certifiers score even higher. Also by their own standards consumer organisations, and especially environmental organisations and trade unions score relatively low. Also when focussing on what standardisation might do for the own (objectives of the) organisation, trade unions and environmental organisations score lowest.

The most important reason for stakeholders to participate in the process is to influence the contents of the standards being developed, either negatively formulated (to avoid that potentially harmful issues will be incorporated) or positively (to make sure that things that are important to them are properly incorporated). The negative or defensive motive is especially high with trade unions, whereas the idea that 'contributing their knowledge results in better standards' is especially important for consumer organisations.

Most stakeholders that participated in the survey judge rather mildly about the existence of barriers to participate in the standardisation process. On a scale from 1 (not at all) to 5 (very important) public authorities, large enterprises, SMEs and consultants all score between 2.5 and 3.0. Consumer organisations and environmental organisations experience the highest barriers (score respectively 3.5 and 3.9).

About half of the respondents see these barriers as mainly internal to their own organisation, about half as mainly external, i.e. related to the characteristics and procedures of the standardisation system. Trade unions see to a relatively large extent mainly external barriers (40% of respondents).

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[1] Section 4.1.4 of the Technical Specification in the contract.

The four most important barriers identified for *access to the standardisation process* are:
– amount of time required;
– travel and subsistence costs;
– the cost of participating in technical committees (fee);
– the cost of becoming a member of standards body (fee);
The highest barrier (amount of time) is considered to be (very) important by two thirds of all respondents.

The top 3 barriers for *using standards* are:
– price of standards;
– cost of implementing the standards;
– the number of cross references in the standards.
The price of standards is an (very) important barrier for 52 % of the respondents.

The seven most important benefits cited by respondents are[1]:
– complying with (European) legislation;
– complying with requirements of customers;
– products and services are up to date;
– to be in a position to communicate clearly and unambiguously with relevant parties in the market place;
– compatibility of our products with other products is assured;
– environmental interests are covered;
– better reputation of our products and services in the market place.

Obviously the score is quite different for different types of stakeholders, e.g. with trade unions 'Improve health and safety conditions at the work place' scores very high (4.8) and with environmental organisations environmental concerns score 5. For large enterprises, two items score above 4.5: 'comply with legislation' and 'comply with requirements of clients'. For SMEs the highest score of 4.3 is for 'comply with requirements of customers'.

Main conclusions
Although the report does not take away the general feeling that access to standardisation is difficult for individual SMEs and indeed concludes that the cost/benefit ratio of SMEs for participation in the system is much worse that for larger enterprises, SMEs are generally rather well represented in the technical committees of the NSOs. This is simply due to the fact that there are 500 times more SMEs in Europe than large enterprise. Even if the percentage of SMEs participating would be 100 times less than the percentage of large enterprise, there would still be five times more SMEs present in the standardisation system than large enterprises. Obviously this does not take away all concerns with regard to an adequate representation of SMEs because the simple number is only one aspect, whereas there are also huge differences in expertise and influence.

The major issue emphasized in the report – and reflected in the recommendations – is that it is of utmost importance to work at the organisation of the various stakeholders and make sure that their representative organisations are

[1] Those issues - out of a list of 13 – that score 3.8 up to 4.1 on a scale from 1 to 5.

strong enough to stand up for the interest concerned (and share the cost of participation among the members).

In addition it was concluded to be important to have a much better and standardised registration system with the 50 to 60 standardisation organisations in Europe. There is for example a need to look into the characteristics of the SMEs that do indeed participate. Certifiers and consultants might be registered as SMEs, whereas their position in the standardisation process is quite different from small engineering companies when discussing for example machine safety standards.

But the emphasis should not be on SMEs only, as the study has found that especially consumers', environmental and trade unions' interests are only marginally represented in many countries.

Already a long time ago the European Commission has recognised this insufficient representation of several interests in European standardisation and has therefore decided to financially support organisations like ANEC (consumers), ECOS (environment), NORMAPME (SMEs) and ETUI (labour) to fill this gap at European level. However the study concludes that the elaboration of a European standard in a model based on national representation - consensus between the different interests is developed at national level and this consensus is later casted at European level – with a representation of these stakeholders interests at European level does not really coincide smoothly.

Recommendations

The information and views collected in the framework of this study were the basis to formulate 13 recommendations to further improve access to standardisation. In line with the objectives of the study specified by the Commission, these 13 recommendations are really *"….avenues for exploration by the standards bodies, the Commission, Member States and interested parties with a view to improving the conditions of access to standardisation activities."* In the main report these 13 recommendations have each been introduced by making reference to the findings of the study on which they are based (Section 3.3 of the main report). In this summary we merely list the recommendations:

Recommendation 1
European policy initiatives aiming at increased access to standards need to take different shapes because of the different organisational structures and different business models in the various Member States[1]. These differences hamper the development of a harmonised European policy. We therefore recommend striving for more uniform organisational structures and business models of the National Standards Organisations as a prerequisite for more efficient and effective European policy making in the area of access to standardisation.

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[1] For example 'free access to standards' as advocated in 'Towards an increased contribution from standardisation to innovation in Europe', COM (2008) -133 final will impact private standardisation organisations rather differently from government run standardisation bodies. Hence this might call for an approach in which the national level is dominant in policy making. Compare the model of the European Employment Strategy, in which actions are agreed upon based on the commitment from Member States to establish a set of common objectives and targets for policy. Under this new framework, policy co-ordination can be fostered by a "management by objectives" approach.

Recommendation 2

Seriously consider the relationship between the standards organisations and the European Institutions and the procedures for the development and distribution of standards used for two different purposes: standards initiated and mainly paid for by private enterprises and standards that are used to bring about public policy goals and that are partly paid by public money.
The recommendation is to develop all standards within one system, but adjust procedures and conditions of access for harmonised standards (e.g. lower prices for EU harmonised standards, see Recommendation 13).

Recommendation 3

Improvement in access to and actual participation in standardisation must not only be achieved by reorganising business models of standards organisations, but also by fostering the organisation of the relevant stakeholder interest to allow meaningful participation. This holds for representation of interests outside the business community as well as for the business community: efforts to increase the representation of SMEs in standardisation should be aimed at organisations of SMEs such as trade associations and professional organisations.

Recommendation 4

The contradiction between the system of national delegation and the efforts to have specific interests represented at European level with the support of the European Commission should be gradually resolved, either:
- *by promoting the access to the standards making process at the national level[1] for other stakeholders than the traditionally strongest stakeholders such as large enterprises;*
  or:
- *by gradually dismantling the system of national delegation and moving towards a truly European system, in which a consensus between the various interests is actually developed and obtained at the European level.*

Recommendation 5

If other membership organisations do exist that claim to represent the same interest as the one organisation selected by the Commission to receive financial support to represent that interest in European standardisation, the position of that organisation may be disputed.
There are two options to arrive at a solution: either:
- *the policies to support the participation of stakeholders should aim to improve framework conditions rather than support directly individual organisations;*
- *any direct support should preferably be to all existing membership organisations, representing the European stakeholders, not just one.*
Obvious a proper mix between these options might result for an exploration by the standards bodies, the Commission and interested parties.

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[1] Hence this might call for an approach in which the national level is dominant in policy making. Compare the model of the European Employment Strategy, in which actions are agreed upon based on the commitment from Member States to establish a set of common objectives and targets for policy. Under this new framework, policy co-ordination can be fostered by a "management by objectives" approach.

Recommendation 6
More support to training and information campaigns on standardisation issues would be most welcome. This holds for courses aimed at specific target groups among stakeholders such as SMEs or consumer associations, as well as for improving the position of standardisation in regular education such as - but not limited to - regular vocational education and academic curricula.

Recommendation 7
Monitor continuously the possibilities to merge different institutions that cater for standardisation in different, but increasingly related fields of expertise (at national as well as European level) in order to reduce complexity and costs with a view to increase ease of access further.
Obviously within merged organisations there will remain a certain specialisation to cater for the different working areas.

Recommendation 8
The cooperation of standards organisations with a wide range of stakeholder organisations (whether business associations or special interest groupings) should be further improved in order to see to it that more relevant, more targeted information on standardisation reaches the stakeholders at grassroots level. In addition to reaching stakeholders adequately and efficiently with information, such cooperation may result in specific sets of standards to be composed and actually distributed among the target group.

Recommendation 9
To allow monitoring progress in increasing access to and actual participation in standardisation by the various types of stakeholders, the ESOs and NSOs should have a uniform registration of the participation of the various types of stakeholders in technical bodies, either by the number of organisations represented or by the number of experts participating on their behalf. A uniform classification of stakeholders is important to judge to which extent a balanced composition of TCs is indeed achieved in the various countries.
To also allow assessing the problems that still exist, they should also have a uniform complaints register with all National Standards Organisations.

Recommendation 10
It should be further encouraged that public enquiries are indeed published widely and that stakeholders not (yet) participating in standardisation are indeed reached. The NSOs should be more proactive in obtaining comments from a wide range of stakeholders during the public enquiry. Just a reference in the State Gazette might not suffice.

Recommendation 11

In designing the various communication tools used by standard organisations – and stakeholder groups for that matter – the need to make these communication tools accessible for people with impairments should be better taken into account.

Recommendation 12

The use of ICT tools should be further encouraged in.
- *Organizing the standards developing process.*
- *Distributing information on the standards documents.*
- *Distributing the standard documents themselves.*

In fostering this, good practices that exist with several NSOs might be a useful instrument.

Recommendation 13

For European harmonized standards (cf. Recommendation 2), that are closely linked to legal requirements, the aim should be to make the standards available for free on the Internet. This obviously brings with it the need to make available alternative sources of finance in order to avoid that as a consequence participation in the standards development process will become much more expensive in order to maintain the economic viability of the standards organisations.

Part I – Introduction and main findings

1 Introduction

The European standardisation system

Standardisation is really very old, but the system of standards organisations caring for private voluntary standardisation developed in Europe over the last 100 years. The system mainly developed from the need of private enterprise to increase efficiency.

The ongoing development of international markets created a need for international communication about and harmonisation of national standards. So after the emerging of National Standards Bodies in the 1920's, European Standards Organisations emerged: CEN[1] in1961, CENELEC in1973, and ETSI in 1988. This facilitated the process of developing standards (organising the process); archiving the stock of existing standards that grew enormously in those 100 years, and distributing the normative documents for onwards use and reference.

Using voluntary standards as reference documents in legislation exists already for a considerable time (e.g. national building codes), however the relationship between legislation and standardisation became more prominent after the introduction of the New Approach by the European Commission in the eighties. Standards are still (de jure) voluntary, but economic players get the presumption of compliance with the law (based on European directives) if products and services are in line with the European standards to which the directive refers. This implies that in practical terms these harmonised standards are almost obligatory for most economic players.

The fact that harmonised European standards have an important role to play in European legislation warrants an additional concern of the European Institutions as democratic legitimacy and free access become even more important. These new harmonised standards aim to support achieving a range of public policy goals like health and safety at the workplace, safety of toys, or energy efficiency. The most obvious stakeholders needed around the table – in addition to industry - are environmental interest groupings[2], consumers, trade unions and market surveillance agencies.

The major part of standardisation work covering a wide range of topics is done within the organisational structures of the three formally recognised European Standards Organisations[3] as described in Chapter 2. There also consist a range of standardisation activities outside this domain for example private consortia in the ICT business, however this report focuses on formal European standardisation.

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[1] CEN was created as de facto association in 1961 and converted in a de jure association in 1975.

[2] In this report "environmental organisations" refers to environmental non-profit citizens' organisations representing civil society.

[3] Directive 98/34/EC defines in Art 1.7 "European standardisation body' by referring to Annex I of the directive in which are listed: CEN European Committee for Standardisation; CENELEC European Committee for Electrotechnical Standardisation and ETSI European Telecommunications Standards Institute.

The project

The objectives of the study[1] were defined as:

− to determine to what extent the European standardisation system in its present form can guarantee appropriate access to all interested parties;
− to recommend avenues for exploration by the standards bodies, the Commission and interested parties with a view to improving the conditions of access to standardisation activities.

The focus is both on access to the European standardisation processes (drafting standards) and on access to standard documents (use).

The project was implemented in five major steps:

Step 1 - View of European Standards Organisations (CEN, CENELEC, ETSI).
Step 2 - View of European interested parties.
Step 3 - View of National Standards Bodies and Organisations (NSBs, NSOs).
Step 4 - View of NSBs and NSOs in 12 selected countries.
Step 5 - View of national interested parties in selected countries.

These views are whenever possible supported by facts and figures. For example, the Internet survey among NSBs and NSOs in Step 3 did not produce all the factual information regarding access and participation issues at national level as required. To remedy this situation, it was decided to develop an additional *10 points questionnaire* and to distribute this to all NSBs (members of CEN and CENELEC) and to NSOs cooperating with ETSI in the ICT domain (all 30 countries concerned).

All National Standards Bodies and Organisations (NSBs, NSOs) are listed in Table 2.1 in Chapter 2. 'Stakeholders' refer to eight or nine categories:

1   Large enterprises;
2   Small and medium-sized enterprises (SMEs);
3   Employers federations and trade associations;
4   Consumer associations;
5   Trade unions;
6   Environmental organisations (private NGOs);
7   Public authorities;
8   Universities and research organisations.

In addition - wherever possible - the category of certifiers, consultants and laboratories has been considered separately (9).

The study covers 30 countries: the current 27 Member States of the EU and the three EFTA countries Norway, Switzerland and Iceland. However as mentioned above, Step 4 and Step 5 are implemented in a group of 12 countries that have been selected[2] considering characteristics as old versus new Member State, small and large economies and geographical location (see Table 1.1).

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[1] Invitation to tender 'Study on the access to standardisation' No. ENTR/07/012. The contract for the study was awarded to EIM Business & Policy Research in The Netherlands (www.eim.nl) in December 2007. EIM implemented the study in co-operation with the European Network for Social and Economic Research ENSR in the 30 countries involved (www.ensr.eu).

[2] Selection has been decided in the meeting of the Steering Group on 9 July 2008.

Table 1.1   12 countries selected for Steps 4 and 5

	Old Member States		New Member States		Total
	Small	Large	Small	Large	
North	Denmark		Estonia		3
	Sweden				
Central	Netherlands	France	Czech Republic	Poland	6
		Germany			
		UK			
South		Italy	Cyprus		3
		Spain			
Total	3	5	3	1	12

The research methodologies applied for the various steps are portrayed in Figure 1.1.

Figure 1.1 Approach of collecting the required information
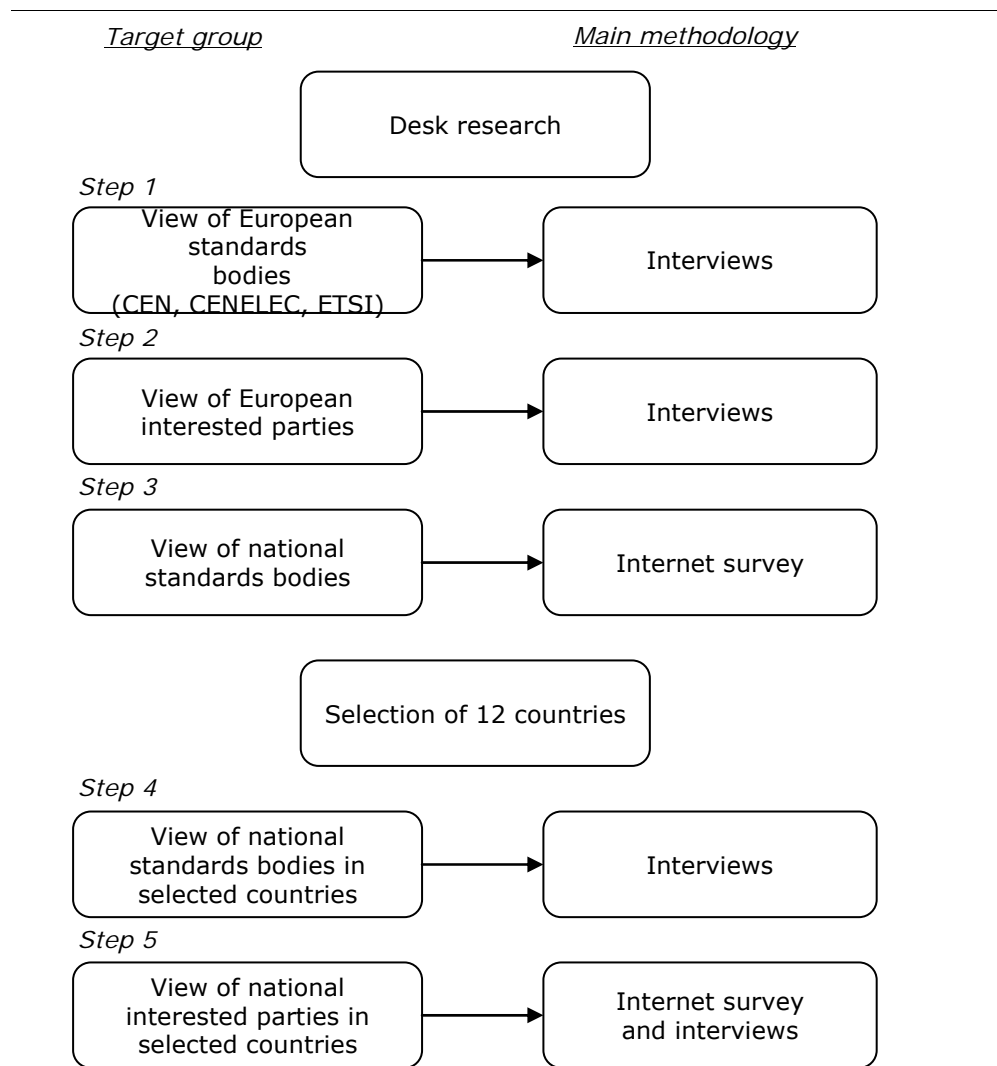
Source: Technical proposal EIM.

Every year, some 1500 European standards are adopted by the European Standards Organisations. The European Standards Organisations (ESOs), consist of the European Committee for Electrotechnical Standardisation **CENELEC**; the European Telecommunications Standard Institute **ETSI**, and the European Committee for Standardisation **CEN** (covering all other fields)[1]. Standards - as voluntary norms of the business community itself - play an important role in national economies within Europe as well as in the European economy and global economy as a whole.

A report by the German Institute for Standardization (DIN) noted the following economic benefits[2]:
1   Standards contribute more to economic growth than patents and licenses;
2   Transaction costs are lower when standards are used;
3   Companies that participate actively in standards work have a head start on their competitors in adapting to market demands and new technologies; and
4   Research risks and development costs can be reduced for companies contributing to the standardisation process.

Especially with the New Approach Directives[3] since the mid 1980s, standards play also an important role in serving public goals such as public safety, health and environmental issues. Starting with Single Market regulations, the new regulatory technique and strategy of the New Approach is now believed to be beneficial for many other areas of public policy making as well[4]. The principles of the New Approach with regard to technical harmonisation and standardisation are described in Chapter 2. By contributing to the emergence of harmonized regulation across Europe, the European standardisation system has contributed a lot to removing technical barriers to trade and hence allowed free movement of goods between EU and EFTA Member States.

Standardisation, participation of stakeholders

The European standardisation process formally allows for participation and input from all interested stakeholders via the National Standards Bodies (NSB) and via European Standards Organisations (ESO)[5] for work done in the domains of CEN and CENELEC or via direct participation and the National Standards Organisations (NSOs) cooperating with ETSI[6]. Stakeholders refer to various types of organisations such as large enterprises, small and medium-sized enterprises (SMEs),

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[1] See Text box 2.1 in Chapter 2.

[2] German Institute for Standardization, Economic Benefits of Standardization, 2000 (as quoted on the website of Standards Council of Canada, see: http://www.scc.ca).

[3] European Commission, White Paper on the completion of the internal market, 14 June 1985. The New Approach was defined in a Council Resolution of May 1985, for the New Approach and European standardisation, see: http://www.newapproach.org.

[4] European standardisation supports European policies in the areas of competitiveness, ICT, public procurement, interoperability, environment, transport, energy, consumer protection, etc.

[5] The main mechanism is national representation, there are however mechanisms whereby for example European trade associations are given liaison status and appoint representatives in the technical committees and groups (With CEN this concerns 600 European trade associations).

[6] In the elaboration, approval and implementation of European Standards (ETSI ENs), ETSI is assisted by 38 NSOs in 36 European countries. See: Table 2.1.

consumer associations, trade unions, environmental organisations, public authorities, universities and research organisations.

Therefore the standards making process has been described as being open, and the term "openness" describes a collaborative, balanced and consensus-based approval process for the promulgation of domestic or international standards[1]. Participation of all stakeholders to the process of standard making is important because it fosters the credibility of standards being developed and this will have a positive impact on the use of standards and the role standards play in society. In practice however there might be a range of factors that hamper the full participation of these various types of stakeholders. These factors may both be related to characteristics of the stakeholders themselves and to the characteristics of the standardisation system: the organisation and business models, the procedures, the culture and the regulations that all affect access and may result in a less than optimal participation of stakeholders and use of standards by all stakeholders.

The most obvious factors that are linked to the characteristics of the stakeholders themselves – but not to be seen in isolation from the characteristics of the system at large – relate to limited awareness of the importance of standards and other standard documents; to technical knowledge and knowledge of the system and to resources in terms of staff, time and money

This study has been initiated by the European Commission in order to find out whether there is indeed a gap between declared principles of openness and transparency by the European Standards Organisations CEN, CENELEC and ETSI and the opinions expressed by some stakeholders that the standardisation system does not allow them to be sufficiently involved and their position to be sufficiently taken into account. The study discusses perceptions of the various types of stakeholders with regard to actual conditions of access by considering as much factual information as possible. Based on the acceptation or rejection of such perceptions, ways and means to improve the conditions of access to standardisation are suggested.

The European Standards Organisations (ESOs), CEN, CENELEC and ETSI, play a central role in this study. In addition, other relevant parties that are closely related to these European organisations are also considered, i.e. National Standards Bodies (NSBs, members of CEN and CENELEC), National Standards Organisations (NSOs cooperating with ETSI) and International Standards Organisations operating at a global scale, i.e. ISO, IEC, ITU[2].

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[1] As used by many recognized standards bodies such as the American National Standards Institute (ANSI). See: Lawrence Rosen, presentation Defining "Open Standards" at the conference Standardisation, Unifier or Divider?, 5-7 December 2005, Vancouver, see: http://www.thebolingroup.com/unifier_divider/presentations.html

[2] The Vienna and the Dresden Agreements determine the cooperation between respectively CEN and ISO and between CENELEC and IEC (originally established in 1991 and 1996 respectively).

Part I – Introduction and main findings

Chapter 2 provides an overview of European standardisation to serve as a framework. To illustrate that the European system is not a homogeneous structure in which only large, well known institutions such as DIN and BSI operate, a report on the overall situation with regard to standardisation in Estonia and a brief report on recent changes in the organisational structure in the Czech Republic towards a more directly state controlled standardisation system have been included in Annex 1 and Annex 2.

Chapter 3 presents the main findings, conclusions and recommendations.

Part II – More detailed information

Chapter 4 presents some information of the actual participation of stakeholders in the system at European level. In Chapter 5 an overview is provided of the views expressed by European players on issues of access and participation. These observations are based on the interviews held at European level (Step 1 and Step 2 in the research plan that is pictured in Figure 1.1). Chapter 6 presents the results from the Internet survey among NSBs and NSOs in Europe (in section 6.2). In addition more factual information obtained through an additional *10 points questionnaire* is summarised in section 6.3. The information obtained from stakeholders in 12 selected countries in Step 5 is discussed in Chapter 7. Next to the annexes 1 and 2 already introduced above, Annex 3 presents an annotated bibliography.

Throughout the report references have been inserted to the 13 recommendations presented in Chapter 3, such as [cf. Recommendation 10]. These references do not imply that that recommendation is directly and only based on the information provided in that paragraph. The paragraph concerned has however been taken into consideration together with other information respondents when the recommendation was formulated.

2 European standardisation: an overview

2.1 Introduction

Standards have existed since the beginning of recorded history. Some describe the calendar as one of the earliest examples of standardisation. The Chairman of the Malta Standards Authority MSA refers to the architecture of the huge megalithic temples (the oldest free standing stone structures of the world, claimed to be 1,000 years older than the pyramids in Egypt and Stonehenge in UK), to suggest that the Maltese are even earlier pioneers in the use of standards than the Egyptians[1].

Some standards were created by royal decree. For example, King Henry I of England standardized measurement in 1120 AD by instituting the ell, which was equivalent to the length of his arm[2]. The history of BSI British Standards, a division of BSI Group that is formally designated as the National Standards Body (NSB) for the UK goes back to 1901, when the first meeting of the Engineering Standards Committee took place initiated by Sir John Wolfe-Barry - the man who designed London's Tower Bridge - to consider standardizing iron and steel sections[3].

In the early years of the previous century, private industry led standardisation in Europe resulted in the establishment of many National Standards Organisations that took the form of privately formed associations or foundations. Since the 1920s officially recognized National Standards Bodies (NSBs) have developed in Europe[4]. Each Member State of the EU and EFTA - with the exception of Liechtenstein - has such an organisation, to mention a few: BSI in UK, DIN in Germany, SN in Norway and BDS in Bulgaria[5]. In addition European Standards Organisations (ESOs) have developed.

Standardisation is the activity of establishing and recording a limited set of solutions to actual or potential matching problems, directed at benefits for the party or parties involved, balancing their needs and intending and expecting that these solutions will be repeatedly or continuously used, during a certain period, by a substantial number of the parties for whom they are meant[6].

In order to attain the status of a standard, a series of *internationally acknowledged basic principles* have to be observed which ensures that the contents of standards are generally accepted and are fit for the purpose of daily practice.

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[1] Francis E. Farrugia, Malta Standards Authority Chairman, The Malta Financial and Business Times, 5 September 2001.

[2] History of standards at http://www.ansi.org

[3] See: http://www.bsigroup.com

[4] Some of these organisations are older. The Austrian Electrotechnical Association (OVE) was for example founded in 1883, when electrical engineering was a new but fast developing technology. OVE focussed on supporting the development of electrical engineering in combination with safe applications.

[5] See for a full list Table 2.1

[6] Vries, Henk de (1997) 'Standardization - What's in a name?' Terminology - International Journal of Theoretical and Applied Issues in Specialized Communication, 4, 1, 55-83 (rectification in 4, 2). See also: Standards for the Nation, Henk de Vries, Doctoral Thesis, 1999, (also published as Standardization: A Business Approach to the Role of National Standardization Organisations).

These principles are:

– *Collective achievement on a neutral basis.* All parties concerned are invited to and should be represented in standardisation work at all levels.
– *Consensus.* Consensus implies general agreement characterised by the absence of sustained opposition to substantial issues of the document, consideration of all points of view voiced by all important parties and to reconciliation of any conflicting arguments. European and international standards shall be passed by a qualified majority (See also section 6.3.3).
– *Publicity.* Prior to publication, a normative document has to be submitted as a draft standard for public enquiry. Justified objections have to be considered by the technical standards committee responsible.
– *Coherence.* The preparation of every single standard entails the attention to coherence and uniformity both at national, regional and international level[1]. For European standardisation this implies that conflicting national standards have to be withdrawn. Thus, uniformity of the body of standards and continuity are safeguarded to the benefit of the user.

The Council Resolution of 28th October 1999[2] on the role of standardisation in Europe confirms that standardisation is a voluntary, consensus driven activity and that standards should have a high degree of acceptability as a result of the full involvement of all relevant interested parties. This resolution also calls for a co-operation between the Community and the European Standards Bodies, based on a partnership, characterised by common objectives. [cf. Recommendation 2]

In the Directive 98/48/EC of the European Parliament and the Council amending Directive 98/34/EC further improvements are laid down to the European standardisation system in terms of openness, transparency, impartiality, and participation of all stakeholders[3]. In addition the standard-setting process needs to be in line with European competition provisions[4.]

In the Communication 'Towards an increased contribution from standardisation to innovation in Europe' (COM/2008/0133 final, Brussels, 11.3.2008) the importance of the issue of access is again underlined.

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[1] This is a trade-facilitating objective. International standards contribute maximally to trade facilitation when they are part of a single and coherent set of standards. If international standards are used in relation to technical regulations as promoted by the WTO TBT Agreement, international standards bodies need to have a clearly defined constituency. The relevant WTO principles taken as a whole ensure that international standards bodies are open to participation by national standards bodies and produce international standards that do not conflict with each other (See: Commission Staff Working Paper, European Policy Principles on International Standardisation, SEC(2001) 1296).

[2] Council Resolution of 28 October 1999, OJ No C 141/1 of 19 May 2000.

[3] Directive 98/34, a basic document defining the position of standardisation within the European Union, confirms that the European standardisation system must be organised by and for the parties concerned, on a basis of coherence, transparency, openness, consensus, independence of special interests, efficiency and decision-making based on national representation (Directive 98/34/EC of the European Parliament and the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations, published in the Official Journal of the European Communities, 21.7.98).

[4] See also the more recent communication COM (2008) 133 final, On the contribution from Standardisation to innovation in Europe, Brussels, 11.3.2008.

One of the nine key elements identified by the Commission for focussing EU standardisation policy on innovation is (item 5): to facilitate the access to standardisation of all interested stakeholders, in particular SMEs[1], but also users/consumers and researchers. This will facilitate the uptake of innovation by the market.

Text box 2.1   Diversity in Europe

This chapter provides an overview of European standardisation to serve as a framework for studying access to standardisation. The structure of the European Standardisation system is described in which the three European Standard Organisations play an important role.
– CENELEC, the European Committee for Electrotechnical Standardization;
– ETSI, the European Telecommunications Standards Institute;
– CEN, the European Committee for Standardization, responsible for standardisation in most other domains.

Although ETSI is also officially recognized by the European Commission as a European Standards Organization, it is not a membership organisation based on national membership. ETSI is a not-for-profit organization with almost 700 ETSI member organizations drawn from 60 countries world-wide. However in the elaboration, approval and implementation of European Standards, ETSI is assisted by 38 National Standards Organisations (NSOs) in 36 European countries.

All in all, the National Standards Organisations are an important part of the European Standardisation system. However as will be demonstrated in the remaining chapters of this report, the National Standard Organisations in the various Member States differ quite a lot with regard to history, scope of activities, business model, links to the national government etc.
To illustrate that the European system is not a homogeneous structure in which only well known large organisations such as DIN in Germany and BSI in United Kingdom operate, two other cases have been described in an annex:
– Annex 1: The overall situation with regard to standardisation in Estonia;
– Annex 2: The recent changes in the organisational structure in the Czech Republic towards a more directly state controlled standardisation system.

[cf. Recommendation 1]

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[1] On 25 June 2008, the European Commission unveiled the Small Business Act for Europe (SBA). The SBA is based on ten guiding principles and proposes policy actions to be undertaken by both the Commission and Member States. The idea is to put a comprehensive policy framework in place for the EU and the Member States to improve the business environment for SMEs a.o. by reducing bureaucratic hurdles and obstacles in order to unlock their potential of long term sustainable growth and of more job creation. In the press release the Commission notes that the SBA includes measures to make it easier for SMEs to participate in the standard-setting process. Source: Enterprise & Industry - e-news of the European Commission - 25/06/2008.

2.2 The role of standards in the economy

The exchange of goods and services, especially across national and regional borders, needs uniform international regulations in order to achieve compatibility and interoperability in the widest sense. International standards facilitate collaboration on a worldwide scale in the economic, scientific and technical field.[1] Standards allow for one thing to match another (interoperability), but not only in a technical sense. Standards can be used as a market-regulating tool for the removal of barriers to trade or for the alleviation or relief from routine tasks.

Standards further rationalise the economy by for example reducing the number of items of different sizes to be produced and to be stocked; facilitate quality assurance; unify test methods and procedures, such as in the field of environment, and facilitate in general the communication between the economic sector, technology, science, administration and public services. All in all standards have a clear positive impact on economic growth[2].

A CEN study of 2002 by two economists[3] explained why standards are important and the effect standards have on enterprises, markets and the economy at large. The authors look at standards, in a broad historical perspective, as a 'public good' and also as an instrument of marketing policy in the life cycle of products. The authors conclude that standards are beneficial to the overall structure of industrialised economies and explain how diverse stakeholders implicitly rely on standards. To summarise some of the findings:

– Standards are vital in assuring that expectations are met. They contribute to the trust needed for any economy to operate.
– Already, since the days of Adam Smith in the eighteenth century, economic development is based on an ever-increasing specialisation and division of labour[4]. This implies that production is broken down into a series of linked activities, into what is nowadays called a value chain. Obviously standards do a lot to make this possible.
– The competitive advantage of firms is based on a complex of different factors, amongst which is reputation. Certain standards such as EN ISO 9001 on quality assurance[5] help in building a strong reputation.
– At the beginning of a product life cycle, enterprises may obtain patents to protect their investments in innovation. This allows setting relatively high prices; the rent that follows is an incentive for innovation and may therefore also be beneficial for society at large.

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[1] Input for the sections 2.2 to 2.5 has a.o. been derived from a.o.: www.on-norm.at, www.cen.eu, www.cenelec.eu, www.etsi.eu, http://ec.europa.eu/enterprise/standards_policy; www.nen.nl, www.normapme.com, http://ec.europa.eu/enterprise/entrepreneurship/craft/craft-priorities/craft-standardisation.htm, and the literature listed in Annex II.

[2] Research carried out in 2005 by DTI in the UK presented clear evidence that standardisation contributes to economic growth. The effects of UK standards on GDP and labour productivity were analysed. About 13 percent of the improvements in productivity and about 10 percent of GDP growth since World War II was attributed to standards.
See: http://www.iram.com.ar/Eventos/Seminario70/presentaciones/MikeLow.pdf.

[3] Paul Temple and Geoffrey Williams, The Benefits of Standards, A CEN Management Centre Publication, CEN, 2002.

[4] Adam Smith, An Enquiry into the Nature and Causes of the Wealth of Nations, 1776.

[5] This International Standard (EN ISO refers to a norm that has been established in cooperation between CEN and ISO) describes fundamentals of quality management systems, which form the subject of the EN ISO 9000 family.

- However users gain from the transition over time of this protected situation to a situation of more open competition on the basis of 'standardised' products as it brings down prices. An econometric study showed that technical standards do not (always, only) create technical barriers to trade, but rather increase imports and hence competition within an industry[1].
- Standardisation makes it easier and cheaper to outsource production. This may not only be relevant in a situation of direct foreign investments from developed economies to lower wage economies (as referred to by Temple and Williams), but also for outsourcing from large enterprises to SMEs.
- A concept in economics is 'asymmetric information'. Here standardisation may help by (i) raising overall quality; (ii) reducing information search costs (knowing that a product conforms to a standard might be sufficient to assess the quality of the product) and (iii) reducing the need to find out exact technical specifications of a product. An official standard may indicate that safety and performance criteria are met.

A study by economists from the Fraunhofer Institute for Systems and Innovation Research assessing the contribution of standards to total factor productivity of the German business sector over the period 1960-1996[2,] found that an increased stock of capital goods is the single largest factor explaining economic growth, but that the availability of a stock of relevant standards was the second largest factor (and nearly ten times more important than the fruits of innovation[3]).

In addition standards play other important roles such as ensuring the safety at the work place and during recreational activities and bringing about unified test methods and procedures, such as in the field of environment.

2.3   The role of standards in European policy making

The origin of standards as 'by and for private business' does not imply that standards have no role to play in public policy and are not instrumental in bringing about public goals. As already mentioned in the Introduction, especially since the acceptance of the so called New Approach[4] by the European Union in 1985, the role of harmonised European standards in legislation and policy has become paramount.
[cf. Recommendation 2]

The New Approach to technical harmonisation and standardisation is based on the following principles[5]:

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[1] Peter Swann (2000), The Economics of Standardisation, Final report for Standards and Technical Regulations Directorate, Department of Trade and Industry, DTI (available as PDF file at the website of DTI: http://www.dti.gov.uk/files/file11312.pdf).

[2] DIN (German Institute for Standardisation), The benefits of standardisation, Summary of results. Final report and practical examples; Part A: Benefits for businesses and Part B: Benefits for the economy as a whole; Berlin Beuth Verlag GmbH, 2000 (Available from: http://www.beuth.de).

[3] In addition there is of course a link between innovation and standardisation, see for example: European Commission, Communication from the Commission, Towards an increased contribution from standardisation to innovation in Europe, Com(2008) 133 final, Brussels, 11.3.2008.

[4] European Commission, White Paper on the completion of the internal market, 14 June 1985. The New Approach was defined in a Council Resolution of May 1985, for the New Approach and European standardisation, see: http://www.newapproach.org/

[5] Source: Guide to the implementation of directives based on the New Approach and the Global Approach, Luxembourg: Office for Official Publications of the European Communities, 2000.

- Legislative harmonisation is limited to essential requirements that products placed on the Community market must meet, if they are to benefit from free movement within the Community (safety requirements of general interest).
- The technical specifications of products meeting the essential requirements set out in the directives are laid down in harmonised standards that are drawn up by standards bodies.
- Application of harmonised or other standards remains voluntary, and the manufacturer may always apply other technical specifications to meet the requirements.
- Products manufactured in compliance with harmonised standards benefit from a <u>presumption of conformity</u>[1] with the corresponding essential requirements.

Starting with Single Market regulations, the new regulatory technique and strategy of the New Approach is now believed to be beneficial for many other areas of public policy making as well. By contributing to the emergence of harmonized regulation across Europe the European standardisation system has contributed a lot to removing technical barriers to trade and hence allowed free movement of goods between EU and EFTA Member States.

2.4 The European players

Some standards are developed by industry such as the Universal Serial Bus (USB) that allows us to connect many different type of peripherals (keyboard, printer or camera) to our computers using one type of socket. The design of USB was standardized in the mid nineties by an industry standards body incorporating leading companies from the computer industry.

When the term European standardisation system is used, reference is made to the standards bodies that are officially recognised by the European Commission and that have links to international standards bodies at global level and to National Standards Bodies (NSBs) in the Member States.

The three recognised European Standards Organisations (ESOs) are:
- CEN: the European Committee for Standardization, a non-profit technical organisation founded in 1961[2] by the NSBs in the EU and EFTA countries.
- CENELEC: the European Committee for Electrotechnical Standardization, created in 1973[3.] Also CENELEC is a non-profit technical organisation composed of National Standards Organisations: the National Electrotechnical Committees of 30 European countries.

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[1] Presumption of conformity is a legal concept surrounding Harmonized Standards that denotes the relationship between the legislative and standardisation processes. The European Commission (the lawmaking body) and the European Standards Bodies collaborate to produce Harmonized Standards. The contract (or mandate) stipulates that the standards body will produce a standard that will provide a technical solution, or a technical interpretation, of for example an essential health and safety requirement. When the conditions of the Commission's mandate are met, the Commission publishes the notice of its completion in the Official Journal of the European Communities. Once the notice is published, the standard takes on the presumption of conformity mantle. A manufacturer, therefore, using a Harmonized Standard in the design and/or production of the product, is presumed to be in conformity with the essential requirements of the law (based on A Guide to EU Standards and Conformity Assessment, http://ts.nist.gov).

[2] CEN was created as de facto association in 1961 and was later converted in a de jure association in 1975.

[3] a merger of two previous European organisations: CENELCOM and CENEL

– ETSI: the European Telecommunications Standards Institute (ETSI), which was created in January 1988. It has a different structure. ETSI is also officially recognized by the European Commission as a European Standards Organisation, but it is not composed of National Standards Bodies. ETSI is a non-profit organisation with about 700 member organisations from 60 countries worldwide. Many individual companies are direct ETSI members.

ETSI works in the ICT domain, including telephone, radio-TV and internet technologies. CENELEC is active in developing standards for electrical and electronic goods and services. Simply put, CEN covers all the remaining areas of standardisation.

All players in the thirty countries concerned are listed in Table 2.1 organised by the three different domains. The National Standards Bodies are the members of CEN and CENELEC. ETSI is an organisation with almost 700 members from 60 countries world-wide. However, in the elaboration, approval and implementation of European standards (ENs) ETSI is assisted by 38 National Standards Organisations (NSOs) in 36 European countries, only half of the ETSI NSOs are also ETSI members, but all NSOs perform the public approval stages for ENs, transpose the adopted ENs into national standards and handle the standstill and notification procedures for their countries.

To get an idea of the annual production of standard documents by the ESOs, see Text box 2.2 below.

The development of *international* standards is the responsibility of the International Organization for Standardization ISO (www.iso.org), the International Electrotechnical Commission IEC (www.iec.ch) and the International Telecommunication Union ITU (www.itu.int). The International Organization for Standardization ISO (founded in 1947) is an independent association of the National Standards Bodies from 130 countries altogether. There are agreements between the European organisations and the global organisations to aim at an efficient cooperation and the development of a consistent set of standards.

Table 2.1   National Standards Bodies (members of CEN and CENELEC) and National Standards Organisations cooperating with ETSI.

	Country (no. of NSBs/NSOs)	CEN members	CENELEC members	ETSI NSO
1	Austria (2)	Österreichisches Normungsinstitut (ON)	Österreichischer Verband für Elektrotechnik	OVE (acting) & ON
2	Belgium (2)	Bureau de Normalisation/Bureau voor Normalisatie (NBN)	Comité Electrotechnique Belge / Belgisch Elektrotechnisch Comité	Bureau de Normalisation/Bureau voor Normalisatie (NBN)
3	Bulgaria (2)	Bulgarian Institute for Standardisation (BDS)		Communications Regulation Commission
4	Cyprus (1)	Cyprus Organization for Standardisation (CYS)		
5	Czech Rep. (1)	Czech Office for Standards, Metrology and Testing – UNMZ, also known by its English acronym COSMT (since 1-1-2009, before Czech Standards Institute -CNI)		
6	Denmark (2)	Danish Standards (DS)		National IT - and Telecom Agency
7	Estonia (2)	Estonian Centre for Standardisation (EVS)		Estonian Technical Surveillance Authority (TJA)
8	Finland (3)	Suomen Standardisoimisliitto r.y. (SFS)	SESKO Standardization in Finland	Finnish Communications Regulatory Authority
9	France (2)	Association Française de Normalisation (AFNOR)	Union Technique de l'Electricité	Association Française de Normalisation (AFNOR)
10	Germany (2)	Deutsches Institut für Normung e.V. (DIN)	DKE Deutsche Kommission Elektrotechnik Elektronik Informationstechnik im DIN und VDE	
11	Greece (1)	Hellenic Organization for Standardization (ELOT)		
12	Hungary(1)	Hungarian Standards Institution (MSZT)		
13	Iceland (1)	Icelandic Standards (IST)		
14	Ireland (2)	National Standards Authority of Ireland (NSAI)	Electro-Technical Council of Ireland Limited	National Standards Authority of Ireland (NSAI)
15	Italy (3)	Ente Nazionale Italiano di Unificazione (UNI)	Comitato Elettrotecnico Italiano	CEI/CONCIT CONCIT/ISCTI
16	Latvia (1)	Latvian Standards Ltd (LVS)		
17	Lithuania (1)	Lithuanian Standards Board (LST)		
18	Luxembourg (1)	Organisme Luxembourgeois de Normalisation (ILNAS)		
19	Malta (1)	Malta Standards Authority (MSA)		
20	Netherlands (2)	Nederlands Normalisatie-instituut (NEN)	NEN/ NetherlandsElektrotechnisch Comité	
21	Norway (3)	Standard Norge (SN)	Norsk Elektroteknisk Komite	Norwegian Post & and Telecommunication Authority
22	Poland (1)	Polish Committee for Standardization (PKN)		
23	Portugal (1)	Instituto Português da Qualidade (IPQ)		
24	Romania (1)	Romanian Standards Association (ASRO)		
25	Slovak Rep. (2)	Slovak Standards Institute (SUTN)	Slovak Electrotechnical Committee /Slovak Standards Institute	Slovak Standards Institute (SUTN)
26	Slovenia (1)	Slovenian Institute for Standardization (SIST)		
27	Spain (1)	Asociación Española de Normalización y Certificación (AENOR)		
28	Sweden (3)	Swedish Standards Institute (SIS)	SEK Svensk Elstandard	ITS - Information Technology Standardization
29	Switzerland (3)	Schweizerische Normen-Vereinigung (SNV)	Electrosuisse	Association Suisse des Télécommunications (ASUT)
30	UK (2)	British Standards Institution (BSI)	British Electrotechnical Committee / BSI	British Standards Institution (BSI)
	Total (51)			

Text box 2.2   Annual production of standards documents by ESOs

CEN

In 2007 CEN produced 1,124 documents: European Standards (ENs), Technical Specifica-
tions (TSs), Technical Reports (TRs) and CEN Workshop Agreements (CWAs). This brings
the total number of available published documents to 11,268 (end 2007).

Details of production 2006 en 2007:

Type of document	2006	2007
EN	1,287	1,006
CEN/TS	101	55
CEN/TR	53	31
CWA	31	32
Total	1,472	1,124

These documents are produced by different types of technical bodies: active CEN technical
committees 282; sub-committees 85, active CEN Workshops 38 and Working Groups 1,418

Source: Standards for a better world, CEN Annual report 2007, available at:
http://www.cen.eu/cenorm/aboutus/information/annual+report/annual+report.asp

CENELEC

Total deliverables published during the year:	2006	2007
Standards (ENs + HDs)	402	380
Interpretation sheets (EN)	0	9
CLC/TR	5	21
CLC/TS	8	3
CWA	0	0
CECC Specifications	0	0
CENELEC Guides	3	2
CEN/CENELEC Guides	1	0
Total	419	415

Source: CENELEC Annual Report 2007, available at:
http://www.cenelec.eu/Cenelec/CENELEC+in+action/News+Centre/Annual+report/Default.
htm

ETSI

The number of standards and reports published by ETSI in 2007 increased by about 18%
over 2006 and amounted to 1,938 documents. By the end of 2007, ETSI had published a
total of almost 20,000 standards, specifications, reports and guides since the Institute was
established in 1988.

Annual production	2006	2007
European Standard (telecommunications series) (EN)	60	68
Technical Specification (TS)	1383	1,658
Technical Report (TR)	114	147
ETSI Standard (ES)	65	49
ETSI Guide (EG)	14	11
Special Report (SR)	5	5
Total	1,641	1,938

Source: Annual Report ETSI 2007, available at:
http://www.etsi.org/website/newsandevents/annualreport.aspx

2.5 The European standardisation process

The European standardisation is a coherent system based on the principle of national delegation. CEN and CENELEC are membership organisations with National Standards Bodies as their members. ETSI is not based on national membership, but is also officially recognized by the European Commission as a European Standards Organization and is - in developing European standards - assisted by National Standards Organizations (NSOs)[1].

For the elaboration of a European standard, a European technical committee in CEN or CENELEC is set up under the responsibility of one of its members. The members of CEN and CENELEC are the respective National Standards Bodies. National so-called 'mirror committees' are established by National Standards Bodies where all interested national parties (enterprises, consumers, public authorities, NGOs) can participate. They develop a national position for the drafting and voting of a European standard which is then presented at the European technical committee.

ETSI (telecommunication) is based on direct participation of industry and other stakeholders at international level but also foresees national votes on European standards (ENs).

Each year, about 1,500 European standards are adopted through this system by the three European Standards Organisations (see Text box 2.2 Annual production of standards documents by ESOs).

The initiative for or the request to start developing a new standard could in theory come from anywhere. Once a request has been formally made, it finds its way through the different procedures of the standardisation system[2]. When the request comes to the responsible technical committee (TC) within the relevant recognised standards body, this TC decides whether a standard should and could be developed. The flow chart taken from this leaflet illustrates the procedure that follows (See Figure 2.1).

Mandates[3]

As mentioned above, the initiative for or the request to start developing a new standard could in theory come from anywhere. When the European Commission requests the European Standards Organisations (ESOs) to develop and adopt European standards in support of European policies and legislation the Commission uses standardisation mandates. Draft mandates are drawn up by the Commission services through a process of consultation with a wide group of stakeholders. Before being formally addressed to the ESOs, they are submitted for opinion to the Standing Committee of the 98/34/EC Directive. New standardisation mandates are approved by the TBT Working Group, in which also Iceland, Liechtenstein and Norway participate (EEA).

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[1] In the elaboration, approval and implementation of European standards, ETSI is assisted by 38 National Standards Organizations (NSOs) in 36 European countries that are a.o. responsible for the standstill agreement, the national public enquiries and establishing the national position for the vote).

[2] See for example the flyer developed by DG Enterprise and Industry at: http://ec.europa.eu/enterprise/standards_policy/european/flyer/index.htm

[3] Source: http://ec.europa.eu/enterprise/standards_policy/mandates

Figure 2.1 Flow chart: Development of European standards

```
┌─────────────────────────┐
│ Identification of a need │
│ for a new standard       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ Formal request to the   │
│ relevant standards body  │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐   (no)    ┌─────────────────────────┐
│ Consideration by the    │ ───────▶  │ Review of the request   │
│ appropriate committee    │           │ and the need for the    │
└─────────────────────────┘           │ standard                │
            │                          └─────────────────────────┘
         (Yes)
            ▼
┌─────────────────────────┐
│ Drafting of the standard │
│ by experts and building  │
│ consensus on its content │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐           ┌─────────────────────────┐
│ Validation through      │ ───────▶  │ Publication of the      │
│ public consultation and  │           │ standard                │
│ voting procedures        │           └─────────────────────────┘
└─────────────────────────┘
```
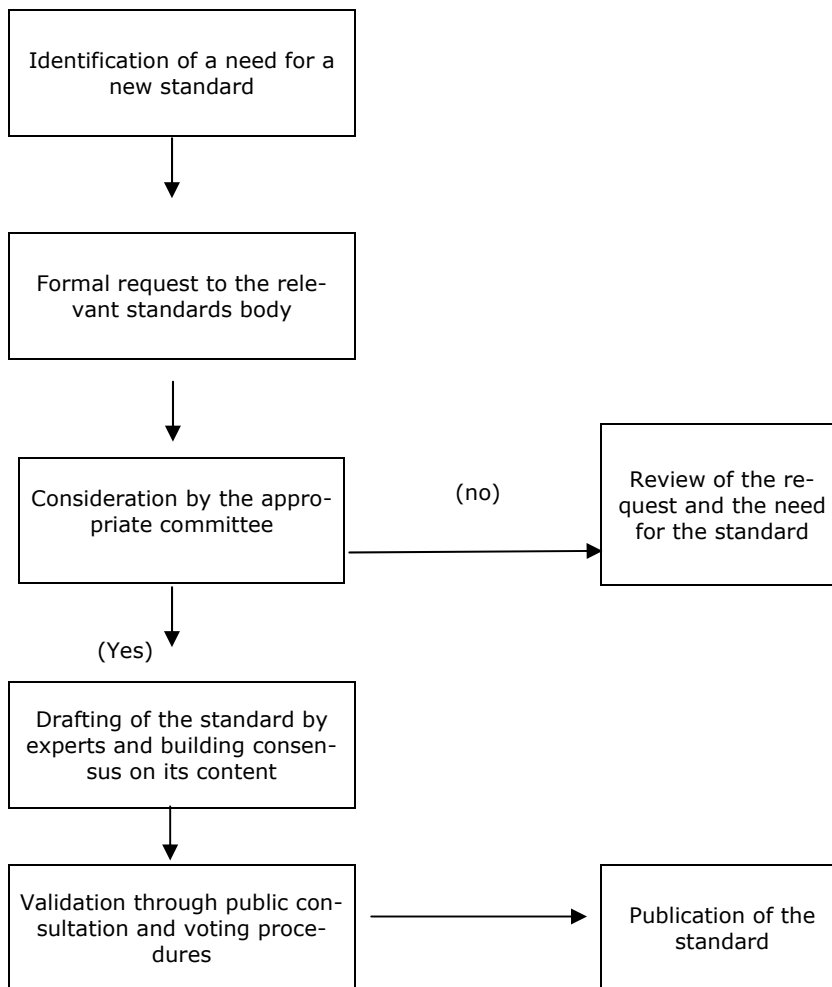
Source: European standardisation flyer - Questions and answers, DG Enterprise and Industry

The ESOs, which are independent organisations, have the right to refuse a mandate if they do not think that standards can be produced in the area being covered. In practice this refusal happens rarely due to the informal consultation mentioned above. [cf. Recommendation 2]

Three types of mandates could be considered:
– study mandates to check the feasibility of standardisation;
– mandates requesting the elaboration of a standardisation programme;
– mandates for the development and adoption of European standards.

Even European standards developed under a mandate and for European legislation, remain voluntary in their use.

National Standards Bodies are obliged to implement European standards (ENs that follow the entire procedure as sketched above including the validation through public consultation and voting procedures) as national standards without any modification and to withdraw any conflicting national standards. As a conse-

quence national standards that result from this procedure are identical[1] across Member States of the European Union and EFTA. However one should note that the term harmonised standards is restricted to one specific set of standards: Harmonised standards are European standards established on request of the European Commission, but only those that provide a presumption of conformity to European directives based on the so-called "New Approach" principles as described in Section 2.3.

2.6   Access to the standardisation process

The participation of SMEs and societal stakeholders can be hampered by a lack of resources and technical expertise. This can, in turn, affect the consensus-reaching process and therefore cause delays in standards development. The Commission is therefore providing financial support to European organisations and associations representing SMEs and societal stakeholder interests. This enables them (as associate members in the European Standards Organisations) to participate more effectively in the standardisation process at the European level and to co-ordinate the involvement of all national experts in the standardisation development process.[2] These stakeholders are amongst others:

– NORMAPME (European Office of Crafts, Trades and SMEs for Standardisation);
– ANEC (the European Association for the Co-ordination of Consumer Representation);
– ETUI (European Trade Union Institute);
– ECOS (the European Environmental Citizens Organisation for Standardisation).

[cf. Recommendation 4]

Also EFTA provides financial support to assist European stakeholders organisations to take part in European standardisation work[3], beneficiaries are a.o. ANEC, EOTA (the European Organisation for Technical Approvals; related to the construction industry) and ECOS.

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[1] However there are some provisions for exceptions. The scope of the EN might for example not fully cover the scope of existing national standards that have to be withdrawn. There may be good reasons why remaining aspects dealt with by the national standards are still needed by the market. However it is important that the basic rule should be adhered to: avoid the creation (or recognition) of barriers to trade. National standard bodies have to be aware that additional national requirements may adversely affect trade within the European market. For all national activities, the notification procedure 98/34 should be followed strictly (See: Guidance - CEN policy on implementation of European Standards not one-to-one related to National Standards, document 2005 available at website CEN: www.cen.eu

[2] In addition the Commission funds standards bodies for the translation of standards into Community languages other than the working languages of the European Standards Organisations.

[3] EFTA Study on Certification and Marks in Europe, executive summary of the final report, Consumer Research Associates Ltd, UK, December 2007.

3 Conclusions and recommendations

3.1 Introduction

Conclusions of the European Council

The Council of the European Union adopted 29 conclusions on standardisation and innovation at the Council meeting in Brussels on 25 September 2008[1]. Many of these conclusions cover more general topics in the field of access to standardisation, e.g. Council Conclusion 7 asking standards organisations to further facilitate participation of all interested parties or Council Conclusion 9 asking a.o. business associations to strengthen their support of SMES to promote their interest in standardisation work. [cf. Recommendation 8]

There are also more specific conclusions that more or less coincide with conclusions reached in this study such as Council Conclusions 12 and 13 regarding the importance of having standards available in the national languages of the Member States concerned; Council Conclusion 19 regarding the attention for the costs of standards as a possible barrier to their use[2] and Council Conclusion 27 encouraging Member States to improve the position of standardisation in education and academic curricula. [cf. Recommendation 6]

There are other Council Conclusions, such as number 14 asking for a validated, freely available summary of each standard that we would like to support as it would indeed facilitate access for many stakeholders. However as also noted by the Council in conclusion 19 concerning a possible reduction in the costs associated with access to standards, it has to be carefully considered what the effect would be on the financial viability of the standardisation system. Free summaries might help guiding users to the standards that are indeed relevant for them and hence increase turnover of standards organisations. However some users may also decide only to use the free summaries with a negative effect on the turnover of standards organisations.

The share of sales of standards in the overall budgets of standards organisations varies quite a lot, however it may be a significant component. DIN in Germany for example recovers more than 50% of its operating costs from the sales of standards. For all NSOs the percentage range from 0 to 99%, generally it is between 30 to 50%.

Information from this study supporting these conclusions

The information collected in the framework of this study show many characteristics of the standardisation system that support these Council Conclusions. In Section 3.2 the main findings of the study will first be summarised before recommendations are formulated in Section 3.3.

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[1] Available as PDF at:
http://ec.europa.eu/enterprise/standards_policy/standardisation_innovation/doc/councilconclusions_20080925_en.pdf

[2] The council encouraged standardisation bodies to review their business model in order to improve access to standardisation a.o. by reducing the cost associated with access to standards, but while ensuring their financial viability.

3.2 Main findings

This section presents an overview of the main findings of the study that are discussed in more detail in the Chapters 4, 5, 6 and 7.

In formulating the questions that have been used to collect views and information from standardisers and stakeholders, both at European and national level, the research team in cooperation with the Steering Group of the study took the questions as specified in the tender dossier as guidance. These questions were categorised by: questions on access to the standardisation process (QP) and questions referring to access to standards documents (QD). The questions were used to draft a series of questionnaires and checklists for interviews. The detailed information resulting from these activities are reported in Part II of this report:
– checklist for face-to-face interviews with European standardisers and European stakeholders (Chapter 5);
– Internet survey among National Standards Organisations in 30 countries (Section 6.2);
– additional '*10 points questionnaire*' addressed to 51 standards organisations in 30 countries (Section 6.3);
– checklist for face-to-face interviews with stakeholders in 12 selected countries (Section 7.2);
– Internet survey among stakeholders in the 12 selected countries (Section 7.3).

Although not all questions could directly be answered by the information as presented by the different types of respondents, the following section uses the original questions from the tender dossier as structure:
– QP1 – QP17 on the standardisation process;
– QD1 – QD7 on standards and other standards documents.

3.2.1 Access to the standardisation process

QP1	What are the possibilities offered to interested parties to be informed about the activities of the standards bodies?

The situation as described in detail in Annex 1 for Estonia, describes rather well the situation as found in most countries: a regular newsletter and much information available for free on the website. Issues covered are harmonised standards, WTO notifications, national standards, translations of standards, European and national draft standards 'open for comments', etc. Most NSOs (70 to 100%) state to use such means to inform stakeholders as shown in Table 6.9:
– Direct dissemination (printed newsletters, journals and/or email bulletins);
– Available on website (passive);
– Published in magazines of third parties (i.e. trade, sector or professional journals);
– Regular contacts with external parties, e.g. sector and professional organisations, consumer or environmental interest organisations;
– Regular seminars, workshops, conferences etc.

These activities are not always judged to be sufficient by the stakeholders. Section 7.2 describes for example that also PKN in Poland has several publications

(such as PKN News) but stakeholders still report that adequate information is lacking.

However, Table 7.5 shows that 75% of the stakeholders feel to be (very much) aware of what standardisation is and also 75% are of the opinion that standardisation is (very much) important for their own organisation (Table 7.8). About 40% of the responding stakeholders feel the information policy of the NSOs is more active, whereas some 28% judge it to be more passive (Figure 7.1). However it should be realised that respondents are to a large extent incumbents[1].

A general feeling among stakeholders is that their specific focus (i.e. sector of activity or aspect such as safety or environmental impact) is lacking. In our analysis it is rather difficult for an NSO to offer this itself. We feel that this could be better developed in close cooperation with representatives of these target groups as they cannot only filter the large amount of information available within the standardisation system but they also speak 'the language' of the target group. [cf. Recommendation 8]

| QP2 | Is access to the standardisation process significantly different from one Member State to another? What are the main differences, and do they follow an identifiable classification (relating, for example, to the size of the standards bodies, the local industrial fabric, the infrastructures of the standards bodies, etc.)? |

The general principles of standardisation are widely and strongly adhered to by all NSOs: an open and democratic system based on consensus and that balances the various interests to the extent possible. All NSOs – see for example the results of the *10 points questionnaire* presented in Section 6.3 – report to actively work on a balanced representation of stakeholders with technical committees and other bodies. So the basic principles are really very much the same. However, the devil is in the detail. Nearly all practical details are quite different from one country to the other, such as membership structure of standards organisations, membership fees, reduction and exemption schemes for different types of stakeholders, specific support to selected types of stakeholders and prices and reduction on prices for obtaining standards.

Table 6.6 indicates for example that with 14 of the 47 NSOs that have answered the survey (30%) stakeholders need to be a member of the NSO in order to participate in standardisation, whereas with 17 NSOs (36%) a payment is required to participate in TCs. But there is no general pattern in the way these fees are structured, it differs from NSO to NSO as described in detail in Section 6.3.3. However the most important factor determining the fee to be paid is 'type of stakeholder' as shown in Table 6.7. This variation goes hand in hand with differences in access and actual participation of stakeholders as shown in the detailed Table 6.20.

One of the consequences of the huge variation between different NSOs – not only in fee structure and discounts, but also with regard to the entire organisational structure and business model – is that it becomes more difficult to have a harmonised European policy to foster access to standardisation.

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[1] Due to the process of inviting parties to particpate in the surveys as well as to the bias that will be associated by non-response (see Section 7.3.2).

QP3   Is standardisation sufficiently attractive, and is the investment required of interested parties perceived as being commensurate with the anticipated returns?

The seven most important benefits of participation in standardisation cited by respondents are:
– complying with (European) legislation;
– complying with requirements of customers;
– products and services are up to date;
– to be in a position to communicate clearly and unambiguously with relevant parties in the market place;
– compatibility of our products with other products is assured;
– environmental interests are covered;
– gives our products and services a better reputation in the market place.

Obviously the score is quite different for different types of stakeholders, e.g. with trade unions 'improve health and safety conditions at the work place' scores very high on a 5-points scale (4.8) and with environmental organisations 'environmental concerns' score 5. For large enterprises, two items score above 4.5: comply with legislation and comply with requirements of clients. For SMEs the highest score of 4.3 is for 'comply with requirements of customers'.
The importance ascribed by stakeholders to standardisation for (the objectives of) their own organisation is (as shown in Table 7.9 on a scale from 1 to 5):
– highest with the group of consultants, laboratories and certifiers (4.4), large enterprises (4.3), universities (4.1) and SMEs (4.1);
– middle position: employers' federations and trade associations (3.8) and consumer associations (3.7);
– lowest with trade unions (3.0), environmental organisations (3.1).

The investment required and the anticipated returns in money terms are especially relevant for stakeholders from the business community as their returns are indeed of a financial nature, either through efficiency gains or improved access to markets. However a large scale effect was found that results in cost benefit ratios being much better for large enterprises than for SMEs (See Section 5.2). For other (societal) stakeholders there are even no immediate financial returns. This may be one of the reasons to opt for improving the organisation of stakeholders in the standardisation process in order to share costs.

QP4   Do standardisation system models exist that interested parties would find more attractive, and can these satisfactorily serve the public interests (i.e. without undermining the principles of transparency and consensus)?

As reported in Section 7.2, respondents in the study praise the higher speed of alternative models such as private consortia but indeed realise that this is often at the cost of not being based on a wide consensus, i.e. less democratic legitimacy. It should however be noted - as mentioned in the Introduction – that this report focuses on formal European standardisation and hence the experience of the respondents selected is mainly with this system rather than with the domain of private consortia in the ICT business for example.

> **QP5** Given that certain participants in the standardisation process can be described as contributors (through providing the necessary expertise, participating actively in committee work, etc.), while others confine themselves to an observer role without actively contributing, is it possible to identify differences in the conditions of access proposed by the standards bodies for these two types of participants?

The most important reason for a large majority of stakeholders to participate in the process is to influence the contents of the standards being developed. Some are mainly there to avoid that potentially harmful issues will be incorporated, others focus on making sure that things that are important to them are properly incorporated (See Table 7.20 for details by type of stakeholder).
The motives 'to be informed' and 'networking' that are more related with a role of observer score lower.

Standardisers indeed recognise these two roles from observing the process within technical committees. However stakeholders do not *enter* the process as either a contributor or an observer, hence differences in access do not exist, other than the motivation of the stakeholder to be involved (willingness to sacrifice time and money).

> **QP6** What are the conditions laid down for participation in the standardisation process: must participants be members of the standards bodies? Are they required to pay a financial contribution? How is this contribution calculated? Does it depend on the type of standards document being prepared, or on the type of committee (national, European, international, strategic committee, technical committee, working group, "workshop")?

There are not many conditions laid down, except having to pay a fee (all parties that have a declared interest can join). Mostly – as shown in Table 6.7 – fees depend on the 'type of stakeholder'. Often NGOs receive reductions or even exemptions. Also for business representatives it is rather common that membership fees vary: "… fees depend on the size of the company in terms of employees and turnover" (details described in Section 6.3.3 for many NSOs).
When discussing recommendation 13 below, we argue that fees have also a role to play in setting priorities for the agenda for standardisation.
[cf. Recommendation 13]

> **QP7** What are the possibilities offered to interested parties to have a say in the strategic choices made by the standards bodies?

National level
In Section 7.2 some examples are described of NSOs that state that the different types of stakeholders may participate in the debate about the standardisation agenda and on strategic choices to be made. DS from Denmark reports for example that stakeholders have fair and good possibilities to influence the strategic

choices. But although everyone has the opportunity to participate, some types of organisations such as environmental organisations could be better represented[1].

European level

Results show that European stakeholders such as ANEC, ECOS and NORMAPME are indeed represented in administrative and technical boards of CEN, CENELEC and ETSI (See: Table 4.1). To which extent these organisations have indeed an impact or are merely observers is much more difficult to asses. Conflicting views were recorded in the study.

Some of the European stakeholders' representatives complain that they sometimes feel like second-class citizens and that their interests and views are not sufficiently taken into account by the standards bodies.

QP8	What means are in place to facilitate the circulation of standards-related information outside the system?

See QP1.

QP9	What processes and procedures have been introduced by the national, European and international standards bodies to guarantee and promote fair access to the standardisation process? Have they developed different strategies for different interested parties?

National Level

This question mainly relates to reductions in memberships fees as described in Section 6.3.3. Nearly 50% of the NSOs report that support such as subsidies are available from national governments. In some cases also the NSO provides such support (See Table 6.8). The type of subsidies available, such as reimbursement of travel and subsistence costs to participate in European standards meetings have been described in 'SMEs and Standardisation in Europe: 23 Good Practices to promote the participation of craft and SME in standardisation, and the use of standards' (DG Enterprise and Industry, Brussels, 2006), see also QP12 below.

European level

At the European level specific strategies are developed to assist the weaker stakeholders to get access at the European Level. Although the basic model is that of national representation based on consensus between the different views at national level, European representative organisations like ANEC, ECOS, NORMAPME and ETUI are not only subsidized by the European Commission to promote the importance of standardisation with their 'rank and file' but are also provided access to the system at European level. Table 4.1 shows that they are generally represented in administrative and technical boards and in selected TCs. However there are more mechanisms in place to incorporate European representatives of the stakeholders in addition to the model of national delegation. CEN reports for example there are as much as 600 European trade associations that

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[1] More details are provided in the Interim report on the 10 points questionnaire completed by 34 NSOs, submitted by EIM Business & Policy Research to DG Enterprise and Industry, January 2009.

have been given liaison status and that may appoint representatives in technical committees and groups.

> QP10 Are there differences in access to standardisation activities depending on the types of interested parties (large enterprises, SMEs, consumer associations, NGOs, trade unions, employers' federations, etc.)?
>
> QP11 What, according to the interested parties, are the barriers to participation in the standardisation process (resources, expertise, length of the process, financial contributions?)

According to the standards organisations, both large and small enterprises have a rather high commitment to standardisation in general and have the required knowledge to participate meaningfully in standardisation. Public authorities get a high score only with commitment, whereas universities and research organisations get only a high score with knowledge. Consumers, environmental organisations and trade unions receive relatively low scores on both accounts.

When the various stakeholders make a self assessment of their awareness about standardisation, business representatives score very high, but public authorities, universities, consultants and certifiers score even higher. Also by their own standards consumer organisations, and especially environmental organisations and trade unions score relatively low. Also when focussing on what standardisation might do for the own (objectives of the) organisation, or the importance of standardisation for the own organisation, trade unions and environmental organisations score lowest.

The extent to which stakeholders themselves see barriers to participate in standardisation on a scale from 1 (not at all) to 5 (very much) is shown in Table 7.22. The conclusion is that:
− the lowest barriers are seen by public authorities (2.5), large enterprises (2.6) and SMEs (2.8).
− middle position: consultants, laboratories and certifiers (3.0), employers' federations and trade associations (3.1) and universities (3.1);
− the highest barriers are seen by: trade unions (3.4), consumer organisations (3.5) and environmental organisations (3.9).

The study also established the barriers for stakeholders as perceived by standardisers. The 'overall picture' shows' mainly:
− lack of financial resources / not willing to pay the costs involved;
− lack of staff (time);
− failing to properly understand the benefits of standardisation;
− lack of technical expertise.

Differences by type of stakeholders are shown in Table 6.3.

Stakeholders have been asked whether such barriers are mainly internal, i.e. related to the characteristics of their own organisation (such as lack of expertise or resources) or external, i.e. related to the characteristics of the standardisation system.

The results shown in Table 7.23 are:
- mainly or a bit more internal   30%;
- both   37%;
- mainly or a bit more external   32%.

Figure 7.3 shows that universities, consultants etc., and trade unions see the highest external barriers. The lowest external barriers are seen by public authorities, environmental organisations and large enterprises.

Finally the actual barriers identified by the stakeholders are shown in Table 7.25. Again using a scale from 1 (not at all an important barrier) to 5 (very important barrier), the ranking that emerges is:
1. Amount of time required (3.9);
2. Travel and subsistence costs (3.4);
3. The cost of participating in technical committees, fees (3.4);
4. The cost of becoming a member of standards body, fees (3.2);
5. Bureaucracy of the process (3.1);
6. Perceived benefits for the organisation or enterprise itself are low (2.8);
7. The process is too complicated, too technical' (2.7);
8. Not enough technical expertise or experts within our type of organisation (2.6);
9. Lack of awareness, information on what standardisation is, how it works (2.4);
10. Language used in formulating the standards is too complicated, too technical (2.3);
11. Use of foreign languages (2.2).

QP12   What public policy mechanisms have been created to facilitate access to standardisation activities?

Hardly any stakeholder or National Standards Organisation reported public policy mechanism to facilitate access to standardisation that had not been documented before, such as in 'SMEs and Standardisation in Europe: 23 Good Practices to promote the participation of craft and SME in standardisation, and the use of standards', DG Enterprise and Industry, Brussels, 2006:
- Financial contributions by national governments to keep cost of standards and participation in standardisation low (for example reduced prices or membership fees for specific types of stakeholder as described in Section 6.3.3 in this report).
- Also the subsidies to cover travel and subsistence costs that are applied by several national governments (often managed by the NSO) were reported.

Especially in Germany several specific and targeted public policy initiatives became apparent (see Section 7.2):
- A two days seminar 'Success factor standardisation' organised by DIN in cooperation with the Federal Ministry of Economic Affairs in April 2008 to better integrate medium-sized companies by raising their awareness on the benefits to be gained.

- KNU[1], the coordinating unit for environmental organisations' work on standardisation, is a joint project of several Environmental Protection Groups that is partly financed by the Federal Ministry for the Environment. Since 1996 KNU works to increase environmental organisations' participation in standardisation work at DIN and DKE. KNU might reimburse travel costs and under special conditions can also pay an expert fee.
- Also for consumer interests there is a special initiative. The Consumer Council of DIN is an entity established in 1974 within DIN to represent consumer interest in standardisation. The Council comprises five members named by the DIN President in consultation with the Federation of German Consumer Organisations (VZBZ) and the Federal Ministry of Food, Agriculture and Consumer Protection (BMELV). The Council members work on an honorary and independent basis and set down guidelines for consumer policy issues in standards work[2]. Consumer representatives are exempted from fees. Also their travel expenses are paid.

QP13 What public consultation procedures exist? Are they judged to be effective by the standards bodies and stakeholders?

The public consultation procedures are clearly considered to be important ('a need') by the National Standards Organisations. However the actual description of the consultation system that they provide shows that in practice the comments are far too often only generated by the incumbents. This is documented in a list of 12 quotes at the end of Chapter 6 (Section 6.3.3).
As the stakeholders that responded to the various surveys generally belong to that circle of incumbents (already participating in TC work, being on the mail list of the NSO etc.), this issue did not come out of the stakeholders' interviews.
[cf. Recommendation 10]

QP14 Does the fact that participation in standardisation is generally regarded as a costly investment for enterprises represent more a barrier to the lasting involvement of partners or a guarantee of credibility of the standard?

In our analysis, the cost of the system functions as a filter to avoid that work items will be taken up that are not really necessary. As parties participating in the development of standards are generally also financing these efforts, they really need to be convinced of the need / the benefits of the standards in order to join. [cf. Recommendation 13]

However, costs are indeed seen by the stakeholders as the main barrier as described above with QP10&11.

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[1] Koordinierungsbüro Normungsarbeit der Umweltverbände, see flyer available at:
http://www.bund.net/fileadmin/bundnet/pdfs/umweltschutz_normung/KNU-Flyer_en.pdf.

[2] See: http://www.din.de/cmd;jsessionid=688E11D7D4BCE6E8CBBE2409164416C6.2?level= tpl-unterru-
brik&menuid=47564&cmsareaid=47564&cmsrubid=57765&menurubricid=57765&cmssubrubid=
57782&menusubrubid=57782&languageid=en

Do the different levels of participation (national, European, international) and the division of competences between independent organisations (for example, CEN, CENELEC and ETSI) constitute deterrents to participation in the standardisation process?

Several stakeholders have mentioned the complexity of the system and their conviction that having all these different organisations makes standard development more costly than necessary. In this they do not only point at duplication of the three vertical pillars (CEN, CENELEC and ETSI), but also question the need to have such large standards organisation at the national level. See also Annex 1. [cf. Recommendation 7]

QP16 Can the conditions of access to the standardisation process cause situations where no consensus can be reached? Can the conditions be manipulated so as to serve particular interests? (Cite examples if necessary);

Many standards organisations report that they revert to voting if consensus cannot be reached[1]. The examples of processes being manipulated so as to serve particular interests, do not necessarily refer to situations where no consensus could be reached at the national level. What has been quoted by several respondents are examples in which large players make serious efforts to being represented strongly at various national (mirror) committees. By influencing consensus in many countries they have a (unduly?) strong influence at the European level. If these large players have a serious position on the market in each country this cannot be termed misuse, however this is not always the case:

– A case has been reported of a standard that was really only considered to be important in a small number of Member States. A large firm that had an important position on the market in these few countries, made sure to be represented in TCs in many other countries. As other participants in these countries had no strong opposition, this was a way to manipulate the outcome at European level.

– A manufacturer of safety devices not only participated in the TC developing standards for such devices, but was also accused of organising influence in the TC working on safety of hotels, with the aim to get such devices introduced as obligatory fittings of hotels.

– A large employer that could not reach an agreement with the trade union on working conditions in a specific type of activities reverted to standardisation to get certain aspects 'fixed' as the trade union was not represented in that TC.

QP17 Are there real problems of access to the standardisation process due to the organisation of the system? Are there barriers created by stakeholders' ability to access the standardisation process?

In our perspective, an important barrier related to the organisation of the European standardisation system is the misfit between the system of national delegation and the effort to improve the access of the so called weak stakeholders by

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[1] More details are provided in the Interim report on the 10 points questionnaire completed by 34 NSOs, submitted by EIM Business & Policy Research to DG Enterprise and Industry, January 2009.

supporting these at the European level as described in Section 2.6, Chapter 4, and Section 5.3. [cf. Recommendation 4]

With QP10 and QP11 it has already been mentioned that the distribution between stakeholders that see barriers for participation mainly as internal to their own organisation vs. those that see barriers as being mainly related to the characteristics of the standardisation system is about 50-50.

As also already mentioned with QP10 and QP11, stakeholders mention as the four most important barriers for *access to the standardisation process* issues related to 'costs' (amount of time required; travel and subsistence costs; fee to participate in technical committees; fee to become member of standards body). However, as mentioned in the report, these lacking resources are only one side of the story. The other part (not that often told) concerns setting priorities, in other words making the resources available. One way or the other, we conclude that lack of access to standardisation is quite often related to characteristics of the stakeholders themselves rather than to the rules and procedures of the European standardisation system. One way to overcome this is not to focus on individual stakeholders but rather on organising stakeholders better, having representative organisations.
[cf. Recommendations 3, 5, 8, 13]

3.2.2 Access to standards and standards documents

> QD1   What conditions have the standards bodies put in place to guarantee fair and easy access to the standards? What is the situation regarding availability of standardisation documents in national languages?

The survey among NSOs provide the following picture with regard to availability of standards that have been adopted in the country concerned in the national language (46 NSOs responding, see Table 6.12):
– None of the standards are available in the national language (3 NSOs);
– 1 - 25% are available in national language (21 NSOs);
– 26 - 50% are available in national language (3 NSOs);
– 51 - 75% are available in national language(2 NSOs);
– 76 - 99% are available in national language (9 NSOs);
– All standards that have been adopted are available in national language (8 NSOs).

The interviews showed that even in Germany the translation of standards documents is an issue, although German is one of the three official languages used by the ESOs and most of the standards become available in German. This is because in the development process, when the course of things might be influenced, drafts are generally not available in German. This point was raised by both NGOs and business representatives.

Quite a lot of the stakeholders interviewed express the opinion that wider availability of standards in the local language would be highly appreciated and expected to have a positive effect on the use of standards (See Section 7.2). Still also here different views were recorded. Even NSOs that translate most of the standards in their national language feel that for some sectors such as telecommunications, English is the main working language anyway so it is judged not to

make sense to translate standards in these areas. Moreover, translations are never perfect and might therefore contribute to differences in interpretation.

Table 7.36 shows that stakeholders (in the 12 selected countries) judge the situation with regard to the availability of standards in the national language - for those standards that are relevant for the own organisation – to be rather positive:
– 23% state that less than 50% of those standards are available in their own language;
– 59% report that 75% or more of those standards are available in the national language.

Asked whether the fact that some standards are only available in a foreign language poses a problem for their enterprise or organisation as much as 61 % state that this is hardly a problem, vs. 22% indicate that it is a rather serious problem (See Table 7.37).

Also when asked about the barriers for using standards (as reported below with QD2) the fact that the text of standards are in a foreign language is one of the less important barriers identified by the stakeholders.

QD2	Is the purchase cost of standards a barrier to their use? What arrangements exist to reduce this barrier?

The top 3 barriers for *using standards* are:
– price of standards;
– cost of implementing the standards;
– the number of cross references in the standards.

The price of standards is an (very) important barrier for 52 % of the respondents, however also this finding is not undisputed. Although stakeholders cite this frequently, standardisers argue that it has been demonstrated that lowering prices does not increase the volume of sales. In addition it should be mentioned that identical standards are offered at quite different prices in some Member States without attracting much customers from other Member States.

This is in line with the results presented in Table 6.15 that 85% of the NSOs feel that the price of standards is not at all, or only to some extent a barrier to their use, whereas only 9% feel it is a barrier to a large extent. With Table 6.15 a long list of arrangements has been listed that are applied by NSOs to reduce this barrier, ranging from discounts to making standards available via libraries.

What remains is the perception expressed by stakeholders that it is indeed the price that is the main barrier. In addition stakeholders find it especially difficult to accept that they have to pay for standard texts that are referred to in legislation and that are used to bring about public policy objectives. Therefore especially for EN harmonised standards one might want to opt for free standards. [cf. Recommendations 2, 13]

QD3   Has the Internet made access to standardisation activities easier?

Table 6.13 shows the view of NSOs, 85% report that the Internet has made the access to standard documents much easier. The possibilities offered may differ:
– information on standards is more easily available;
– hardcopies of standards can be ordered at the website;
– hardcopies of standards can be ordered and paid at the website;
– electronic copies of standards can be bought and paid at the web site;
– electronic copies of standards are freely available at the web site.

However, several stakeholders suggest that more advanced and more frequent use of ICT tools might help in further improving access.
[cf. Recommendations 12]

QD4   What are the distribution channels for standards? Are they deemed to be effective?

EVS in Estonia is an example of an NSO that has some cooperation agreements with re-sellers, unfortunately it is reported in Annex 1 that these have not been effective.

The most reasonable and expected development in the field of distribution is for many NSOs to further improve websites using ICT tools in order to make searches more effective and to enable also downloads of standards.

Making the complete set of standards accessible via the Internet would create further cooperation opportunities with trade associations, libraries etc.

QD5   Is providing user guides for standards an appropriate response to the criticisms concerning the quality of standards drafting?

Table 6.14 shows that nearly a quarter of all NSOs are of the opinion that user guides are "to a large extent" an appropriate response to the criticisms that the text of standard documents is too complicated and that it contains too many references to other standards. Another 57% feel that it is "to some extent" an appropriate response.

The face-to-face interviews in the 12 selected countries showed that in general, a lot of stakeholders would appreciate to have user guides for standards to assist them in better understanding the issues covered by the standards.
However from Estonia a more mixed story was reported. EVS has issued very few user guides due to the limited market in Estonia and states that it is therefore not possible to estimate whether the guides are considered to be an appropriate response to the criticism concerning the complexity of the text of standards. The stakeholders however are not very enthusiastic about the user guides. Some consider them to be helpful, others find them confusing. The major problem with user guides is however financing. In case there are not enough funds available to translate standards the state cannot afford to support the elaboration of user guides.

33 from the 47 NSOs that responded to the Internet survey mentioned several arrangements that are applied by NSOs to reduce the barrier of price. 14 of the suggestions referred to a collection of standards:
- 4 times: subscription to collections of standards (four times);
- 3 times: the option of providing 'sets of standards' at a lower average price;
- 2 times: packages editions;
- 2 times: series of standards on CD-ROM with reduced price;
- 1 time: development of special products, e. g. handbooks, collections of standards;
- 1 time: publications that compile sectoral standards are continuously published;
- 1 time: PDF-on line access to series of standards.

The report from Estonia in Annex 1 shows that EVS reported that nobody has ever wanted to get a complete collection of standards. Still there have been requests to have access to the collection of standards. As regards targeted collections, they have been introduced in few areas such as construction and electricity. EVS has plans to develop in the future such specific sets of standards.

Unfortunately no specific clear information was obtained from stakeholders on this subject.

Generally drafts are only made available freely to members of technical committees. In addition there are opportunities to consult the draft, for example in the premises of the NSO or in public libraries, in order to offer the possibilities to develop comments during the public enquiry stage.
Sometimes also drafts are offered for sale.

3.3 Conclusions and recommendations

In line with the objectives of the study specified by the Commission, these 13 recommendations are really "….avenues for exploration by the standards bodies, the Commission, Member States and interested parties with a view to improving the conditions of access to standardisation activities."

Many of these recommendations concern more than one of these parties. Hence, if a party would like to follow-up a recommendation, it should reach a mutual understanding with the other parties concerned.

The recommendations are presented independently in the sections below. However if it would be considered to implement some of these recommendations their mutual interdependency should also be considered.

3.3.1 Organisational structure of standards organisations

CEN and CENELEC are membership organisations with National Standards Bodies as their members. ETSI is not based on national membership, but is also officially recognized by the European Commission as a European Standards Organization and is - in developing European standards - assisted by National Standards Organizations (NSOs)[1].

However the National Standards Organisations are not a homogeneous group. The history, ownership structure, organisation model, scope of activities and the business models of the National Standards Organisations differ quite a lot. They range from entities that are part of a ministry to companies with a range of commercial activities. The findings of the study show this large variation in characteristics of the National Standards Organisations, e.g.:

– governmental versus private organisations;
– not for profit membership associations vs. corporations;
– focussing on standardisation only vs. mixing standardisation work with a lot of other (commercial) operations such as certification, consultancy, training etc.;
– focussing on standardisation vs. organisations that have a much wider interest (i.e. representing a specific sector of industry also in completely different areas);
– centralised national organisations vs. organisations which use a more decentralised approach involving associated organisations;
– entirely different business models of financing standardisation work, e.g. government support, membership fees, fees to participate in technical committees, sales of standards or auxiliary activities such as certification or training.

Recommendation 1

European policy initiatives aiming at increased access to standards need to take different shapes because of the different organisational structures and different business models in the various Member States[2]. These differences hamper the development of a harmonised European policy. We therefore recommend striving for more uniform organisational structures and business models of the National Standards Organisations as a prerequisite for more efficient and effective European policy making in the area of access to standardisation.

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[1] In the elaboration, approval and implementation of European standards, ETSI is assisted by 38 National Standards Organizations (NSOs) in 36 European countries that are a.o. responsible for the standstill agreement, the national public enquiries and establishing the national position for the vote).

[2] For example 'free access to standards' as advocated in 'Towards an increased contribution from standardisation to innovation in Europe', COM (2008) -133 final will impact private standardisation organisations rather differently from government run standardisation bodies. Hence this might call for an approach in which the national level is dominant in policy mak-ing. Compare the model of the European Employment Strategy, in which actions are agreed upon based on the commitment from Member States to establish a set of common objec-tives and targets for policy. Under this new framework, policy co-ordination can be fostered by a "management by objectives" approach.

3.3.2 Standards used for two purposes

Private voluntary standardisation developed from the need of private enterprise to increase efficiency and have products and techniques widely accepted in the market place. The link between legislation and harmonised standards that developed in the 1980's (the New Approach) drives the European Commission to interfere more with standardisation. See for example the policy aim formulated by the Commission[1] in March 2008:

"The European and National Standards Bodies are invited to address as a matter of priority the conditions of access to standardisation, and to reconsider, in close cooperation with the Member States and the Commission, their business model in order to reduce the cost of access to standards, with the ultimate goal of providing free access to standards developed in support of EU legislation and policy"[2].

This signals the somewhat blurred relation between the European Institutions and the European Standards Organisations (ESOs). On the one hand the ESOs are private independent organisations, on the other they are formally recognised by the Commission and have an important role to play in producing European harmonised standards in the framework of the New Approach in Single Market directives and beyond. This situation emerged because standards initiated and mainly paid for by private enterprises and standards that are used to bring about public policy goals and that are partly paid by public money, are dealt with in one process and using identical procedures and terms and conditions.

However, because harmonised European standards play an important role in European legislation, democratic legitimacy and free access become even more important. In addition, the study has shown that stakeholders are reluctant to pay for standard texts that are referred to in legislation and that are used to bring about public policy objectives.

Still, there are also several good reasons not to take the two apart completely:
− It is not always clear from the outset what use will be made of a standard.
− Having 'public standards' developed outside the standardisation structure will destroy some of he benefits of the technique introduced by the New Approach: specify policy aims in legislation, but define ways and means to achieve and monitor these by consensus of stakeholders including the business world.
− Two different production and maintenance structures will introduce additional complexity and problems with regard to overlapping or possibly contradictory normative texts.

Recommendation 2
Seriously consider the relationship between the standards organisations and the European Institutions and the procedures for the development and distribution of standards used for two different purposes: standards initiated and mainly paid for by private enterprises and standards that are used to bring about public policy goals and that are partly paid by public money.
The recommendation is to develop all standards within one system, but adjust procedures and conditions of access for harmonised standards (e.g. lower prices for EU harmonised standards, see Recommendation 13).

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[1] Communication from the Commission COM (2008) -133 final.

[2] Reducing the price of standards would indeed seriously affect the business models of the National Standards Organisations, as the present study has shown that several of these organisations recover some 50% of their overall budget (costs) from selling standards.

3.3.3 Access and actual participation: organise stakeholders

Quite obviously the study showed that access to and participation in standardisation are two interlinked concepts. Without access there is no participation, but if there is no participation this does not imply that there is no or very limited access.

SMEs, consumers or environmental NGOs may for example state that access is limited because participation in technical committees or acquiring the standards themselves is simply too costly. However to arrive at the conclusions that standards are indeed too costly requires two distinct steps:

1. It has to be determined whether costs are really the most important factor, or that it is just *easier* to state that costs are the impediment than to acknowledge that it is difficult to mobilize the required (technical) expertise within the rank and file of the stakeholder category.

2. Even if costs are indeed the relevant factor, it is not simply the amount of Euro's involved[1] but rather the priority given to the subject and the willingness to accept that serious costs are involved in producing standards.

If we agree that costs are too high to succeed in getting all the relevant parties around the table, it still does not follow automatically that prices need to be lowered. The options that could be considered are:

- more efficiency in the development of standards (lowering costs and hence prices);
- more contribution from tax payers' money (lowering prices for participants);
- put more efforts in getting the stakeholders organised. The study showed for example that some trade associations in Denmark and the Netherlands in sectors with mainly small enterprises are very active in organising their representation. They find individual SMEs ready to send an expert to participate in standardisation, but facilitate such participation by sharing the travel costs etc. and sometimes even the costs of the hours spent[2]. This addresses directly the unbalance discussed in this report in Section 5.2, that the cost/benefit ratio of participation in the standardisation process is much larger for smaller than for larger enterprises (see also footnote[2]).

Recommendation 3

Improvement in access to and actual participation in standardisation must not only be achieved by reorganising business models of standards organisations, but also by fostering the organisation of the relevant stakeholder interest to allow meaningful participation. This holds for representation of interests outside the business community as well as for the business community: efforts to increase the representation of SMEs in standardisation should be aimed at organisations of SMEs such as trade associations and professional organisations.

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[1] However as discussed in the study (See Section 5.2), it should not be neglected that the cost benefit ratio for the traditional strong stakeholders such as large enterprises is much better than for other, weaker stakeholders such as SMEs. For SMEs, the absolute costs to participate in the standardisation process are almost identical as for large enterprises but the potential efficiency and marketing gains are much smaller in absolute terms. For other stakeholders such as consumers, environmentalist and trade unions there are not even direct financial gains to compensate the costs made.

[2] If a small entrepreneur would represent his national trade association in the standardization process, it should not be a big problem to cover his entire costs, as in many cases he is representing hundreds or even thousands of businesses in the same sector of industry, who may all benefit from his work.

3.3.4 European vs. national level

The European standardisation is a coherent system based on the principle of national delegation. CEN and CENELEC are membership organisations with National Standards Bodies as their members. ETSI is not based on national membership, but is also officially recognized by the European Commission as a European Standards Organization and is - in developing European standards - assisted by National Standards Organizations (NSOs)[1].

The system of national delegation requires a consensus between the various different interests at national level that result in a national vote by a national delegation at European level[2]. The importance of the principle of national delegation is again emphasised in conclusion 10 of the European Council of September 2008 (See introduction to this chapter).

However, many efforts have been made to strengthen various interests at the European level in order to increase their influence in the elaboration of European standards: the European Union financially supports organisations like ANEC (consumers), ECOS (environment), NORMAPME (SMEs) and ETUI (labour).

This is a conflicting combination of the system of national delegation where national delegations come to European meetings with an 'iron-casted' national vote[3] that is the outcome of consensus building at the national level and the idea to influence the European outcome by having a specific interest weighted in at the European level[4].

Recommendation 4

The contradiction between the system of national delegation and the efforts to have specific interests represented at European level with the support of the European Commission should be gradually resolved, either:

– *by promoting the access to the standards making process at the national level[5] for other stakeholders than the traditionally strongest stakeholders such as large enterprises;*
  or:
– *by gradually dismantling the system of national delegation and moving towards a truly European system, in which a consensus between the various interests is actually developed and obtained at the European level.*

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[1] In the elaboration, approval and implementation of European standards, ETSI is assisted by 38 National Standards Organizations (NSOs) in 36 European countries that are a.o. responsible for the standstill agreement, the national public enquiries and establishing the national position for the vote).

[2] See for example: Hands on standardization, a starters' guide to standardization for experts in CEN technical bodies; available as PDF at:
http://www.cen.eu/cenorm/workarea/handson/handsonguidejan09.pdf.

[3] The study clearly showed that with almost all National Standards Organisations, there is a strict control by the Technical Committees that national delegations at the European table indeed plead for the national position agreed before at home.

[4] This explains part of the frustration expressed by respondents from organisations that may be associate members in the European Standards Organisations, but that still feel that their actual influence is only marginal.

[5] Hence this might call for an approach in which the national level is dominant in policy making. Compare the model of the European Employment Strategy, in which actions are agreed upon based on the commitment from Member States to establish a set of common objectives and targets for policy. Under this new framework, policy co-ordination can be fostered by a "management by objectives" approach.

3.3.5 Original interest vs. supported institutions

As described in the study, the European Union financially supports various inter-
est groupings to strengthen their position in European standardisation: ANEC
(consumers), ECOS (environment), NORMAPME (SMEs) and ETUI (labour). This
indeed brings about a lot of benefits, however not without a cost. Some of these
supported organisations operate at the European level in a relative vacuum: no
other European level organisations claim to represent the interest of that type of
European stakeholders. However in the case of SMEs this is different. NORMAPME
is financially supported by the European Commission[1] and is doing a good job in
representing the interest of SME and craft enterprises in European standardisa-
tion[2]. However other business organisations, such as those in the SME dominated
construction sector, expressed in the study that they consider themselves as the
'real' representatives of the business community being a European sectoral or-
ganisations with a large SME membership. Such organisations are found to ques-
tion the legitimacy of NORMAPME speaking on behalf of the SME community:
'With us, SMEs are paying members, and we should speak on their behalf, not an
EC financed entity'.

Recommendation 5

*If other membership organisations do exist that claim to represent the same in-
terest as the one organisation selected by the Commission to receive financial
support to represent that interest in European standardisation, the position of
that organisation may be disputed.*
There are two options to arrive at a solution: either:
- *the policies to support the participation of stakeholders should aim to improve
  framework conditions rather than support directly individual organisations;*
- *any direct support should preferably be to all existing membership organisa-
  tions, representing the European stakeholders, not just one.*
*Obvious a proper mix between these options might result for an exploration by
the standards bodies, the Commission and interested parties.*

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[1] NORMAPME is an international non-profit association created in 1996 with the support of the
European Commission, under the full name of the "European Office of Crafts, Trades and Small
and Medium- Sized Enterprises for Standardisation". NORMAPME focuses on small enterprise in-
terests in the European standardisation system (source: http://www.normapme.com).

[2] See for example the Evaluation of EU actions for the promotion of craft and SME interests in the
standardisation area, Final Evaluation report submitted by GHK / Technopolis to DG Enterprise
and Industry, 27 February 2009.

3.3.6 Training and education

Much information collected in this study pointed at a general lack of understanding and lack of awareness of the importance of standardisation among the different types of stakeholders. A higher level of awareness of the importance of standardisation – also in bringing about public policy objectives - in society may allow several interest groups to allocate more resources to participation in standardisation with a positive impact on access. This holds for all stakeholders, whether these are consumer organisations, environmental interest groupings or business.

For example technical staff of somewhat larger enterprises reported in the study that they are of the opinion that they themselves properly understand and see the importance for their firm of participating in standardisation. However often adequate support from higher management levels is lacking, the technical staff ascribe this to a lack of awareness and understanding with general management.

Improved understanding may result in better awareness and access and hence increase the use and impact of standardisation in society at large with a positive effect on efficiency and welfare of Europe as several economic studies quoted in Chapter 1 and 2 of this report have demonstrated.

Recommendation 6

More support to training and information campaigns on standardisation issues would be most welcome. This holds for courses aimed at specific target groups among stakeholders such as SMEs or consumer associations, as well as for improving the position of standardisation in regular education such as - but not limited to - regular vocational education and academic curricula.

3.3.7 Integration of different standardisation domains

In European standardisation three domains are distinguished that are covered by the three officially recognised standards organisations CEN, CENELEC and ETSI. Similarly there are a lot of different organisations at the national level; more than 50 national organisations in the 30 EFTA and EU Member States considered in this study.

Respondents in the study have pointed at the consequences of the variety of standardisation organisations that exist in the official European standardisation system:

– It is often difficult for stakeholders to know 'where to go', which is limiting access.
– High costs for stakeholders (representative organisations), as they have to maintain contact and participate in meetings etc. of several organisations, which has also a negative impact on access.
– Inefficiency of the European standardisation system itself as standards development takes place in three parallel organisations. As a consequence costs and prices for participation and standards documents are higher than reasonably necessary. This has again a negative effect on access.

The study has found that much cooperation and coordination between the various standardisation domains exist already. However due to the ever increasing combination of different fields of specialisation (electrical and mechanical components in machinery, ICT in cars, etc. etc.) and in order to reduce complexity, barriers to access, and double costs, it must continuously be monitored whether having separate entities to cater for standardisation in different fields should be continued, both at European and national level.

Recommendation 7

Monitor continuously the possibilities to merge different institutions that cater for standardisation in different, but increasingly related fields of expertise (at national as well as European level) in order to reduce complexity and costs with a view to increase ease of access further.
Obviously within merged organisations there will remain a certain specialisation to cater for the different working areas.

3.3.8 Cooperation between standards organisations and sectoral organisations

Some of the complaints that are expressed by respondents in the study might be serious issues, but it can be questioned whether solutions only have to be sought by adjustments within the standardisation system.

It is for example indeed very difficult for a small gate producer running a workshop with only four employees to find his way in a huge collection of technical standards. This may take more time than can reasonably be expected from a small manufacturer. However the solution might not only have to come from the standards organisations (giving more focussed information and offering sets of standards for specific target groups), one should also consider the relevant business organisation or trade association that should be in a position to provide such more targeted (filtered) information to its members about which standards are most relevant and how to deal with them.

We recognise of course that a lot of cooperation already takes place. Just to mention two examples, one from either side of the wide range that does exist:
– Fully integrated within the standardisation system. The Mechanical Engineering Standards Committee (NAM) operates within DIN (German Institute for Standardisation) on behalf of the Verband Deutscher Maschinen- und Anlagenbau e.V., VDMA (Federation of German Machine and Plant Building Industry). It results in 'standardisers' really using the language of the business world and presents a good example[1];
– Ad-hoc external cooperation as done by all NSOs. For example NEN in the Netherlands organising a symposium in January 2009 on packaging and sterility in cooperation with two professional organisations in that field.

Recommendation 8

The cooperation of standards organisations with a wide range of stakeholder organisations (whether business associations or special interest groupings) should be further improved in order to see to it that more relevant, more targeted information on standardisation reaches the stakeholders at grassroots level. In addition to reaching stakeholders adequately and efficiently with information, such cooperation may result in specific sets of standards to be composed and actually distributed among the target group.

[1] Described more in detail in: EIM Business & Policy Research, SMEs and Standardisation in Europe: 23 Good Practices to promote the participation of craft and SMEs in standardisation, and the use of standards, European Commission, DG Enterprise and Industry, Brussels, 2006.

3.3.9 Uniform registration of participation of stakeholders

A lot of discussion is going on in Europe about the need for SMEs to be better represented in standardisation, and it is obviously the case that most SMEs are not involved or aware. However given the fact that there are roughly 500 times more SMEs in Europe than large enterprises (having more than 250 employees), SMEs are overall reasonably well present in standardisation[1]. In other words: if 10% of the large enterprises in Europe would be active in the standardisation system and only 0.1% of the SMEs (incidence 100 times less), there would on average still be five times more SMEs present in each technical committee than large enterprises (about 20,000 vs. 4,000 members).

Table 6.20 in this report shows that the absolute number of SMEs reported to participate in the technical committees with the various National Standards Organisations is indeed generally larger than the number of large enterprises. However one important issue still needs to be documented much better, because with most National Standards Organisations, certifiers and consultants are registered as SMEs, whereas there are valid reasons to argue that when discussing for example machine safety standards, the position of engineering companies is really different from the position of certifiers and consultants and hence a distinction should be made when their participation is registered and assessed.

The study has found that the real problem lies in the limited representation of consumers' and especially environmental and trade unions' interests in many countries. Generally large enterprises, government institutions and universities seem to be properly represented.

However, the study also established that it is not really possible to obtain proper statistics on the participation of the different types of stakeholders in the European standardisation system. Much registration is only done on a case-by-case basis (to verify the balanced composition of one technical committee), without developing an overall registration system able to produce reliable, comprehensive statistics. This makes it impossible to monitor actual participation of the various stakeholders, and hence to monitor the effect of policy actions to improve access. If registration takes place with the National Standards Organisation, it follows an own model making monitoring at European level even more difficult.

In addition the study found (See Section 6.2.1) that only one third of the National Standards Organisations report that a complaints register does exist in their country. Also in this respect a further harmonisation across Member States would improve the possibility to monitor developments with regard to (complaints about) access.

Recommendation 9

To allow monitoring progress in increasing access to and actual participation in standardisation by the various types of stakeholders, the ESOs and NSOs should have a uniform registration of the participation of the various types of stakeholders in technical bodies, either by the number of organisations represented or by the number of experts participating on their behalf. A uniform classification of stakeholders is important to judge to which extent a balanced composition of TCs is indeed achieved in the various countries.

To also allow assessing the problems that still exist, they should also have a uniform complaints register with all National Standards Organisations.

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[1] They also make up 20% of response in the stakeholder survey.

3.3.10   Public hearing

The development of European standards (EN) includes a public commenting period (public enquiry) followed by an approval by weighted voting by national standards organisation. When asked during this study, most National Standards Organisations (NSOs) obviously refer to this accepted principle, such as an NSO stating: "The procedure for public enquiry is announced on the NSOs website and published in the official bulletin. The draft national standards are notified to the competent authorities in accordance with the NSOs notification procedure under EC Directive 98/34."

However the study recorded also signals from a range of Member States that these public hearings mainly, or even exclusively, are targeted at those stakeholders that are already participating in technical committees[1].

However the situation is not black and white. In those cases for which we tend to conclude that in practice the focus of the 'public' enquiry is a bit too much on those parties that are already participating in standardisation work, NSOS generally also state that in addition 'everybody in the country can participate in the public enquires' or 'additionally, all enquiries are announced in the bulletin'.

In many other Member States it is really a public hearing and all drafts are for example announced in the state gazette.

The practice of circulating drafts mainly among insiders does not only seem to be detrimental to the basic characteristic and meaning of a public hearing to collect additional comments on that specific draft, it might also be a missed opportunity to raise awareness on what is going on in standardisation in general.

Recommendation 10
It should be further encouraged that public enquiries are indeed published widely and that stakeholders not (yet) participating in standardisation are indeed reached. The NSOs should be more proactive in obtaining comments from a wide range of stakeholders during the public enquiry. Just a reference in the State Gazette might not suffice.

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[1] The following findings originate from the additional "10 points questionnaire" reported by EIM in an internal document to DG Enterprise and Industry (See also Section 6.3 of this report):
- So called IEC/CENELEC-experts (a special kind of national committee member) are nominated by the national TCs. These experts are coordinating the national consultation and are responsible to provide the NSO with the national comments".
- European and international public enquiries are addressed to all known members of the NSO.
- About 40 organisations are on the mailing list for public enquiries: ....
- Only members of national Technical Committees are involved in the development and (public) enquiries of European and international standards."
- For public enquiries, the members of the national TC prepare comments on the draft.

A lot of information on standardisation is distributed by means of special publications, e-mail newsletters and dedicated websites. Hardly any of the standard organisations pay special attention to access to this information for people with limited eyesight or other impairments.

It is rather easy in ordering printed material or in giving design assignments for websites to ask for features that will make it better accessible and usable to as wide an audience as possible (colour schemes, font type and size, navigation tools, magnifiers for on screen display etc.).

Recommendation 11

In designing the various communication tools used by standard organisations – and stakeholder groups for that matter – the need to make these communication tools accessible for people with impairments should be better taken into account.

3.3.12 Use of ICT

In providing information on the standardisation process and on the standard documents that are available, much has already improved by using ICT tools. Many websites provide a lot of information on standards and make it much easier to search through the available information and filter out the information and standards that are relevant for that specific user.

Still many stakeholders judged that the use of ICT tools could be further improved.

– Most of the work of technical committees is almost entirely focussed on physical meetings as reported in the last paragraph of Chapter 6. Although it is probably not a good idea to do away with physical meetings altogether, more use of ICT tools might help to reduce the cost associated with participation in standardisation. If part of the work is done using web fora etc., significant savings in terms of time and money may be accomplished, especially by reducing the travel frequency.
– Also people active at Member State level were found to complain about the time lags in getting answers from the European Standards Organisations. Distributing more information using advanced ICT tools will help to reduce time lags.
– As shown in Annex 1 on Estonia, stakeholders state "It is of utmost importance to have an opportunity to get information, comment on it and buy standards via the Internet".

Reduce cost and 'time-consumption' in these ways would improve access further.

Recommendation 12
The use of ICT tools should be further encouraged in.
– Organizing the standards developing process.
– Distributing information on the standards documents.
– Distributing the standard documents themselves.
In fostering this, good practices that exist with several NSOs might be a useful instrument.

Based on the information and views collected in the course of this study we concluded that generally the importance of prices as an impediment to the use of standards or to participating in the standards development process (membership fees) is less important than often stated. Indications are for example:

– With stakeholders, ascribing insufficient priority to standardisation is often interlinked with the stated argument 'too expensive'.
– Standardisers report that lowering prices of standards does not result in a sizeable effect on the volume of standards being sold (low price elasticity).
– Although EN standards are available from a large number of National Standards Organisations at diverging prices, stakeholders do not seem to shop to buy from the cheapest supplier in Europe.

We do not advise to opt for free standard documents and having no fees for participation in standardisation work), because it might destroy the industry led standardisation as it evolved over the last 100 years. As one stakeholder *stated "as a matter of principle, standardisation should continue to be a tool of self-regulation by industry. Therefore, public funding is not an option"*.

One has to understand that in private standardisation there is a balance between the agenda for standardisation, the amount of standardisation work (work items) taken up and the willingness of stakeholders to finance such activities and contribute their expertise and time in the process. This implies priority setting. If standardisation would be financed by public money this mechanism will stop to function, and it may be difficult to arrange alternative mechanisms that would result in a proper prioritisation and in keeping the budgets required within reasonable limits.

However, for those standards that are mainly used to bring about public policy goals (EN harmonised standards), this reasoning does not apply:

– The need for democratic legitimacy is more important hence having an open system with all societal stakeholders around the table is more important.
– Priority setting and financing can be done by the public sector (cf. mandates).
– Stakeholders find it especially difficult to accept that they have to pay for standard texts that are referred to in legislation and that are used to bring about public policy objectives test[1].

It should also be noted that having the possibility to sell European standards at a price that is interesting for the National Standards Organisations, might also function as a stimulus to arrange for translations in the local language (aiming to increase the volume of sales).

Recommendation 13

For European harmonized standards (cf. Recommendation 2), that are closely linked to legal requirements, the aim should be to make the standards available for free on the Internet. This obviously brings with it the need to make available alternative sources of finance in order to avoid that as a consequence participation in the standards development process will become much more expensive in order to maintain the economic viability of the standards organisations.

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[1] On 31 December 2008 there was a ruling in a Dutch court case. A private enterprise - Knooble ltd. active in providing information and consulting with regard to construction projects - demanded that standards that are referred to by the Dutch building code will be no longer legally binding because the text of the standards is copyrighted by NEN and not freely available. The ruling stated that these standards are no longer mandatory because the law demands that legally binding texts are freely available.

Part II – More detailed information

4 Access and participation of European stakeholders

The actual participation in the standardisation process can be described as the outcome of several factors:

A. Availability and dissemination of information on the standardisation system and its processes.
B. Awareness by the various stakeholders of the importance of standardisation and the possibilities to influence the outcomes of the process.
C. The rules and regulations of the standardisation process. Are specific organisations allowed to join, what are the conditions for joining?
D. The priority given by the various stakeholders to participation.
E. The resources available with the (individual) stakeholders in terms of expertise, money and time (and made available given their priorities) to actually participate.

When access to standardisation is being discussed, reference is often made to factors A and C only, being factors related to the system and the process. However it has to be realised that actual participation not only depends on these characteristics but also on characteristics of the (potential) participants, i.e. the factors B, D and E. [cf. Recommendation 3]

In the report from the Commission on the operation of directive 98/34/ec from 2002 to 2005[1], it is stated that "The European standardisation stakeholders ANEC (European association for the co-ordination of consumer representation in standardisation), ECOS (European Environmental Citizens Organisation for Standardisation), NORMAPME (European Office of Crafts, trades and Small and Medium-sized Enterprises for Standardisation) and ETUI (European Trade Union Institute) were well-integrated into the process by the end of the reporting period. Two remarks are in order:

− it should be noted that here only three type of stakeholders are considered, as these are supposed to be weak stakeholders (in terms of participation in standardisation);
− next to participation, it has of course to be considered whether this participation goes hand in hand with the ability to actually influence the outcomes of the process.

In Table 4.1 the participation of three of these four European interest groupings at the European level is considered[2]. However in CEN and CENELEC technical bodies, these interest groupings are observers. In arguing their case they are faced by the 'effective' members of the CEN and CENELEC technical bodies, the national delegations. This highlights the importance of a good representation of the various interests at national level because in the national mirror committees the national votes are being developed. The national delegations have to adhere to the agreed national position, when participating in the technical committees at European level. [cf. Recommendation 4]

[1] Report from the Commission to the Council, the European Parliament and the European Economic and Social Committee, the operation of directive 98/34/ec from 2002 to 2005, {sec(2007) 350} , COM(2007) 125 final , Brussels, 21.3.2007

[2] ETUI did not make this information available.

The representation of the various types of stakeholders at national level is discussed in Chapter 7 based on the surveys among NSBs and NSOs (Step 4 of this study, as shown in Figure 1.1) and the consultation of the stakeholders at national level in Step 5.

Table 4.1   Participation of European stakeholders in technical bodies of the three ESOs*

European Standards Organisations	Presently active	ANEC considered relevant	ANEC actual participate	ECOS considered relevant (estimate)	ECOS actual participate	NORMAPME considered relevant	NORMAPME actual participate
CEN							
Administrative Board			X		X		X
General Assembly			X		X		X
Technical Board			X		X		X
Technical Committees (TC)	282		25	30	12		23
- sub-committees	85						
Workshops	38		1				
Working Groups	1,418		6	50	12		
BT/Task Force			5	5	2		1
CENELEC							
Administrative Board							
General Assembly			X		X		X
Technical Board			X	X			X
Technical Committees, sub-committees	73		9	10	2		1
TC/SC Working Groups	220			20	4		1
BT/Task Forces/Working Groups	24		2				
ETSI							
Board			X	?			X
General Assembly			X	?			X
Operational Coordination Group			X				X
Technical Committees (TC)	21		2	5			1
Work Groups/Task Groups	100						1
ETSI Project (EP)	1						
ETSI Partnership Project (EPP)	5						
Special Committee	4		1				1

* The number of technical bodies is derived from: (1) CEN Annual Report 2007, p. 55; (2) CENELEC Annual Report 2006, p. 44, plus e-mail 2008-07-17; (3) ETSI website, July 2008, plus e-mail 2008-07-08. The number of technical bodies in which stakeholders participate is based on (4) ANEC Annual Report 2007, p. 38 - 39, plus e-mail 2008-08-07; (5) List supplied by ECOS, March 2008, revised e-mail 2008-07-08; (6) NORMAPME website June 2008, plus e-mail 2008-07-07.

5 Views of European players

5.1 Introduction

Extensive interviews with large and high level delegations of CEN and CENELEC in Brussels and ETSI in the south of France[1] have been held. Subsequently meetings were held with representatives of some European representative organisations such as consumers, business, trade unions, environmental organisations[2] and market surveillance organisations.

5.2 Overview and summary

The findings from the interviews can be summarized as follows.

– The management of CEN, CENELEC and ETSI are convinced that their procedures and business models are overall adequate. They provide the best guarantees for an open and democratic standardisation system that is based on consensus and balances the various interests to the extent possible. They admit that minor improvements might be possible, but overall they feel that their system provides the best conditions for access. They also belief that there is little doubt that their system is superior to the other (CEN/CENELEC vs. ETSI and the other way around) and that most 'stories' of stakeholders about limited access or stories about for example large corporations dominating procedures are generally based on individual cases that are greatly overexposed.

– Some of the stakeholders (stakeholders' representatives at European level) on the other hand complain that they sometimes feel like second-class citizens and that their interests are not sufficiently taken into account.
[cf. Recommendation 4]

How is it possible that such contradicting views are so firmly expressed? There might be various factors contributing to this:

– Lack of access to standardisation is quite often related to characteristics of the stakeholders themselves rather than to characteristics of the European standardisation system (rules and procedures). Often a lack of resources is said to hamper the full involvement for various types of stakeholders. However, it is also reported that a lack of resources in terms of money, staff (-time), and the required technical expertise may be actually be related to setting priorities.

– Within the business community, 'scale' is one of the important factors. For large corporations standardisation may have a major impact on how they can and will serve their markets in Europe and beyond. The same holds for small scale operators, however whereas the costs of participation in the standardisation process are more or less similar (sending an expert to meetings for a few years, paying for travel and subsistence), the benefits are of a completely different scale. If participation in the process would lead to one percent reduction of production costs of a business, this is a huge sum for a major manufacturer (allowing to financing an own standardisation department within the

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[1] ETSI is located in the Sophia Antipolis science park, between Nice and Cannes.

[2] In this report "environmental organisations" refers to environmental non-profit citizens' organisations representing civil society.

company), whereas for a small company the absolute gains are rather moderate. In addition the owner/manager has to keep his business running and rarely finds the time to participate in such long term administrative procedures. In summary:

- – in absolute terms, the costs of participation in the standardisation process are for large enterprises and SMEs more or less the same, whereas the benefits are much higher for large firms;
- – however in relative terms, the cost/benefit ratio is much better for large enterprises than for smaller enterprises.

– For many other stakeholders, such as trade unions, consumers or environmentalists there is no immediate financial return. Hence financing their input is even more difficult, but again also here prioritisation is reported to be a relevant issue as it determines the amount of resources organisations are willing to mobilise for the issue of standardisation.

In addition we feel that another major issue - to which in our view surprisingly little attention is paid - is the fact that two different 'types' of standardisation are dealt with in one system that have basically different drivers, characteristics, financial consequences etc.:

– In the 'old' days standards emerged as voluntary agreements between *private parties* to enable a.o. interoperability of their products and in this way hugely contributed to conquering markets, efficiently etc. The 35 mm film introduced in photography (and film) in the early twentieth century fitted cameras of many manufacturers and could be processed anywhere around the world. A4 sized paper[1] contributed to efficient markets for a.o. copiers, fax machines and printers. These different models of printers can all be connected via a standardized printer port[2] to numerous brands of computers. Manufacturers and users have benefited a lot.

– On the other hand there are harmonised standards in the framework of the New Approach Directives of the European Commission and EFTA. These were originally meant to support the development of the Single Market. However, over the years ideas have grown to widen the scope of the New Approach – at least some of the techniques used - considerably (as also expressed in official documents); for example by covering environmental legislation in the harmonised standards. The link between legislation and these harmonised European standards helps in removing technical barriers to trade, and hence plays a vital role in ensuring the free movement of goods between Member States and EFTA countries. The over 25 Directives[3] that have developed since the mid 1980's that are based on the New Approach and the Global Approach[4] have

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[1] One out of a series of standards measures starting from A0 (1 m2), defined by the international paper size standard, ISO 216, that is based on the German DIN 476 standard that was already adopted by a range of countries before the Second World War.

[2] Originally a de facto standard (Centronics in the 1970's) was popularized when IBM used it as the basis for the printer port on the early days PCs in the 1980's. The standard further developed, bi-directional faster communications, to become the IEEE 1284 in 1994.

[3] Some 22 New Approach directives that provide for CE marking (e.g. pressure equipment, lifts, safety of toys); 4 that do not provide for CE marking (e.g. packaging and packaging waste) and 4 others that are based on some principles of the New Approach and the Global Approach (e.g. transportable pressure equipment) are listed on http://www.newapproach.org.

[4] The common thread between these complementary approaches is that they limit public intervention to what is essential and leave business and industry the greatest possible choice on how to meet their public obligations. The New Approach concerns regulation (New Approach Directives) whereas the Global Approach concerns conformity assessment.

the dual purpose of ensuring the free movement of goods through technical harmonisation of entire product sectors, and a high level of protection of public interests. The essence is that these harmonised European standards are providing ways and means to companies to show that their products are believed to comply with European legislation [1]and hence can be marketed in the Single Market. So the idea of 'voluntary standards initiated by private parties' is being distorted somewhat. Here standards help in 'imposing' obligations upon enterprises to ascertain that products and services are complying with important essential *public policy* requirements[2] relating to a.o. safety of workers and consumers and to environmental impacts.

In summary: standards are on the one hand used to increase efficiency (of businesses) and on the other hand to reach public policy goals set by the European Union.
The question to be addressed is whether the mixing together of these two 'uses' into one European standardisation system has not blurred the overall picture, because characteristics, drivers, interests of and acceptance by various types of stakeholders differ for standards used for these two purposes.
[cf. Recommendation 2]

However the European standardisation system might manage both 'types', including their rules of access. But there might be an additional need for public authorities to consider the access issue in case standards are used in the public domain. This might warrant additional checks on and measures to support access and the actual participation of all relevant parties in such cases.

Also within ISO an approach is advocated based on the tripod of a balance of stakeholder interests at the national level, voting by ISO's national members, and consensus decision process (i.e. efforts to convince dissidents, see ISO/IEC Guide 2:2004)[3]. In practice, however, the ISO committees may also lack diversity. In 2005 a draft guideline was issued to involve a wider set of stakeholders in committee negotiations, in particularly the usually absent stakeholders such as consumers, labour representatives and NGOs. Special efforts were made by ISO on representation in the standards committee on Social Responsibility (i.e. ISO 26000). For this process a guide on relevant stakeholder categories was specifically drafted. Representation was to be based on six stakeholder categories.
These categories are: consumers; government; industry; labour (workers); NGOs and other, namely "service, support, research and others".

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[1] The Guide to the implementation of directives based on the New Approach and the Global Approach (Office for Official Publications of the European Communities, Luxembourg 2000) states in Section 4.3: Conformity with a national standard that transposes a harmonised standard, whose reference has been published, confers <u>a presumption of conformity</u> with the essential requirements of the applicable New Approach directive that is covered by such a standard. The application of harmonised standards, which give a presumption of conformity, remains voluntary in the field of New Approach directives. Thus, the product may be manufactured directly on the basis of the essential requirements.

[2] These standards relate to both the definition of mandatory essential requirements and appropriate conformity assessment procedures.

[3] This paragraph is mainly based on T.M. Egyedi (Delft Univ. of Technology) & S. Toffaletti (NOR-MAPME), Standardising Social Responsibility; Analysing ISO representation issues from an SME perspective, EURAS Workshop on "Standards and Conflict Resolution", 26-27 October 2007 Dresden, Germany. Available as PDF at: http://www.tbm.tudelft.nl/live/pagina.jsp?id=0b330c26-def4-45e3-a367-43b61bf0ae45&lang=en&binary=/doc/EURAS_Dresden_2007_SMEs_ISO26000.pdf

A balance of experts from these categories was explicitly desired. However ISO has stated that such a sophisticated approach is not possible for all regularly standardisation work as it would delay procedures unacceptably.

5.3   Individual statements expressed in the interviews

Although nearly all standards are European or international, there is a large net-work of National Standards Organisations. National and European organisations are well integrated. But the question is raised whether the European system as a whole is efficient:
− are such large national structures indeed required?
− does this make the European standardisation system more costly than needed?
Unnecessary costs and complexity may be detrimental to access.
[cf. Recommendation 7]

Some parties believe that the European Commission overestimates their financial contribution to the European standardisation system. Considering all, much less than 5% of the costs would be covered by public money as was demonstrated by a Roland Berger study done in 1999-2000, commissioned by CEN[1].

Several interested parties stress that their budgets don't allow them to partici-pate in the European standardisation process in a proper way. The question of the CEN associate membership fee has for example been mentioned as an obsta-cle to participation and also as a matter of principle regarding the role public in-terest stakeholders (can) play in the standardisation process. The fee of about € 10,000 per year is a punitive charge for public interest organisations such as ECOS and ANEC (respectively representing environmental and consumer inter-ests at European level).

Moreover the status of associate membership conveys few rights in the eyes of some stakeholders. The associates sit only as observers in the CEN General As-sembly (AG), the Technical Board (BT) and the technical committees of CEN. On the one hand the associates only have limited influence on the strategic direction of CEN or on its key decisions. On the other hand influence on actual standards being developed is rather limited if - in the model of CEN and CENELEC - the vot-ing is done by national delegations (that bring a national vote to the table that has been decided upon before at national level). Associate members at European technical committees can hence do hardly anything to influence the decision making with regard to normative documents at European level.

In several technical committees representation of SMEs is limited or absent, al-though issues are addressed that are relevant for sectors in which SME operate. However it does not follow that factors within the standardisation system prevent participation, it might also be related to characteristics of the SMEs themselves or their representative organisations. A same line of reasoning applies to other interests such as those of workers, consumers or of the environment.

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[1] Future financing for the CEN System, Roland Berger & Partner GmbH – International Manage-ment Consultants, December 2000 (Available at: http://www2.nen.nl/cmsprod/groups/public/documents/bestand/200840.pdf).

Because the price elasticity of demand for standards is very low (i.e. reducing prices will not substantially increase the numbers sold) reducing the price of standards will reduce the revenues of standards bodies substantially, hence costs can no longer be recovered.
[cf. Recommendation 13]

Having National Standards Bodies selling (EN) standards and having NSBs financially benefiting from this, is a driver to have standards translated into national languages and in this respect improving access to standard documents.
[cf. Recommendation 13]

Some observers state that at European level the system is more open and transparent than in many of the national situations.

Some parties state that serious issues are sometimes broadcasted in a distorted way: the case of the difficulty small producers of gates and doors have to cope with the cluster of standards that they have to follow is as much an illustration of an overload of formal requirements as of a lack of information and guidance of smaller producers from their own trade organisations. Here access might be improved by a better role of for example trade associations and a better cooperation between such organisations and standardisers. (The cluster of standards EN 13241-1, see: video at website http://www.normapme.com.).
[cf. Recommendation 3, 8]

In the view of ESOs the system is so open and transparent that it is indeed very hard for one particular party (e.g. certifiers or multinationals) to have a controlling influence.

The price of standards, for example ISO, is sometimes even a bottleneck for the European Commission. A particular staff member may hear from the library of a Directorate General: 'sorry, too expensive / no budget to acquire these standards for the library'.
[cf. Recommendation 13]

NGOs do express the view that there is a gap between the principles of standardisation that are advocated by the standards bodies (open, all interested bodies involved, consensus) and the every day practice: lack of information, large representation of industry who have a lot to gain, for several other stakeholders difficulties in digesting information, lack of resources to participate and obtain standards, not being represented in the delegations (to European level). In some circumstances various types of stakeholders are 'only' observer with different rights in voting, they perceive their own position as second-class citizens.
[cf. Recommendation 4]

The fact that several National Standards Bodies and Organisations are not only active as standardisers (i.e. facilitating the evolvement of standards and distributing existing standard documents) but all have auxiliary commercial activities in for example certification and training is something that needs more reflection. The commercial interest in one area may influence decisions in another area.
[cf. Recommendation 1]

 'Lack of resources' is often mentioned as the major bottleneck. However some informants have their doubts. In reality it might be a lack of detailed knowledge with regard to the complexity of the system and its procedures and with regard to the technical issues at hand. [cf. Recommendations 3, 8, 13].

Supported training and information campaigns on standardisation issues would be most welcome. This holds both for groups of stakeholders such as SMEs or consumer associations and for elements in the curricula of regular (vocational) educational and training systems. [cf. Recommendation 6]

Some informants question the legitimacy of several parties that are participating at the European level in standardisation. The activities of such parties are (partly) financed by European public money: who do they represent? [cf. Recommendation 5]

Enterprises have immediate economic benefits from participation, it may positively affect their knowledge on what is going on, reduce production costs or ease access to markets. For many other types of stakeholders there are no immediate economic returns, hence it is much more difficult to make available the resources needed to participate in the process.

Although standards bodies do a lot on informing interested parties by means of websites[1], newsletters, user guides, seminars etc. (also in various languages), it is sometimes difficult to get the type of 'targeted' information that is very important for various stakeholders such as in *which TCs or draft normative documents are important Occupational Health and Safety (OHS) or environmental aspects at stake?*. [cf. Recommendation 8]

There is a demand for better enforcement of regulations and information exchange in several areas of public policy such as food safety. Therefore also market surveillance authorities have a strong interest in standardisation for example concerning the description of testing methods.

The EU research programmes form an important input in the standardisation process. At national level national researchers should be involved in the process; the extent to which this is really happening differs between countries. National Standards Organisations have a role to play (Note that at European level efforts are made to give proper emphasis to the innovation dimension, in a joint effort of CEN and CENELEC the Working Group "Standardisation, Innovation and Research, STAIR has been established to increase the co-operation between the researchers and the standardisers).

ESOs should stimulate that knowledge and experience of the standardisation process is shared between old and new Member States.

Raising awareness about the importance of the standardisation process among business associations (especially those representing SMEs) is one of the best ways to stimulate their participation in the process. [cf. Recommendation 8]

Some argue that the integration of environmental and social aspects in the standardisation process should be done from the start of the process at national level. So although these interests should be guarded both at national and at European level, it is crucial to strengthen national level participation of the different types of NGOs. [cf. Recommendation 4]

[1] See also the dedicated website on the New Approach that has been realised to increase the visibility of New Approach Standardisation in Europe and to provide information on the standardisation process: http://www.newapproach.org/

European interest organisations also report that there are situations where there national members complain that no mirror committees are set up at national level. This may have various reasons such as for example a lack of interest with the NSO or an NSO that cannot mobilise sufficient interested parties (with the consequence that the stakeholder that is making enquiries is told that a mirror committee could be set up, but that the requesting party should cover all costs, i.e. € 15,000). [cf. Recommendation 4]

There might be a need to reflect on the link that has been developing between the European Standards Organisations (ESOs) and the European Commission (New Approach directives, mandates, subsidies etc.) as it may at a certain moment in time endanger the position of European standardisation at a global scale. ISO for example does not have a governmental counterpart playing a role in the decision making process, and if the situation in Europe would deviate too much from the other players at global level, this might have an impact on the position of the ESOs within the global system. [cf. Recommendation 2]

6 Views of National Standards Organisations

6.1 Introduction

The Internet survey among National Standards Bodies and Organisations (NSBs and NSOs, hereafter called standards organisations) was implemented in April-May 2008. In Section 6.2 the main findings from this survey are reported[1].
As views expressed in the survey were not always adequately supported by facts and figures, an additional *10 points questionnaire* was distributed in all 30 countries concerned to all NSBs (members of CEN and CENELEC) and to all NSOs co-operating with ETSI in the ICT domain.
The results from the *10 points questionnaire* have been described in a background report in a series of 34 narratives, a kind of case descriptions of 34 different standards organisations. Section 6.3 provides a resume.

6.2 The Internet survey among National Standards Organisations

All the information is provided by 'the response' as characterized in Table 6.1. Facts and perceptions were contributed by staff members of standards organisations in 26 countries in Europe[2].

Table 6.1   Response Internet survey among standards organisations

	Invited	Completed	Percentage
Number of countries	30	26	86%
Number of organisations	52	34	65%
Number of experts / groups of experts	128	47	37%

Source: Web based survey among standards organisations in 30 countries

In total 47 experts have filled in the on-line questionnaire (almost) completely.

6.2.1 Access to the standardisation process

The participation of 8 groups of stakeholders

Most respondents state that their standards organisation pays special attention to promote access to standardisation for the different types of stakeholders distinguished. For public authorities this is as high as 42 of the 47 respondents or 90%. Table 6.2 shows that even for the category with the lowest score, trade unions, still 57% pay special attention to access issues.

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[1] More detailed findings were reported in the interim report.

[2] Countries that have not responded to this part of the study are the 'old' Member State Greece and the 'new' Member States: Estonia, Slovenia and Hungary.

Table 6.2   Number and percentage of respondents that pay special attention to promoting access to standardisation, by specific groups of stakeholders (n= 47)

	No.	Percentage.
Public authorities, government departments and government agencies	42	89%
Consumer associations	41	87%
SMEs, i.e. enterprises employing up to 250 workers	41	87%
Universities and research institutes	40	85%
Employers' federations; trade associations	37	79%
Large enterprises, i.e. enterprises with more than 250 workers	34	72%
Environmental organisations	28	60%
Trade unions	27	57%

Source: Web based survey among standards organisations in 30 countries.

In addition to the eight groups defined in the questionnaire, respondents also indicate that they pay special attention to local authorities; organisations for persons with disabilities and the Technical Chamber[1].

Figure 6.1 shows – as expected – that large enterprises are seen to be most active in standardisation[2].

Figure 6.1 The participation of specific groups of stakeholders in the standardisation process as reported by standards organisations (n= 47)
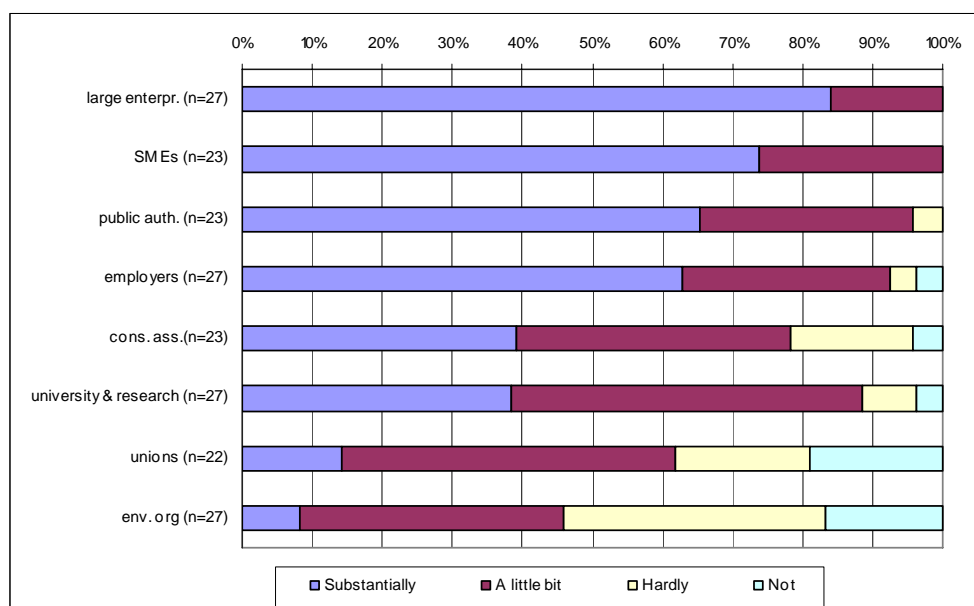
Source: Web based survey among standards organisations in 30 countries

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[1] The Technical Chamber of Cyprus (ETEK) is a non-profit organisation that is regulating the Engineering Profession and is acting as the official Technical Advisor to Government and Local Authorities.

[2] For each of the eight pre-defined groups a number of questions have been answered. In order not to overload the respondents they were only asked to provide answers to four series of questions, therefore these series of questions has only been answered by about 23 respondents rather than 47.

Figure 6.2 shows that – depending of the type of stakeholder - 60 to 75% of the NSOs keep track of the participation of the different type of stakeholders in the technical committees, mirror groups and working groups.
Also the actual participation of this type of stakeholders is mostly registered (average 60%). However only a minority have statistics on the participation of the different types of stakeholders available (average just over 30%).
[cf. Recommendation 9]

Figure 6.2 The percentage of National Standards Organisations that monitor the participation of specific groups of stakeholders in the standardisation process (n= 47)

Source: Web based survey among standards organisations in 30 countries

The actual participation of the various types of stakeholders is shown in Figure 6.3 for old and new Member States and EFTA countries separately. The overall picture as stated by NSOs is that:
- SMEs participate in about 65% of all technical committees
- For public authorities and large enterprises this figure is just below 60%
- For consumers, trade unions and environmental organisations the score is really rather low, roughly 10 to 20%.

Figure 6.3 Share of TCs etc in which each type of stakeholder participates, as reported by standards organisations (n=47).
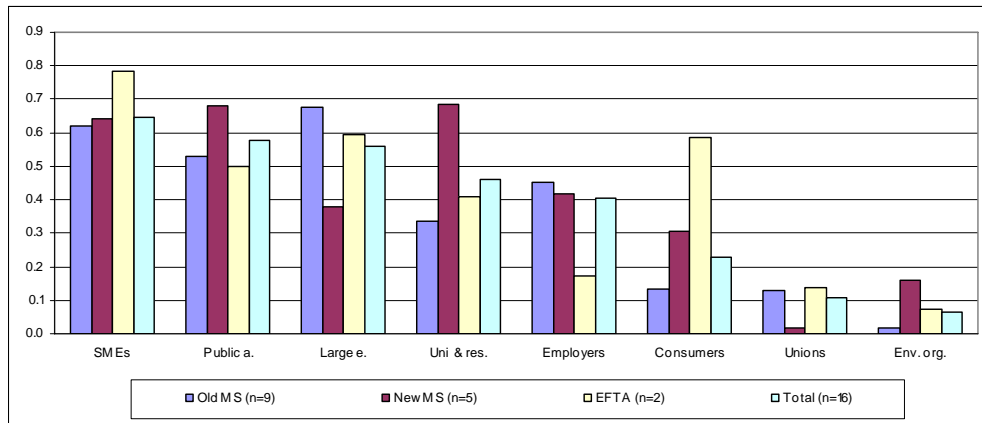
Source: Web based survey among standards organisations in 30 countries

If we combine the high and very high commitment to standardisation, Figure 6.4 shows that NSOs rank the different types of stakeholders as follows. The representatives of the business community and public officials highest, and consumer associations, environmental organisations and trade unions lowest.

Figure 6.4 The commitment to standardisation for groups of stakeholders, as reported by National Standards Organisations (n=47).

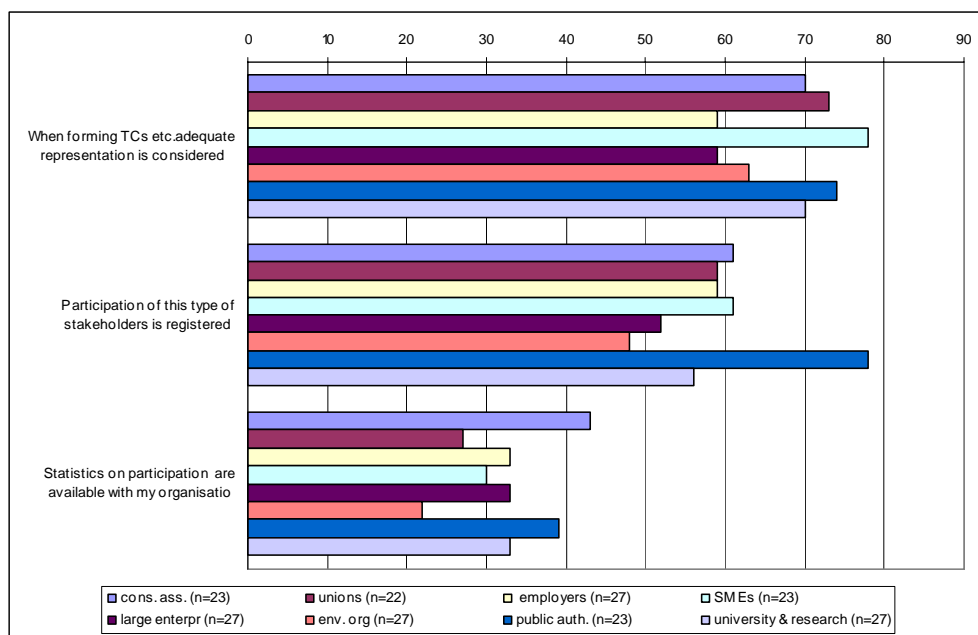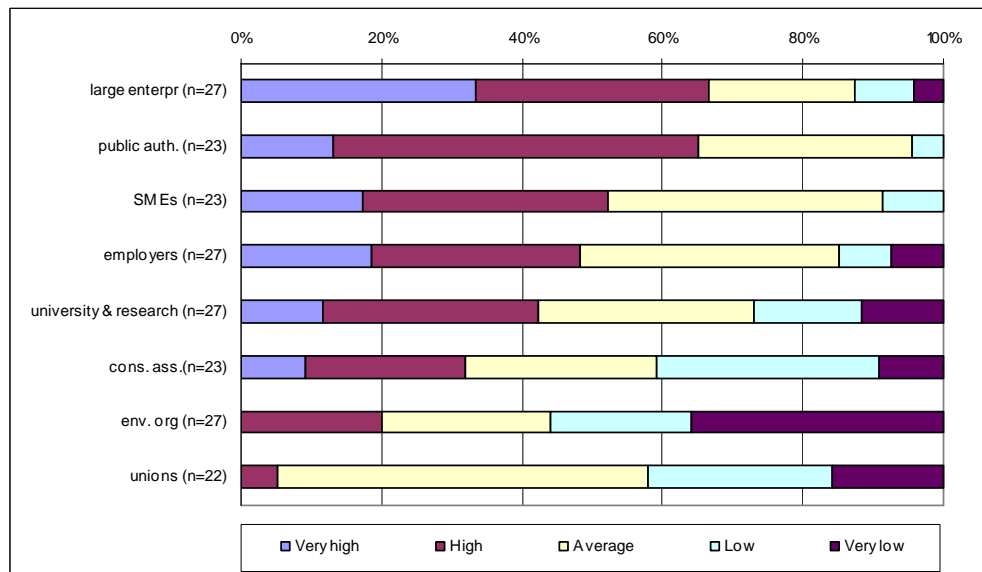*Source: Web based survey among standards organisations in 30 countries*

Figure 6.5 indicates that generally, NSOs feel that the knowledge that stakeholders of different types have to participate meaningfully is more or less in line with the commitment shown.

So the rank numbers in Figure 6.5 are generally in line with Figure 6.4 with two major exceptions: universities and research organisations score much higher with relevant knowledge than with commitment; whereas for public authorities the situation is reversed: a high commitment but a relatively low level of relevant knowledge.

Figure 6.5 The knowledge of groups of stakeholders to participate meaningfully, as reported by standards organisations (n=47).
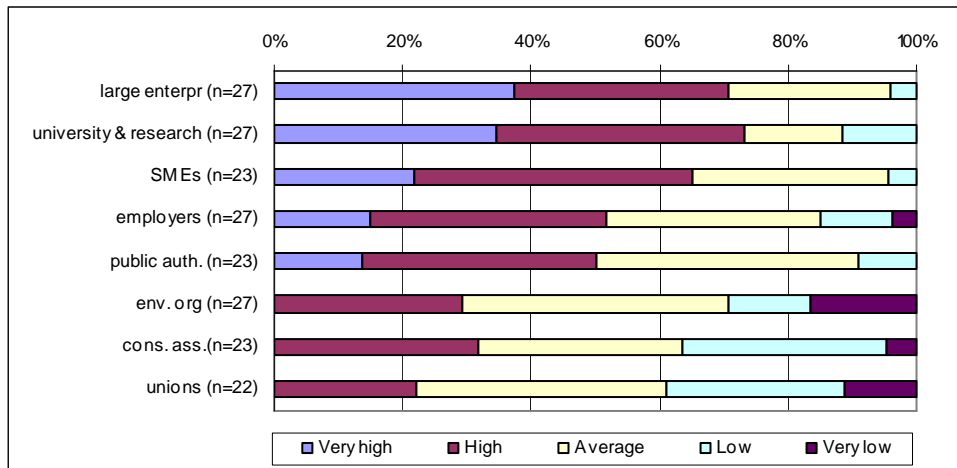
There are also differences with regard to the belief among NSOs that stakeholder representatives, indeed represent the interest they stand for:
- for public authorities, employers associations and universities this is some 70 to 80%;
- for consumer associations; environmental organisations and trade unions this is a bit lower: about 50 to 60%.

Figure 6.6 The extent to which groups of stakeholders indeed represent the interest they stand for, as reported by standards organisations (n=47)
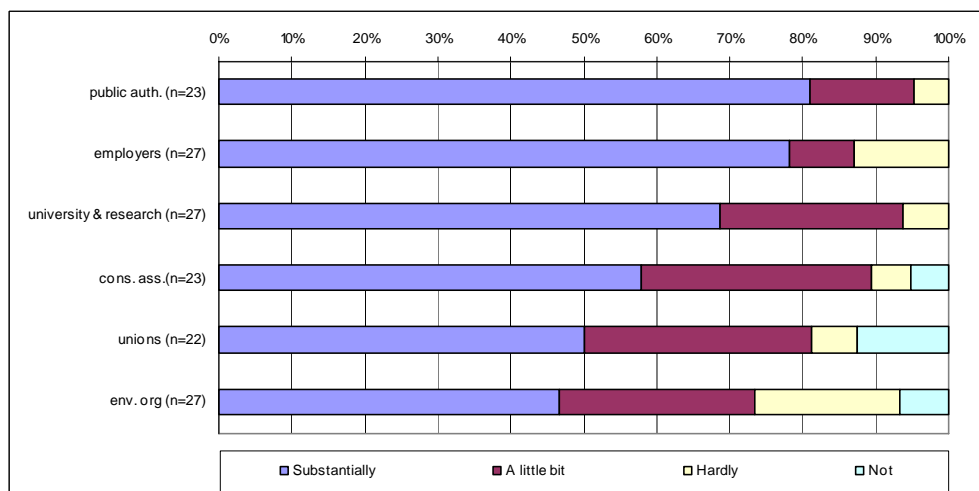
The staff of the standards organisations also expressed their opinion on the most important three barriers for stakeholders to be involved in the development of standards. There are minor differences by type of stakeholders, but the 'overall picture shows' mainly:
- lack of financial resources / not willing to pay the costs involved;
- lack of staff (time);
- failing to properly understand the benefits of standardisation;
- lack of technical expertise.

Some details for specific groups of stakeholders are shown in Table 6.3.

Table 6.3 Detailed barriers for participation for specific groups of stakeholders as mentioned by standardisation organisations.

Stakeholders	Barriers mentioned by standards organisations
Consumer associations	65% of the National Standards Organisations mentioned lack of (financial) resources. Once or twice specific issues were mentioned such as 'having a political agenda' or 'having too much a legislative approach'.
Trade unions	The top issues are lack of interest and the priority for technical subjects (36%). Also lack of comprehension of the importance of standardisation is mentioned (14%).
Employers organisations	Lack of awareness of the benefits of standardisation scores high (33%). Organisations tend to focus more on economic and legal issues.
SMEs	Lack of (financial) resources tops the list (70%). Also time constraints score relatively high. Staff of NSOs made the observation that entrepreneurs (and other staff of SMEs) are generally too much focussed on the every day, immediate job of running the enterprise to be able to find the time or energy to focus on standardisation. These are issues which are for most of them a more distant long term objective, if they see the relevance at all.
Large enterprises	Often 'a lack of comprehension is mentioned', this is however a combination of not knowing 'the rules of the game' and a difference of judgement 'falling to understand the benefits of standardisation'. For large enterprises sometimes the picture emerges of technical staff being adequately equipped to fruitfully participate and seeing the benefits of participation for the firm, but this technical staff is sometimes restrained by higher level (non technical) management that are not sufficiently convinced to provide the necessary resources.
Environmental organisations	Financial resources score highest (44%), this ranges from a general lack of resources, to specific statements such as no budget for travel expenses or 'they tend to overestimate the cost of participation'. There are also specific statements such as 'refuse to participate in a consensus process because they want to be free to oppose some of the resulting texts'. Also here staff of NSOs are of the opinion that stakeholders fail to properly see the benefits of standardisation and are favouring compulsory regulation rather than voluntary standards.
Public authorities	No issues that stand out. Answers are rather evenly distributed among general issues such as lack of awareness, financial resources, priority, and technical expertise
Universities and research org.	Financial resources top the list (59%)

Source: Web based survey among standards organisations in 30 countries (about 25 respondents per item)

General access issues

The respondents have described the information policy of their own NSO towards the various groups of stakeholders on a scale from very passive to very active. All respondents opt for a position average to very active (very active 21%; active 55% and average 23%), none chose passive or very passive.

Also when asked about access to the standardisation process for the various types of stakeholders in their own country compared to other European countries, the respondents express rather positive views. 69% state that ease of access is above average in their country, whereas only 6% opt for less than average. We are inclined to see this as an indication that NSOs tend to overestimate the ease of access to standardisation at their own organisation.

Table 6.4 Comparing national and European standardisation (CEN, CENELEC, ETSI) in terms of ease of access for the various types of stakeholders, views of respondents from standards organisations (n=47)

	Region			Total
	Old MS (n=31)	New MS (n=10)	EFTA (n=6)	(n=47)
	percentages			
Much easier for national standardisation	26	0	17	19
Easier for national standardisation	23	40	33	28
About the same	39	50	50	43
Easier for European standardisation	3	10	0	4
Do not know / no answer	10	0	0	6
Total	100	100	100	100

Source: Web based survey among standards organisations in 30 countries

The perception of standards organisations is clearly that easy of access is much higher for national standardisation, 47% (much) easier national vs. 4% easier European (see Table 6.4).

Table 6.5 Comparing European (CEN, CENELEC, ETSI), and international standardisation (ISO, IEC, ITU), in terms of ease of access for the various types of stakeholders, views of respondents from standards organisations (n=47)

	Region			Total
	Old MS (n=31)	New MS (n=10)	EFTA (n=6)	(n=47)
	percentages			
Much easier for European standardisation	10	0	0	6
Easier for European standardisation	23	0	17	17
About the same	55	90	83	66
Easier for international standardisation	0	10	0	2
Much easier for international standardisation	3	0	0	2
Do not know / no answer	10	0	0	6
Total	100	100	100	100

Source: Web based survey among standards organisations in 30 countries

Somewhat more remarkable is the perception of standards organisations that ease of access is higher for European standardisation than for international standardisation. European is (much) easier according to 23% of the respondents vs. international (much) easier 4% (see Table 6.5). However, still about two thirds state that it is about the same.

Table 6.6   Conditions that apply for participation of stakeholders in the standardisation process, views of respondents from standards organisations (n=47, more answers possible)

Have to be members of the standards body	14
Are required to pay a financial contribution for the participation in a specific drafting process	17
Are required to pay a lump sum for access (to nearly all committees)	5
Other	26
Do not know / no answer	2

Source: Web based survey among standards organisations in 30 countries

Respondents provided 26 specifications of the other conditions that determine the fee to be paid listed in Table 6.6; to mention only a few:
– access is free (4 times);
– no conditions apply (three times);
– financial contribution is required for industry, laboratories, control;
– free access to standardisation process for consumer and environmental organisation and with some standard organisations also for trade unions and universities;
– participants only have to cover part of their expenses when travelling abroad.

More details on the same issue are provided in Section 6.3.

Table 6.7   Which factors determine the participation fee in technical committees (answers from 17 standards organisations (see Table 6.7), more answers possible

By type of document being drafted	0
For national, European or international (standard) documents	4
By type of stakeholder (NGO, large enterprise, small enterprise, etc.)	17
Variation depends on other criteria:	6
Do not know / no answer	4

Source: Web based survey among standards organisations in 30 countries

Table 6.7 shows that also other criteria determine the fee to be paid, these are:
– the level of activity and services provided (twice);
– the number of projects within the technical committee and (to a lesser extent) the number of participants. Participation is free for consumer and environmental organisations, trade unions and universities;
– membership of committees;
– number of participants of the national mirror committee and the number of projects in the committee (variations between committees are relatively small);
– 'pay for play': costs are split over participants for total services rendered.

More details again in Section 6.3.

Table 6.8   Availability of financial support for certain categories of stakeholders that lack resources to participate, views of respondents from standards organisations (n=47, more answers possible)

There is support available by national government, e.g. subsidies	21
There is support available by us (standards organisations), e.g. reductions	10
Other	15
Do not know / no answer	10

Source: Web based survey among standards organisations in 30 countries.

The answers given by 'other' (see Table 6.8):
− access is free, only time involvement is required and feedback to interests to be defended;
− contribution to business trips;
− exclusively for trade unions;
− financial support via national government for consumer participation and financial support for travel to overseas meetings;
− government subsidy for consumers participation on European level;
− grants to attend national, European or international standardisation meetings;
− in exceptional cases there is support available for experts;
− standards organisations contribute financially to active members of national TC to participate at meetings of European TCs;
− public authorities have free access;
− support available for consumer representatives.

Table 6.9   Means that are used to facilitate the circulation of information on the standardisation process outside the system, views of respondents from standards organisations (N=47, more answers possible)

Direct dissemination (printed newsletters, journals and/or email bulletins distributed by us)	40
Available on website (passive)	47
Published in magazines of third parties (i.e. trade, sector or professional journals)	35
Regular contacts with external parties, e.g. sector and professional organisations, consumer or environmental interest organisations	34
Regular seminars, workshops, conferences etc.	36
None of the above	0
Do not know / no answer	0

Source: Web based survey among standards organisations in 30 countries

Table 6.10   The main barriers to participation in the standardisation process for the various types of stakeholders as perceived by staff of standards organisations (N=47, more answers possible)

Lack of awareness	36
Lack of understanding of the standardisation process	32
Considering perceived benefits and costs, not willing to make the time available	29
Lack of expertise on the standardisation subject	28
Do not find it important enough	24
Need to master foreign languages / lack of language skills	16
Considering perceived benefits and costs, not willing to pay the required fees	12
In-transparency of the standardisation process	2
Other, specified as travel expenses	1
Do not know / no answer	2

Source: Web based survey among standards organisations in 30 countries

Staff of the National Standards Organisation state that lack of awareness and lack of understanding (of the benefits of standardisation) and expertise are clearly the most important barriers for the participation of the various types of stakeholders. [cf. Recommendation 6]

Time and money spent to travel to meeting places may be a hindrance to the participation in the standardisation process. Figure 6.7 presents the view of respondents from the National Standards Organisations, There is a remarkable difference between old en new Member States: in the old Member States the physical distance is less a barrier than in new Member States.
The influence of distance might be reduced by applying more often and more sophisticated ICT tools. [cf. Recommendation 12]

Figure 6.7   The extent to which the physical distance to the meeting place is a barrier to participate in the standardisation process, views of respondents from standards organisations (n=47)
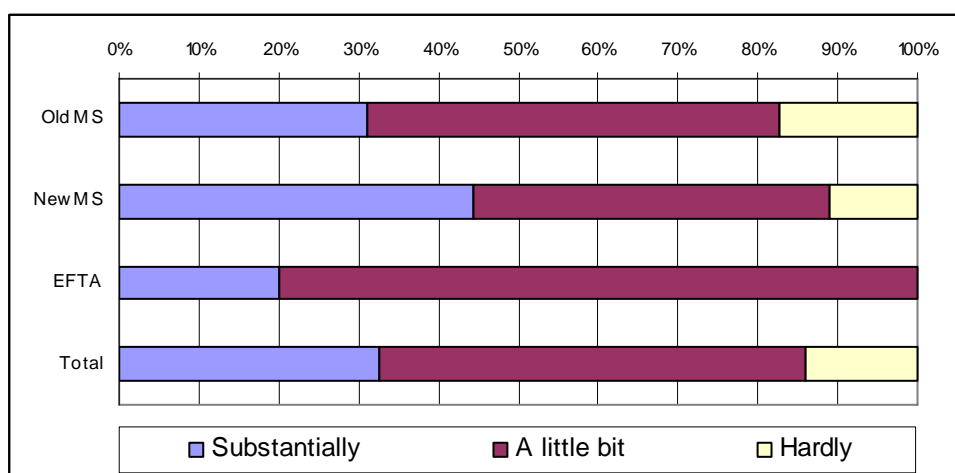
Source: Web based survey among standards organisations in 30 countries

Staff members of National Standards Organisations have also been asked about any complaints received about the access to the standardisation process. Table 6.11 shows that as much as 70% of the respondents state that no complaints were received from stakeholders regarding the access to the standardisation process. With new Member States this holds for even 9 out of 10 respondents.

Table 6.11   Formal complaints from stakeholders regarding access to the standardisation process in 2007, as reported by respondents from standards organisations (n=47), by region

	Region			Total
	Old MS n=31	New MS n=10	EFTA n=6	N=47
	percentage			
Received	19	0	0	13
Not received	61	90	83	70
Don't know/ no answer	19	10	17	17
Total	100	100	100	100

Source: Web based survey among Standards organisations in 30 countries

Only three of the six respondents that state that complaints were received provide information on the number of complaints received:
– one respondents mention 5 complaints;
– two respondents mention about 40 complaints.

16 of the 47 respondents, i.e. 34%, report that a register of complaints does exist in their country. These registers are maintained by the standards organisations themselves. [cf. Recommendation 9]

Table 6.11 shows that 13 respondents state to have received complaints, only 6 of these report the dominant (type of) complaints:
– lack of awareness of drafts in progress (twice);
– language;
– no information made available;
– the participation fee (because of introducing a new fee system in 2007 more complaints were received);
– they must sometimes pay for access to some standards before being able to comment;
– travel expenses;
– voting not transparent;
– commercial manoeuvres;
– lack of ease in obtaining documentation.

On the other hand 9 of the 47 respondents, i.e. nearly 20%, report that suggestions were received from stakeholders with regard to access issues. About 25% of the respondents state that a register of suggestions is maintained by the National Standards Body (12 out of 47).

The dominant (type of) suggestions received (reported by 12 respondents) were:

1   **About fees and participation**
- Access of public authorities to the standardisation process; difficulties to pay the participation fees;
- Charge for participation;
- More subsidies to participation (three times).

2   **About providing information**
- Improving the identification and clarity of standards;
- Improvement in the national standardisation information system;
- More efficient dissemination of information (twice);
- To improve standards organisation's web site;
- More timely dissemination of information;
- Make standardisation documents available in the national language.

3   **About training**
- To organize more training courses for stakeholders and society;
- Teaching about standards and standardisation;
- Training courses for standardisation officers.

4   **About availability/price of standard documents**
- In contacts with stakeholders, the need for cheap (or even free) standards was voiced. However the stakeholders also understood that in the present business model the financial contribution by selling standards could not be missed;
- Request of members of national TCs to have access to valid standards free of charge at the web site;
- More discounts to prices of standards;
- More efficient availability of documentation;
- Other issues;
- The government should strengthen the National Standards Organisation by increasing its contribution to standardisation;
- Develop feedback on application of standards.

6.2.2 Access to standard documents

We have asked the National Standards Organisations to what extent the standardisation documents are available in the national languages. The results, presented in Table 6.12 reveal that almost half of the respondents indicate that less than 25% of the standards are available in their language.

Table 6.12   Availability of standardisation documents in the national language, views of respondents from standards organisations (n=47)

	Frequency
None of the standards that have been adopted in this country are available in the national language (0%)	3
1 - 25% are available in national language	21
26 - 50% are available in national language	3
51 - 75% are available in national language	2
76 - 99% are available in national language	9
All standards that have been adopted in this country are available in national language (100%)	8
Do not know / no answer	1
Total	47

Source: Web based survey among standards organisations in 30 countries

Table 6.13 The effect of Internet on the access to standard documents, views of respon-
dents from standards organisations (n=47)

Hardly any effect	1
Made it somewhat easier / more accessible	4
Made it much easier / more accessible	40
Do not know / no answer	2
Total	47

Source: Web based survey among standards organisations in 30 countries

85% of the respondents feel that the Internet has made access to standards
documents much easier, for example because:
– information on standards is more easily available;
– hardcopies of standards can be ordered at the website;
– hardcopies of standards can be ordered and paid at the website;
– electronic copies of standards can be bought and paid at the web site;
– electronic copies of standards are freely available at the web site.

It has also been investigated to which extent providing user guides for standards
is an appropriate response to the criticisms that the text of standard documents
is too complicated and that it contains too many references to other standards.
The results are presented in Table 6.14.

Table 6.14 Providing user guides for standards is an appropriate response, as reported by
respondents from standards organisations (n=47)

Hardly	5
To some extent	27
To a large extent	11
Do not know / no answer	4
Total	47

Source: Web based survey among standards organisations in 30 countries

The price of standard documents

Table 6.15 shows that in the eyes of standards organisations, the price for buy-
ing a standard is only a moderate barrier to the use of standards.

Table 6.15 The price of standards as a barrier to their use, views of respondents from
standards organisations (n=47)

	Frequency
Not at all	18
To some extent	22
To a large extent	4
Do not know / no answer	3
Total	47

Source: Web based survey among standards organisations in 30 countries

To the extent that the price of standards may indeed be a barrier, some 33 respondents mention a series of arrangements that are applied by standards organisations to reduce this barrier:
– reduced price for schools and universities (mentioned 7 times);
– discounts for standards organisation's members (three times);
– discounts (twice);
– 20% discount for standards organisation's members;
– 30% discount for TC members;
– 90% discount for students;
– efforts to reduce price of standards if sold in large volumes;
– reduced price for subscriber members (customer web shop);
– subscription collections of standards (four times);
– promotions with rebates;
– special arrangements exist with entities that have overall sectoral needs;
– special conditions are offered to local authorities;
– licence agreements enabling lower prices when using many standards;
– package deals;
– special price for standards supporting laws;
– special prices for public libraries;
– development of special products, e. g. handbooks, collections of standards;
– handbooks for special price for students;
– packages editions (twice);
– collections CDs;
– publications that compile sectoral standards are continuously published;
– PDF-on line access to series of standards;
– series of standards on CD-ROM with reduced price;
– discussions on a case by case basis with any stakeholder;
– standards are sold through a number of resellers to raise competition (twice);
– handbooks / collections of standards to reduce prices (three times).

37 respondents provided an answer with regard to the share of sale of standards in the total revenue of their organisation; the answers range from 0 to 99%. On average a substantial part of the standards organisation's budget is derived from selling standards, generally 30 to 50%. 15 respondents provided information with regard to the sales of harmonised standards only. This source of income constitutes 0 to 30% of all revenues of the standards organisations, with an average of 5 to 10%.

The respondents have also been asked to indicate their view on the possibilities to reduce the price of standard documents substantially. Table 6.16 shows that two thirds of the respondents that provided an answer (n=41) feel this is a bad idea with regard to harmonised standards. On the condition that the revenue losses of standards bodies are compensated, 11 respondents (27%) judge this to be a good idea for harmonised standards.

Table 6.16   Judgement by respondents from standards organisations (n=47) on the idea to reduce the price of harmonised standards (those supporting New Approach directives)

	Frequency
This is a good idea	3
This is a good idea provided the revenue losses of standards bodies are compensated	11
This is a bad idea	27
Do not know / no answer	5
Total	46

Source: Web based survey among standards organisations in 30 countries

If the same question is asked with regard to standards in general, almost an identical picture emerges (Table 6.17).

Table 6.17   Judgement by respondents from standards organisations (n=47) on the idea to reduce the price of other standards

	Frequency
This is a good idea	3
This is a good idea provided the revenue losses of standards bodies are compensated	10
This is a bad idea	28
Do not know / no answer	5
Total	46

Source: Web based survey among standards organisations in 30 countries

About 22 of the 47 respondents made use of the opportunity to provide additional comments. The overall picture is very clear and it could be described as follows:
– The current system is good, further reducing prices of standards will probably jeopardise the functioning of the present system.
– Standard making should be neutral, and its costs should be paid by all interested parties together, therefore it is not an option to have one specific group of stakeholders finance all the operations.
– As a matter of principle, standardisation should continue to be a tool of self-regulation by industry. Therefore, public funding is not an option.

6.3 Additional information from National Standards Organisations

6.3.1 Introduction

The original plan for this study anticipated five major steps:

Step 1 - View of European Standards Organisations (CEN, CENELEC, ETSI).

Step 2 - View of European interested parties.

Step 3 - View of National Standards Bodies and Organisations (NSBs, NSOs).

Step 4 - View of NSBs and NSOs in 12 selected countries.

Step 5 - View of national interested parties in selected countries.

These views are whenever possible supported by facts and figures. However, the Internet survey among NSBs and NSOs in Step 3 did not produce all the factual information regarding access and participation issues at national level as required. To remedy this situation, it was decided to develop an additional *10 points questionnaire* and to distribute this to all NSBs, members of CEN and CENELEC, and to all NSOs cooperating with ETSI in all 30 countries concerned. All in all, invitations were sent to some 51 organisations in 30 countries on 17 July 2008[1].

The 51 organisations are presented in Table 6.18 on the next page. Till January 16 2009, 34 responses were received (these are highlighted in the table and represent slightly more organisations, e.g. NEN/NEC and BSO/BEC were covered in one response).

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[1] Much more invitations to persons were sent. The number of organisations is a bit arbitrary because of the Electrotechnical Committees at for example NEN, SUTN or BSI. If we include these as separate organisations we arrive at 51 organisations. However often only one response has been received such as for NEN/NEC or BSI/BEC.

Table 6.18   Response from National Standards Bodies (members of CEN and CENELEC) and National Standards Organisations cooperating with ETSI on *10 points questionnaire* (highlighted).

	Country (no. of NSBs/NSOs)	CEN members	CENELEC members	ETSI members
1	Austria (2)	Österreichisches Normungsinstitut (ON)	Österreichischer Verband für Elektrotechnik	OVE (acting) & ON
2	Belgium (2)	Bureau de Normalisation/Bureau voor Normalisatie (NBN)	Comité Electrotechnique Belge / Belgisch Elektrotechnisch Comité	Bureau de Normalisation/Bureau voor Normalisatie (NBN)
3	Bulgaria (2)	Bulgarian Institute for Standardisation (BDS)		Communications Regulation Commission
4	Cyprus (1)	Cyprus Organization for Standardisation (CYS)		
5	Czech Rep. (1)	Czech Office for Standards, Metrology and Testing – UNMZ, also known by its English acronym COSMT (since 1-1-2009, before Czech Standards Institute -CNI)		
6	Denmark (2)	Danish Standards (DS)		National IT - and Telecom Agency
7	Estonia (2)	Estonian Centre for Standardisation (EVS)		Estonian Technical Surveillance Authority
8	Finland (3)	Suomen Standardiso-imisliitto r.y. (SFS)	SESKO Standardization in Finland	Finnish Communications Regulatory Authority
9	France (2)	Association Française de Normalisation (AFNOR)	Union Technique de l'Electricité	Association Française de Normalisation (AFNOR)
10	Germany (2)	Deutsches Institut für Normung e.V. (DIN)	DKE Deutsche Kommission Elektrotechnik Elektronik Informationstechnik im DIN und VDE	
11	Greece (1)	Hellenic Organization for Standardization (ELOT)		
12	Hungary(1)	Hungarian Standards Institution (MSZT)		
13	Iceland (1)	Icelandic Standards (IST)		
14	Ireland (2)	National Standards Authority of Ireland (NSAI)	Electro-Technical Council of Ireland Limited	National Standards Authority of Ireland (NSAI)
15	Italy (3)	Ente Nazionale Italiano di Unificazione (UNI)	Comitato Elettrotecnico Italiano	CEI/CONCIT, CONCIT/ISCTI
16	Latvia (1)	Latvian Standards Ltd (LVS)		
17	Lithuania (1)	Lithuanian Standards Board (LST)		
18	Luxembourg (1)	Organisme Luxembourgeois de Normalisation (ILNAS)		
19	Malta (1)	Malta Standards Authority (MSA)		
20	Netherlands (2)	Nederlands Normalisatie-instituut (NEN)	NEN/ Netherlands Elektrotechnisch Comité	
21	Norway (3)	Standard Norge (SN)	Norsk Elektroteknisk Komite	Norwegian Post & and Telecommunication Authority
22	Poland (1)	Polish Committee for Standardization (PKN)		
23	Portugal (1)	Instituto Português da Qualidade (IPQ)		
24	Romania (1)	Romanian Standards Association (ASRO)		
25	Slovak Rep. (2)	Slovak Standards Institute (SUTN)	Slovak Electrotechnical Committee /Slovak Standards Institute	Slovak Standards Institute (SUTN)
26	Slovenia (1)	Slovenian Institute for Standardization (SIST)		
27	Spain (1)	Asociación Española de Normalización y Certificación (AENOR)		
28	Sweden (3)	Swedish Standards Institute (SIS)	SEK Svensk Elstandard	ITS - Information Technology Standardization
29	Switzerland (3)	Schweizerische Normen-Vereinigung (SNV)	Electrosuisse	Association Suisse des Télécommunications
30	UK (2)	British Standards Institution (BSI)	British Electrotechnical Committee / BSI	British Standards Institution (BSI)
	Total (51)	Responses: 34		

The interim report (summer 2008) contained already 17 'narratives' based on the completed questionnaires received by 8 August 2008 (in addition one organisation returned some information by e-mail). After sending out some reminders[1,] 16 additional reports were received up to 16 January 2009. So the following narratives are available and summarised in this report:

1   Austria - ON

2   Austria - OVE Austrian Electrotechnical Association

3   Belgium - BEC

4   Belgium - NBN

5   Bulgaria - BDS

6   Cyprus - Cyprus Organisation for Standardisation (CYS)

7   Czech Republic - CNI

8   Denmark - DS

9   Denmark - NITA

10   Estonia - EVS

11   Finland - SFS

12   Finland - FICORA, Finnish Communications Regulatory Authority

13   France – AFNOR

14   Germany - DIN

15   Germany – VDE

16   Iceland – IST

17   Ireland - NSAI The National Standards Authority of Ireland

18   Latvia - Latvian Standard

19   Lithuania - LST

20   Luxembourg - ILNAS

21   Malta - MSA

22   Netherlands - NEC and NEN

23   Norway - NEK

24   Norway - SN

25   Portugal - IPQ Instituto Português da Qualidade

26   Romania – ASRO

27   Slovakia - SUTN Slovakia

28   Spain - AENOR

29   Sweden - SEK

30   Sweden – SIS

31   Switzerland – ASUT

32   Switzerland - Electrosuisse/CES

33   Switzerland - SNV Swiss Association for Standardisation

34   UK – BSI and BEC

Much more details are provided in the Interim report on the *10 points questionnaire* completed by 34 NSOs, submitted by EIM Business & Policy Research to DG Enterprise and Industry, January 2009.

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[1] EIM greatly acknowledges the support received from the European Commission, CEN, CENELC and ETSI in sending out a second series of reminders.

6.3.2 Summary of questionnaire used

The 10 questions - that were each accompanied by a number of sub-questions - can be summarised as follows:

Q1   Conditions for participation by 8 types of stakeholders in your organisation (NSB) in governing bodies and national technical committees and working groups.

Q2   Membership and fees by 8 types of stakeholders.

Q3   Fees to be paid for participation in national technical committees, by 8 types of stakeholders.

Q4   Number of national technical committees and working groups in NSB and participation of 8 types of stakeholders. In addition the participation of consultants and/ or certifiers was raised.

Q5   Number of experts within the standardisation process of 8 types of stakeholders and the number of consultants and/or certifiers among experts.

Q6   Number of organisations and/or experts that are addressed and involved in public enquiries and the number of consultants and/or certifiers involved.

Q7   How do NSBs guarantee that national technical committees and working groups are indeed representative, i.e. that the composition is balanced?

Q8   How do NSBs build consensus in national technical committees and working groups to make sure that it really represents the consensus of all stakeholders?

Q9   The rules that exist in NSBs to form national delegations to European technical committees to represent the national position and cast the national vote.

Q10   Virtual participation. Next to actual participation by being present at meetings of committees etc., are there other forms of participation and consultation of stakeholders, for example by using ICT tools such as web fora etc.

6.3.3 Summary of results

The various case descriptions vary quite substantially, and although a wealth of specific information is available in the 34 case descriptions that cover 70 pages of text, only a limited number of general conclusions can be arrived at.
In this section we summarise some general observations arranged by the topics of the ten major questions.

The type of legal entity

Many different organisational structures do exist. Most standards organisations (21 out of 34 or 62%) are membership organisations on a not for profit basis, but many variations do exist, such as:

− state organisations, e.g. CNI in the Czech Republic; Institut Luxembourgeois de Normalisation ILNAS in Luxembourg is a department under the umbrella of the Minister of Economy and Foreign Trade, the Portuguese Institute for Quality IPQ is a governmental entity under the Ministry of Economy and Innovation and MSA in Malta is a public funded autonomous entity;

− not for profit organisations, but having commercial sub-departments, such as the certification and inspection departments of NSAI in Ireland that make up for deficits in the standardisation area, or AFNOR;

- not for profit organisations without members, such as the foundation NEN in the Netherlands that recovers it costs mainly by charging participants in technical committees and users of standards ('pay for play') or DS in Denmark;
- organisations for which standardisation is only a part of their activities and objectives, e.g. the Austrian Electrotechnical Association OVE;
- the limited liability corporation LVS in Latvia, or a private company with the state as only shareholder in Cyprus (CYS);
- NITA is the Danish National IT and Telecommunication Authority and hence no not-for-profit organisation and without any members;
- Centralised organisations versus organisations that have most of the standardisation work done with a range of associated organisations, e.g. NBN in Belgium or AFNOR in France.

Membership conditions

With many organisations all interested parties in the country can join as members, e.g. EVS in Estonia or SFS in Finland: consumer associations, trade unions, environmental organisations, universities and research institutes may all be a member of SFS and have the possibility to be elected in the governing bodies. Generally the only condition that varies with the type of stakeholder is membership fees (see next section).

Specific conditions of membership reported:
- Parties that have a declared interest and sign an agreement on rights and duties can join (ON in Austria).
- The conditions for participation in BDS in Bulgaria are stipulated in Article 8.5 of the National Standardisation Act and Article 8 (2) of the BDS statute: "Persons wishing to support national standardisation activities and who agree to comply with the BDS statute and belonging to the following groups can become BDS members: (a) Employer associations, industrial branch chambers, manufacturers and traders; (b) Ministries, agencies, commissions and administrative structures of the Executive established by law or a decree of the Council of Ministers; (c) Scientific organisations, research institutes and universities; (d) Conformity assessment bodies, including inspection bodies, certification bodies, testing and/or calibration laboratories; (e) Associations of insurers, consumer associations, professional organisations and trade unions."
- In Iceland the law determines that membership of IST is open to any kind of stakeholder.
- AENOR in Spain distinguishes five types of members among the total membership of 882 members: (a) 169 corporate members, i.e. employer's federations and trade associations; (b) 539 individual companies; (c) 82 public/non-for profit institutions such as public administrations, foundations, etc; and (d) 92 others (membership numbers by type of stakeholders are for several NSOs presented in Table 6.19).

Membership fees for eight types of stakeholders

Also here, the situation in each country and for each standards organisation has its specific features, for example:
- With ON in Austria enterprises pay an annual membership fee that range from € 185 (up to 10 employees) to € 12,650 (more than 42,000 employees), whereas the annual subscription fee for associations, federations and institutes is decided upon by the board and is at least € 990.
- BEC in Belgium have a category A membership for associations of enterprises (at least € 30,000 per year) and a category B membership of € 1,350 (consumer associations, trade unions, SMEs and large enterprises (or covered by

cat. A membership of their organisation); environmental organisations and universities. Public authorities do not pay a fee.

- BDS in Bulgaria has just over 400 members that pay on average about € 275 annually, bringing their joint contribution to € 112,000. But different fees apply to different categories: consumer associations: € 150; trade unions: € 100; employers' federations, trade associations: € 100; micro enterprises: € 100; small enterprises: € 150; medium-sized enterprises: € 200; large enterprises: € 250; environmental organisations: € 100; public authorities € 100; universities and research institutes: € 150; associations of insurance companies and banks: € 250; conformity assessment bodies, including inspection bodies, certification bodies, testing and/or calibration laboratories: € 150; corporate members: € 150.
- At CYS is Cyprus there are 85 members of different categories and they all pay an annual fee of about € 185.
- The membership fee for SFS in Finland varies from € 800 to 12,700 for the different employers federations according to the size of the organisation. All ministries and one university are also member but they do not pay an annual membership fee.
- For AFNOR in France the structure of fees is as follows: (a) consumer associations, environmental organisations and trade unions, no obligation to become member, but if they want membership fees are 166 euro; (b) employers' federations, trade associations € 775; (c) for enterprises, the membership fee depends on their turnover; (d) for public authorities, universities and research institutes there is no membership fee.
- The membership fees of DIN are based on the number of employees a business or organisation had in the previous year. Included in the fee is a license to copy standards for in-house use and to store standards electronically for use in internal networks. Those not wishing to make use of this license pay a reduced fee. To fee varies from about € 800 for 1 – 100 employees to almost € 13,000 for 9,000 -10,000 employees.
- For IST in Iceland there are three levels of membership fees. (a) The highest annual fees, 100,000 ISK (nearly € 600, 1 January 2009) are paid by ministries, public institutions with more than 50 employees, private companies with more than 1,000 million ISK turnover (nearly € 6 million), and sector organisations with more than 100 million ISK turnover (nearly € 600,000). (b) an annual fee of currently 70,000 ISK (about € 410) is paid by public institutions with between 20 and 50 employees, private companies with a turnover between 100 million ISK (€ 600,000) and 1,000 million ISK (€ 6 million), sector organisations with a turnover of less than 100 million ISK (€ 600,000), and associations of individuals with more than 500 members. (c) The lowest annual fees, currently 50,000 ISK (nearly € 300), are paid by public institutions with less than 20 employees, private companies with less than 100 million ISK turnover (€ 600,000), and associations of individuals with fewer than 500 members. (d) In addition, the Board of IST can exempt a member from paying an annual fee. This has only been done for the Consumers' Association of Iceland (since the establishment of IST).
- NEK in Norway has no members among consumer associations, trade unions, individual SMEs, environmental organisations or universities and research institutes. Three employers' federations or trade associations; 4 individual large enterprises and 5 government departments are member each paying an annual subscription fee of € 12,500.
- With SN Standards Norway the membership fees depend on the size of the organisation or company. The maximum fee in July 2008 was € 5,000 for large

organisations having more than 1,000 members or employees. A typical Norwegian SME was paying € 650.

- ASRO in Romania has slightly different fees for different types of stakeholders, but non profit organisations pay less than € 100 euro per year.
- The membership fee of AENOR varies depending on the type of institution and its market volume and/or annual budget, ranging from € 1,900 per year for federations representing a market volume of less than € 300 million to € 7,500 per year for national federations that represent a market volume of over € 900 million. For individual entities, whether companies or not-for-profit organisations, the fee ranges from € 190 per year for entities with an annual budget lower than € 0.6 million to € 750 per year for those with an annual budget above € 6 million Euro.
- SEK in Sweden is a non-for profit membership organisation with a membership fee of € 210 for all members (i.e. no distinction by type of stakeholder or size);
- The membership fee for SIS in Sweden is the same for all members with one exception: members with an annual turnover of less than € 2 million pay half the membership fee.
- The overall membership fee of Electrosuisse/CES is € 1 million contributed by 1,779 members (average about € 560).The approximate annual membership fees are: (a) consumer associations € 200; trade unions € 200; employers' federations, trade associations € 200; SME € 350; large enterprises € 2,650; environmental organisations € 500; public authorities € 1,000; universities and research institutes € 420;
- The fees for being a BSI member in UK depend on the number of employees and turnover of the organisations, rather than the type of organisation: Consumer associations, € 175; trade unions, employers' federations; trade associations, environmental organisations, SME, € 175 – € 1,187; large enterprises, € 418 – € 1,187; public authorities € 231 – € 1,187, universities and research institutes, € 175.

Fees to be paid for participation in national technical committees

Again, also with regard to Q3 on fees, the situation varies quite a lot from one organisation to the other. However with nearly half of the organisations there are no (additional) fees required to participate in technical committees. This applies to at least 15 organisations:

ON and OVE, Austria[1]	IST, Iceland	IPQ, Portugal
CYS, Cyprus	LVS, Latvia	SUTN, Slovakia
CNI, Czech Republic	LST, Lithuania,	Electrosuisse, Switzerland
EVS, Estonia	ILNAS, Luxembourg	BSI, UK
FICORA, Finland	MSA, Malta	

- A second group, amongst which NEN in the Netherlands, applies the 'Pay for Play' principle. NEN acts as a facilitator and the stakeholders have to pay these costs. The distribution among them (all paying, or some exempted) is decided by the TC itself. SN in Norway uses a system in which the participants bear the costs of their 'own' committee either in cash or in kind. Also with

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[1] New members have to pay an entrance fee however, that includes a one day workshop to introduce new participants to the standardisation system.

AENOR in Spain and with SIS in Sweden the TCs decide themselves on the fee structure used to finance their activities.
- At OVE or ON in Austria one has to pay an entrance fee of € 380 that includes a one day workshop to introduce new participants to the procedures involved (paid only once per person).
- At BEC in Belgium one has to pay € 650 per expert per domain to participate in technical committees.
- At NBN in Belgium a contribution *might* be required to cover the operational costs of that TC (maximum € 2,000 per year).
- At BDS is Bulgaria the fee to participate in TCs generally varies from € 50 to € 100. For associations of insurance companies and banks this will be somewhat higher, up to € 250 per year.
- At DS in Denmark the annual fee for TCs is either € 1,600 or € 2,400 depending on the activity level of the TC (There is a discount for SMEs, their fees are respectively € 1,335 and € 1,600 (so a reduction by 17 to 34%).
- At SFS in Finland there is a fee of € 1,200 for national technical committees and € 800 for mirror committees.
- AFNOR distinguished two types of participants. Consumer associations, environmental organisations, trade unions and universities and research institutes pay nothing; employers' federations; trade associations, small and large enterprises, public authorities, government departments and government agencies pay a fee depending of the program and the project.
- Also DIN in Germany charges a fee to participate in TCs, in 2008 this was fixed at € 950 excl. VAT per person and per committee. DKE in Germany follows almost all rules and regulations of DIN, however at DKE no fees apply for TCs.
- At NEK Norway a contribution of € 375 per member per year is due.
- With ASRO in Romania the fee to participate in a TC is € 60 for each representative in each TC.
- With SEK in Sweden the fee varies with the number of work items dealt with in a TC from about € 200 to € 750.
- With SNV in Switzerland, the fee to participate in one technical committee is included in the general membership fee. Additional committees are charged with € 300 per annum.

The number of members of the standard organisations is presented by type of stakeholder for several National Standards Organisations in Table 6.19. This table already suggests that participation of especially environmental organisations and trade unions is rather limited. The number of SMEs in the six standards organisations that provided these detailed data (many standards organisations do not have members as described above) is not very worrying: the number of SME members is much larger than the number of large enterprises. However SMEs are still underrepresented, as there are about 500 times more SMEs than large enterprises in Europe. More details are presented – for much more standards organisations – in Table 6.20, which provides details of the participation of stakeholder organisations and experts in technical committees.

Table 6.20, in which information from 21 standard organisations is summarized provides two types of information:
- the number of TCs in which stakeholders organisations participate;
- the number of experts that participate in the standardisation work on behalf of these stakeholder categories.
All this information is provided by the standards organisations in the *10 points questionnaire.*

For several standards organisations only the number of individual enterprises among their members is known, without a distinction by size of enterprise. For those that have these statistics available, the number of SMEs and larger enterprises is often of the same order of magnitude. Obvious exceptions are:

− CNI, Czech Republic, reports 15 to 20 times more participation by large enterprises as by SMEs;
− LVS, Latvia, reports only a small numbers, however 5 times more SMEs than large enterprises;
− With IPQ in Portugal, there are nearly 1.5 more SMEs active than large enterprises, however the number of experts from SMEs is nearly 8 times higher than for large enterprises (remarkable fact is that SMEs send on average just over 4 experts per organisation, and larger enterprises less than 3);
− ASRO, Romania, about twice as much participation from SMES than from large enterprises.

If we take the participation from the business community as a yardstick, the following observations with regard to the other stakeholder categories can be made:

− Consumers: in many countries participation is reported to be rather low or even zero, with major exceptions: Cyprus, Czech Republic, France, Lithuania;
− Environmental organisations: even lower than consumers, with exception Latvia with 40 experts;
− Trade unions: generally very low except with DS in Denmark and to some extent with AENOR in Spain and SNV in Switzerland;
− Public authorities: in nearly all countries a sizeable participation;
− Universities and research institutes: in most countries a sizeable participation;
− A general observation with regard to consultants, certifiers and laboratories is more difficult as this category was not distinguished in many cases.

[cf. Recommendation 3, 9]

Table 6.19 Number of members of National Standards Organisations by type of stakeholder, some illustrations

	AENOR Spain	CYS Cyprus	BDS Bulgaria	SEK Sweden	Electro-suisse/CES Switzerland	SNV Switzerland
SMEs	307	49	157	7	1,442	450
Large enterprises	232	16	52		150	80
Employers' federations	169	1	49	4	5	3
Consumer associations		0	1	0	5	10
Environmental organisations		0	0	0	2	4
Trade unions		0	0	0	5	3
Public authorities	82 (incl. not for profit org.)	15	41	7	50	50
Universities and research institutes		4	46	0	120	30
Consultants, certifiers, laboratories			29	2		-
Others	92		31	2		20

Table 6.20 Participation in the number of technical committees by type of stakeholder and number of experts participating, some illustrations (table part A)

	Nmber of experts ON *Austria*	Participation in TCs - number of experts BEC *Belgium*	Participation in TCs - number of experts BDS *Bulgaria*	Participation in TCs - number of experts CYS *Cyprus*	Participation in TCs - number of experts CNI *CZ Rep.*	Participation in TCs - number of experts DS *Denmark*	Participation in TCs - number of experts EVS *Estonia*	Participation in TCs - number of experts SFS *Finland*
SMEs	3019	143 - 172	69 - 429	29 - 30	5 - 15	245 - 1261	31-175	10 - 23
Large enterprises			60 - 315	29 - 20	100 - 235			8 - 28
Employers' federations		83 - 244	37 - 72	29 - 50	0 - 98	71 - 98	31 (incl. trade unions) - 53	9 - 33
Consumer associations	335 (incl. other NGOs)	0	1 - 5	29 - 2	15-15	20 - 21	1 -1	2 - 4
Environmental organisations		0	0 - 0	2 - 5	2 - 0	1- 2	0-0	0 - 0
Trade unions		0	0 - 0	0	0 - 0	15 - 17		1 - 1
Public authorities	1,062	68 - 14	65 - 154	29 - 80	42 - 126	136 - 364	23-50	9 - 26
Universities and re-search institutes	950	70 - 32		29 - 20	70 - 132	120 - 264	27-40	6 - 11
Consultants, certifiers, laboratories			65 - 69		25 - 235		6-9	
Others	224		2 - 12	29 - 15	55 - 712	80 - 149	-	

Table 6.20 Participation in the number of technical committees by type of stakeholder and number of experts participating, some illustrations (table part B)

	Participation in TCs - number of experts FICORA *Finland*	Participation in TCs: number of organisations* and number of experts, AFNOR *France*	Participation in TCs - number of experts LVS *Latvia*	Participation in TCs - number of experts LST *Lithuania*	Participation in TCs - number of experts ILNAS *Luxembourg*	Participation in TCs - number of experts MSA *Malta*	Participation in TCs, three categories (%) NEN *Netherlands*	Participation in TCs - number of experts IPQ *Portugal*
SMEs	-	5,000 - -	15 - 150	68 - 438	27 - 27	0 -0	63%	144 - 1,058
Large enterprises	35 -		3 - 30	61 - 197	34 - 49	0 - 0		99 - 249
Employers' federations	4 - 5	many	0 - 0	33 - 52	2 - 2	8 - 6		109 - 276
Consumer associations	1 - 5	80 - 130	0 - 0	36 - 36		1 - 0	24% (all others, incl. universities & research)	1 - 1
Environmental organisations	0 - 0	not determined	4 - 40	7 - 7		2 - 3		1 - 8
Trade unions	0 - 0	many	0 - 0	2 - 2		0 - 0		2 -
Public authorities	40	600 - 1,700	15 - 150	67 - 164	4 - 4	8 - 8	13%	89 - 331
Universities and research institutes	5 - 10	not determined	11 - 110	66 - 219	11 - 11	6 - 9		97 - 517
Consultants, certifiers, laboratories			(11 incl. in the 150 experts from SMEs)					
Others						1 - 4		- - 610 (individual experts)

* Not number of TCs as reported in other columns!

Table 6.20 Participation in the number of technical committees by type of stakeholder and number of experts participating, some illustrations (table part C)

	Participation in TCs - number of experts ASRO Romania	Participation in TCs SUTN Slovakia	Participation in TCs* - number of experts** AENOR Spain	Participation in TCs - number of experts SEK Sweden	Percentage of TCs in which they participate - number of experts SNV Switzerland	Number of experts Electro-suisse-CES Switzerland
SMEs	134- 158	81	169 – 2475	88 - 493	80% - 600	250
Large enterprises	60 - 88	42	169 – 2899		90% - 720	200
Employers' federations	35 - 17	26	169 – 1567	6 - 6	5% - 5	5
Consumer associations	8 - 5	5	19 - **	0 - 0	15% - 15	5
Environmental organisations	2 - 2	6	not known - **	0 - 0	10% - 20	5
Trade unions	0 - 0	0	8 - **	3 - 4	8% - 5	5
Public authorities	142 - 125	95	194 - **	43 - 76	50% - 80	50
Universities and research insti-tutes	192 - 406	92	180 - **	15 - 15	30% - 40	100
Consultants, certifiers, laborato-ries				- - 32		
Others	22 - 126			14 - 16	5% - 20	

*) In total there are 194 TCs at AENOR.

**) On behalf of other participants (consumers, NGOs, academia, testing, public authorities) there are 2474 experts active with AENOR.

With regard to the establishment of technical committees and what efforts standards organisations make to guarantee that technical committees are representative (question Q7), not much specific information became available. The general principles of aiming at balanced committees and inviting all interested parties is well adhered to, procedures used to identify and invites stakeholders concerned are generally described in a similar way stating that all relevant parties are invited.

The description provided by BSI from UK is particular exemplary:

The main principles and procedures for participation in standardisation are laid down in the British Standards rules: *'The composition of technical committees and subcommittees shall be organizations representative of the interests in the standardization of products (including services) or processes within the committee's terms of reference. BSI shall endeavour to carry out an analysis of all those it considers might have substantial interest in, or who might be significantly affected by, a particular standards project with a view to encouraging their representation. As far as possible, BSI shall ensure that its committees are representative of the interests concerned. The composition of a technical committee or subcommittee should be a standing item on every meeting agenda.*
The primary means of representing business interests shall be through trade associations or their equivalent organizations. Exceptionally, representation from individual companies shall be permitted when BSI deems that the scope of the technical committee or subcommittee requires this in order to undertake its work. BSI shall endeavour to ensure that the balance of representation between trade associations and individual companies meets the requirements of fairness of representation.'

It should be noted that in these BSI rules, a choice has been made with regard to the preferred way of representing business interests; not by participation of individual enterprises whether small or large but preferably by their trade associations or their equivalent organisations. [cf. Recommendation 3, 4, 5, 8]

Also with regard to question Q6 that considers the way parties are selected and addressed for public enquiries the rules and general principles are generally adhered to. Most National Standards Organisations (NSO) described the procedure in a similar way stating that all relevant parties are informed and that information is in addition made public to give all those that are interested the chance to express their opinion.
However there is one clear exception ("Only members of national technical committees are involved in the development and (public) enquiries on European and international standards ") and quite many descriptions that suggest that in practice the 'public enquiries' might be too much focussed on incumbents.
[cf. Recommendation 10]

To illustrate a dozen replies to the *10 points questionnaire* completed by 34 NSOs is presented here:

1 There is a specific procedure for developing the national comments in public enquiries. So called IEC/CENELEC-experts (a special kind of national committee member) are nominated by the national TCs. These experts are coordinating the national consultation and are responsible to provide NSO with the national comments.

2 European and international public enquiries are addressed to all known members. For national standardisation enquiries a formal public enquiry is published in the Official Government Journal.

3 For international and European enquiries, the enquiry is sent to the interested identified stakeholders having a subscription as a member of the national electrotechnical committee or an annual subscription to the information service of the national electrotechnical committee.

4 The NSOs' internal system with mirror committees is operating electronically with the continuous, systematic and effective involvement of the NSOs officers. The management of the organisation is responsible to approve any changes to the list of members of mirror committees. Mirror committees are periodically assessed and revised accordingly. This system is also used for the public inquiry procedure.

5 Public enquiries are announced on the web page of the NSO and in the official journal of the organisation. Organisations that are interested have the possibility to be actively involved. In general, organisations outside the national technical committees are not explicitly addressed for public enquiries.

6 There are different procedures in the various standard writing bodies. In most cases the public enquiries will be launched either via LiveLink and/or via email. Additionally the enquiries will be listed in the newsletters. The distribution of the enquiries will be as wide as reasonably possible taking into account that all the relevant parties will receive the information on the enquiries.

7 About 40 organisations are on the mailing list for public enquiries: .... Also for public enquiries, consultants or certifiers are presently not invited."

8 Those who have expressed interest in specific areas, either directly or as a result of our solicitations, are invited to comment at the stage of public enquiries. The procedure and the number of organisations/people involved vary somewhat with the type of standards involved (national/European/international; Harmonized European standards vs. other type of standards).

9 Some 100 experts active at NSO .... In public enquiries mainly the organisations/experts mentioned above are invited to provide feedback.

10 For public enquiries, the members of the national TC prepare comments on the draft.

11 The regulatory authorities, in normal circumstances, do the public enquiry. However, the technical committees decide who should be invited for comments

12 For public enquiry all interested parties have the possibility to provide their comments. However in most of the cases the sources of comments are the technical committees.

To be fair it should be emphasized that in the majority of cases the procedure seems to be fine:

1 The procedure for public enquiry is announced on the NSO's website and published in the official bulletin of the NSO. The draft national standards are notified to the competent authorities in accordance with the NSO's notification procedure under EC Directive 98/34."

2 Enquiries are publicly announced and all organisations and experts do have the possibility to comment during the enquiry phase as a matter of principle.

3 All experts participating in technical committees are involved in public enquiries. Additionally, all enquiries are announced in the Official State Bulletin, the NSO's monthly bulletin and targeted specialized media. As a consequence nearly anyone can potentially be involved in public enquiries."

Also with regard to Q8 on consensus building in technical committees and to Q9 on forming national delegations to European technical committees such a situation exists. The general objectives and principles (as described in ISO are quoted and adhered to:

"Decisions are in principle made by consensus defined in accordance with ISO rules. This implies that no important part of the stakeholders persists in its opposition and that efforts are made to accommodate views of all stakeholders and to reconcile the different viewpoints. So consensus does not necessarily mean that all fully agree (ISO/IEC Guide 2:2004)".

Virtual participation

With most National Standards Organisations, physical participation in meeting of committees is (still?) the general procedure, supported by ways and means to facilitate occasional virtual participation, using web fora, e-mails or LiveLink. [cf. Recommendation 12]

7 Views of stakeholders in 12 selected countries

7.1 Introduction

The five main steps in which this study project was implemented were portrayed in Figure 1.1 and comprised the following five major steps:

Step 1 - View of European Standard Organisations (ESOs: CEN, CENELEC, ESTI).
Step 2 - View of European interested parties.
Step 3 - View of National Standards Bodies and Organisations (NSBs, NSOs).
Step 4 - View of NSB and NSOs in 12 selected countries.
Step 5 - View of national interested parties in selected countries.

At the third meeting of the Steering Group, the selection of 12 countries in which Steps 4 and Step 5 are implemented was made (see Table 7.1).

Table 7.1   12 countries selected for Steps 4 and 5

	Old Member States		New Member States		Total
	Small	Large	Small	Large	
North	Denmark		Estonia		3
	Sweden				
Central	Netherlands	France	Czech Republic	Poland	6
		Germany			
		UK			
South		Italy	Cyprus		3
		Spain			
Total	3	5	3	1	12

This chapter provides a summary of the second Internet survey among stakeholders in the 12 selected countries. The survey was implemented in December 2008 and about 1,500 people in these 12 countries were invited to complete the questionnaire on line. In addition an open survey was hosted on line. Before results are presented in Section 7.3, an overview of the face-to-face interviews made in the 12 countries is presented in Section 7.2.

7.2 Face-to-face interviews in 12 countries

The face-to-face interviews implemented by EIM's partners in the selected countries confirmed to a large extent the overall ideas as expressed in the internet surveys among standard organisations and stakeholders.
Because the data from internet survey are based on a larger number of responses, these are reported more in detail in Section 7.3. Selected results from the face-to-face interviews are reported here only if they provide additional information or illustrate more general findings with concrete examples.
Findings from both the Internet survey and the face-to-face interviews have been considered when drafting the conclusions and recommendations in Chapter 3.
The results from the interviews in Estonia have already been presented at length in Annex 1 of this report. To give an idea of the other information collected some items are described in this section in more detail.

Dissemination of information

AENOR (Spain) is very active with informing stakeholders about developments in standardisation. During the time of interview, only 2006 data were available: 75 different publications were made available in that year. In addition CD's are distributed and information made available at the website.

In Poland the understanding by several respondents (both from the educational sector and the business community) is that the National Standards Organisation in Poland rarely informs organisations directly on standardisation. Information has to be collected through conferences, specialised publications and the internet. So, improving distribution of information (on process, business models, participating teams etc) is seen as a priority, especially sector bulletins to inform stakeholders on new developments in standardisation and standards would be welcome.

Still, PKN seems to be relatively active. PKN has its publication PKN News and other ways of spreading information free of charge, but it seems this does not reach all stakeholders sufficiently. PKN operates three standards-reading-rooms (in Warsaw, Katowice, Łódz) and 15 standardisation information points across Poland (at libraries, universities, institute of welding, etc.).

Fees and other costs

In Denmark, large participants like the Danish Safety Technology Authority may spend about € 1 million a year on standardisation. This sum is based on a negotiated deal with the NSB. However other types of participants such as consumers and universities pay lower or even a zero rate like the Danish Consumer Council. Experience shows that many stakeholders are even shocked by the idea that they have to pay in order to participate in standardisation.

Some stakeholders report that there has been a cut in resources being made available from the public budget and hence the costs for stakeholders to participate have been increasing.
Whatever the position on the fees, parties seem to agree that the hours spent amount to the largest share of annual cost to participate in standardisation. There seems to be a tradition in Denmark that trade associations reimburse the fee if individual member enterprises are participating in a technical committee.

Another example of a stakeholder wondering why its members would have to pay to participate in standardisation is the Dutch VNI (installers' branch): "They contribute their knowledge and time and moreover have to bring money!"

If you ask BSI in the UK (like other NSBs) about membership fees they talk about the different fee rates to be paid depending on "…the size of the company in terms of employees and turnover'. This still very much reflects the situation of a private enterprise driven standardisation and less the situation of the last twenty years of harmonised standards that are being developed to support government policy to bring about public goals such as public safety of sustainable production. [cf. Recommendation 2, 13]

For electrotechnical standardisation work at Svensk Elstandard, participation is free for universities, research organisations, trade unions and consumer organisations.

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With Denmark some parties make efforts to reduce the out of pocket expenses as much as possible. For example NITA, the Danish National IT and Telecommunication Authority that is the 'ETSI NSO', makes sure all exchange of views is done by e-mail to eliminate travel costs.

Again the most important cost item mentioned are the wage costs of the experts of the stakeholders or the opportunity costs of time spent by entrepreneurs in standardisation. As a result participating in a European meeting abroad may already take about € 1,650, whereas the costs for travel and subsistence of an overseas meeting may more than € 3,500.

Participation of stakeholders

In general not many barriers in the Danish system have been identified. Most of the issues raised deal with knowledge and awareness of the stakeholders. However entering already existing technical committees might be difficult. The interviewed stakeholders of different categories interviewed in Denmark believe that there are no major impediments and in theory all different stakeholders can and should be represented in the development of a standard, however in practice this is seldom the case. This is mainly related to a lack of motivation with stakeholders to put in the time and energy required and hence brings us back to education and awareness rising. [cf. Recommendation 6]

This is also the case in other countries. For example, the National Consumer Institute in Spain that promotes the consumer interest is part of the state administration and participates in standardisation work at AENOR. However due to difficulties in finding qualified staff and limited other resources, private consumer associations do not participate. [cf. Recommendation 4]

Also in Sweden, the consumer interest is mainly represented in standardisation by the Swedish Consumer Agency, a public authority.

Representatives of the business community report easy access to standardisation processes, both for trade associations and individual SMEs. But – although AENOR already reports serious information dissemination efforts – stakeholders feel that AENOR should enhance its 'marketing strategies' to make more people aware of the benefits of standards and participation in the standardisation processes.

In Poland stakeholders generally speak positively about access and the chance to be represented in technical committees and the balanced composition of TCs. Asked about suggestions for improving access, only additional financial support was mentioned to allow more active participation of Polish experts in standards applied on the Single Market.

Also interviews in the Netherlands illustrated that actual access to and participation in standardisation depends very much on the awareness with the stakeholders and the efforts a stakeholder is ready to make. From associations of SMEs quite different opinions could be noted about access to standardisation work at NEN. Some associations make a serious efforts to inform and organize their members (for example sharing costs with the member that is ready to actually participate in a technical committee), other organisations start from the assumption that standardisation is for large corporations and that it is not possible for SMEs to participate meaningfully. This subsequently proves to be a self-fulfilling prophecy. [cf. Recommendation 3, 8]

Consumer and environmental organisations find it – just as trade unions - very difficult to make available the required resources (manpower) to participate meaningfully. On the other hand they express the need to be involved, but do so on a relatively limited scale. [cf. Recommendation 4]
Cases were reported in which the interest that a respondent represents was not present in the technical committee, e.g. trade unions in cases on defining labour conditions at the workplace.

Public authorities, e.g. those responsible for market surveillance and hygienic conditions in a range of institutions such as nursing homes, find it important to participate in standardisation especially to be involved when measuring methods (e.g. to ascertain concentration values of specific substances) are being described.

The Cyprus Consumer Association is convinced that it is valuable to participate in standardisation to introduce aspects that have not been suggested by other stakeholders. They feel it is worth the efforts, and are satisfied with the possibilities to join. All in all, stakeholders interviewed in Cyprus (a.o. a consumer association, trade federation, ports authority, chamber, technical university) are rather positive about the way the standardisation system is functioning in Cyprus, about the information they receive and about the possibilities to join and to contribute.

In the interviews in Germany, again the principle of open standardisation, guaranteed by the rules at DIN (Standardisation principles DIN 820) is confronted with practice: limited resources in terms of time, money and experts with the interested stakeholders may prevent them from participating. Specific organisational structures have been established; see for example the notes on DIN Consumer Council and the coordinating unit for environmental organisations below. Still one is not entirely satisfied with the democratic representation of valid interests. For example in April 2008 a two days seminar 'Success factor Standardisation' was organised by DIN in cooperation with the Federal Ministry of Economic Affairs to better integrate medium-sized companies by raising their awareness on the benefits to be gained. (In this respect also the DIN study 'Economic benefits of Standardisation, 2000 as referred to in Chapter 2 is important).

Large stakeholder organisations, like associations representing the building sector, have described their own objectives as 'damage control'. Standards, especially bad compromises that may result from merging conflicting interests, may place a heavy burden on enterprises by being unpractical, ineffective and sometimes even unsuitable. Sometimes also academic findings find their way into standards (academics leaving their footprints) that should foremost be guides for practical work in a business setting.

In Germany there exist KNU, the coordinating unit for environmental organisations' work on standardisation. KNU is a joint project by the German League for Nature Conservation and Environmental Protection, the German Association of Environmental Protection Action Groups and the German branch of Friends of the Earth (BUND). Since 1996 KNU works to increase environmental organisations' influence on standardisation and to see that better consideration is given to environmental aspects. Representatives from environmental protection organisations are active in various committees of the German standards institute DIN and in DKE, the German organisation responsible for the elaboration of standards in

electrical engineering and electronics. The representatives concentrate on standards bodies of relevance for the environment (e.g. standards for thermal insulation, sustainable construction, environmental management, solid recovered fuels and nanotechnology). Interviewees pointed out that where DIN charges fees and does not reimburse travel costs etc, KNU might reimburse travel costs to volunteer experts of environmental organisations and under special conditions can also pay an expert fee. KNU is partly financed by the Federal Ministry for the Environment.

An environmental NGO in Germany stated: "As a matter of principle, paying a fee is inappropriate for public interest stakeholders, i.e. organisations without any commercial interest in standardisation". [cf. Recommendation 13].

With DIN in Germany organisations such as the BAM Federal Institute for Materials Research and Testing, which is a scientific and technical federal institute with responsibility to the Federal Ministry of Economics and Technology, plays an important role in standardisation. The mission of BAM is to ensure ongoing safety in technology and chemistry through R&D, testing, certification and consultancy within its objective of promoting German industrial development. Standardisation works should be seen in this perspective making BAM to send every year 400 to 500 experts into technical committees of DIN and its international partner organisations. Only the large industrial enterprises participate with more experts in the system of standardisation. BAM has the chairmanship of various technical committees. Furthermore, the president of BAM acts as Vice-President of DIN. The fee BAM has to pay to DIN (a few thousand euros) is nothing compared to the labour costs of hours spend on standardisation (millions of Euro's a year). BAM reports no difficulties in access to standardisation; its major concern is the speeding up the process. In the context of rapidly evolving and changing markets, standardisation work would benefit - at least in some areas - from faster working procedures.

The general idea emerging from the interviews in France is that access to standardisation remains fairly difficult for organisations outside the system, especially when the organisation is small. Barriers that may hamper access to standardisation for stakeholders:
− the high costs;
− the difficulty of the language;
− the difficulty of distinguishing between 'compulsory' and optional standards;
− most interested parties would like more specific information for their subject/sector.

However, national bodies consider access to standardisation as a means to express their opinion. They know the role of AFNOR in the process of standardisation and they are informed about new developments by electronic newsletters. Parties recognize that progress was made to improve access, e.g. to the academics and the researchers who benefited from subsidies to participate in the committees of normalisation.

Several stakeholders state that there is no barrier in the rules and regulations to participate. All who have the required expertise and time available may participate, however substantial costs (fees, travel, and accommodation) are involved.

Influence in governing bodies

At CYS in Cyprus, stakeholders may indeed participate in the debate on the agenda for standardisation work in the next period. However, it is not guaranteed that the suggested standardisation work will indeed be approved by the Board of CYS.

DS in Denmark states that the different type of stakeholders have fair and good possibilities to influence the strategic choices. But although everyone has the opportunity to participate, some types of organisations such as environmental organisations could be better represented.

Subsidies and other support

To participate in European technical committees there is a subsidy of 30% of costs in the Czech Republic, still several stakeholders complain about the high costs for travel and subsistence involved.

In Cyprus, experts from the private sector get a € 600 subsidy per trip if they go to European meetings as a representative of Cyprus.

In Sweden, the Swedish Standards Council (SSR), the responsible authority for the three standard organisations in Sweden (SIS, SEK and ITS) provide funds to environmental organisations, trade unions and consumer organisations (not for profit organisations) and this may cover both membership fees, travel expenses and seminars, courses and material for these courses. However SMEs and large enterprises have to pay for their own expenses. This might have stopped SMEs from participation.
In addition, other support systems do exist for various types of organisations. For example, the Swedish Association of Local Authorities and Regions (SALAR) pays a large annual fee to the standardisation organisations and then all hospitals in Sweden are covered (no need to pay additional fees to participate in technical committees). In addition the procedure that the hospital had to pay for its own expert has been abolished. SALAR has recently signed an agreement stating that all delegations are paid for if they represent the interest of the healthcare sector as a whole.

The fees that have to be paid by participants in the standardisation work at DIN have been described in Section 6.3.3. However for consumer representatives nominated by the DIN Consumer Council (an entity established in 1974 within DIN to represent consumer interest in standardisation[1]) are exempt from contributing to the costs of the standardisation activities in which they are involved. Also their travel expenses are paid by the DIN Consumer Council that is mainly funded by public funds.
The funding of the standardisation work is largely borne by industry, with state funding for certain public interest projects.

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[1] http://www.din.de/cmd;jsessionid=688E11D7D4BCE6E8CBBE2409164416C6.2?level=tpl- unter-rubrik&menuid=47564&cmsareaid=47564&cmsrubid=57765&menurubricid=57765&cmssubrubid=57782&menusubrubid=57782&languageid=en

Cooperation with other organisations

Several organisations in Cyprus facilitate the work of CYS by co-operating, for example:

– The technical chamber webpage hosts prENs.
– The Consumer Association regularly publishes information about standards.
– The Ministry of Commerce, Industry and Tourism publishes information on its webpage on standards and promotes quality through standards.
– Trade associations co-operate and sponsor CYS events.
– Large organizations like the Telecommunications Authority, the Electricity Authority, banks and others sponsor standardisation events.
– The Human Resource Development Authority sponsors training events for standardization.
– The Cyprus Employers and Industrialists Federation hosts and promotes events on standardisation.

Package services

CYS runs a subscribers' service. Subscribers enjoy several services:

– A discount on the purchase of ISO, IEC, CEN, CENELEC, ELOT (Greece National standardization Institute) and BSI standards.
– National standards (CYS) can be purchased at 50% discount.
– Regular free updating on all news concerning the European, international and national standards.

On request, AENOR publishes specific sets of standards on CD-rom or paper. Such a tailor made set is much appreciated by enterprises in the sector concerned.

A lot of stakeholders would appreciate to have user guides for standards to assist in better understanding the issues covered by the standards.

The availability of specific sets of standards, for example those relevant to specific sector of the economy, would also be welcomed by stakeholders.

Translations

Obviously translation of standards is not a main issue in the UK.
However even in Cyprus where English is widely spoken, wider availability of standards in the Greek language would be highly appreciated and is expected to have a positive effect on the use of standards.
Overall about 60% of European standards are available in Czech language. For CEN and CENELEC harmonised standards this is even about 90%, but for ETSI harmonized standards only about 10%. Stakeholders clearly express that experience shows that having translations available is very important for a better penetration of standards.
Importance given to standards in national language seems to be rather low among stakeholders in Denmark. But it is also noted that the desirability of a translation very much depends on the issues being covered by the standard.

Also in Sweden standards in national language are welcomed. Unfortunately people are not really ready to pay for such translations. This might be partly explained that in technical sectors people are generally rather fluent in English. However as one spokesman pointed out, harmonised standards really need to be available in national language, as they are to be used in conjunction with the relevant legislation in the country (in national language).

With Svensk Elstandard in Sweden there is a policy for the translation of electro-technical standards: the principle is that the closer the standard is related to the end consumer, the greater is the reason to translate it. However it is reported that less than 5% of European standards are indeed translated (Svensk Elstandard 3%, SIS 5%)

AENOR claims that as much as 95% of all European standards are available in Spanish and this is highly appreciated by stakeholders. However for some sectors such as telecommunications, English is the main working language anyway so it is stated that one believes that translation into Spanish does not really make sense.
Several stakeholders feel that information and texts of standards in the national language certainly help. PKN reports that 55% of European standards and 72% of harmonised European standards are already available in Polish.

The importance of having standards available in French is stressed by stakeholders, although also in France it is said to depend on the sector (for example in the oil industry, English is the common language anyway).

Also in Germany the translation of standard documents is an issue, although German is one of the three official languages used by the ESOs and most of the standards become available in German. However, in the development process, when the course of things might be influenced, drafts are generally not available in German. Point made by both NGOs and business representatives.

Public enquiries

Stakeholders note that organisations outside the national technical committees are not explicitly addressed by CNI for public enquiries.
[cf. Recommendation 10]

With AENOR the public consultation phase is really public – as in several other Member States but not all – as references to all draft documents (number, title, and deadline for comments) are published in the Boletín Oficial del Estado, or the Official State Bulletin so everybody can have a say.

A specific note on the public hearing: "It is not really public as one needs an invitation to participate in the meeting".

Sales of standards

Next to electronic access to selected standards, the sale of standards by CNI in 2007 amounted to:
- 225,000 printed copies
- 125,000 standards and amendments in PDF format.

In 2007, CYS sold 1,685 standards, of which 81% were CYS EN, 7% ISO and 6% ELOT. The remaining are a.o. IEC and CYS standards.

Manipulations

Several stakeholders report about cases were large companies manipulate the course of things in order to accumulate more votes in technical committees at European level (e.g. being represented in various national delegations). One of the suggestions made is to promote standardisation as a more prominent subject

in education as this will increase the understanding of standardisation and its merits in general. The general idea being that the better the merits and the characteristics of the system are understood inn society at large, the more difficult it will be for a few players to abuse the system for their own particular interests. [cf. Recommendation 6]

Training

In Poland the need is expressed to have a set of standards being made available to educational institutions and centres of professional training.
Also in Germany it is suggested to improve access of educational institutions (teachers, students) to standards documents as this would improve awareness of the importance of standardisation. [cf. Recommendation 6]

BSI belongs to the minority of standards organisations that does not resort to voting if different views persist. BSI really operates on the principle of a consensus based approach and makes every effort to seek consensus and agreement where different views exist. In order to make this possible a lot of efforts are put in training for the chairs.

Asked about different standardisation models, if anything stakeholders praise the higher speed of alternative models often at the cost of not being based on a wide consensus (less democratic legitimacy). It should however be noted - as mentioned in the Introduction – that this report focuses on formal European standardisation and hence the experience of the respondent selected is mainly with this system rather than with the domain of private consortia in the ICT business for example.

7.3   Internet survey among stakeholders

The initial invitation for the survey among stakeholders in the 12 countries (Step 5) was dispatched on 4 December 2008. The survey was closed on 31 December 2008 after two reminders were sent.
In addition to the people invited individually by EIM, the questionnaire was placed on line to allow additional parties being informed by the stakeholders as represented in the Steering Group to complete the questionnaire on line.

In total 619 people had visited the survey on line when it was closed on 31 December 2008; however the number of useful responses is considerably smaller. Only about 50% completed the entire questionnaire successfully. The remaining half can again be distributed in two groups:
-    those who stopped almost immediately;
-    those who still answered a considerable part of the questions.

All in all there are 417 respondents that have seriously answered part of the question (and hence it was accepted for analysis) and from which we know the type of stakeholder they represent. Their information is considered in this section. Tables 7.2 summarises the details.

Table 7.2   Response Internet survey among stakeholders

	Invited	Gross response (percentage)	Questionnaires accepted (percentage)
Countries invited survey	12	12	
Persons invited survey	1,570	449 (29%)	358 (23%)
Persons open survey	-	170	59
Total	-	619	417

Source: Web based survey among stakeholders, December 2008

Of these 417 respondents, 300 did complete the entire questionnaire (72%), approximately the same proportion for the survey by invitation and the open survey.

The results of the various sections of the questionnaire are presented in the following sections of this chapter:
7.3.1   Basic characteristics respondents
7.3.2   Awareness about and being informed on standardisation
7.3.3   Actual involvement in standardisation and benefits seen
7.3.4   Barriers for participating in standards development and suggestions for improvement
7.3.5   Actual usage of standards and benefits seen
7.3.6   Barriers for using standards and suggestions for improvement

7.3.1 Basic characteristics respondents

The type of stakeholder, i.e. organisation or enterprise, to which the respondents belong, is shown in Table 7.3 by type of survey.

Table 7.3   Type of stakeholder, for each type of survey

		Survey type		Total
		open	invitation	
1	Consumer organisations	4	13	17
2	Trade unions	3	12	15
3	Employers' federations, trade associations	27	52	79
4	SMEs	2	83	85
5	Large enterprises	5	58	63
6	Environmental organisations	7	11	18
7	Public authorities, government departments	1	23	24
8	Universities and research institutes	4	40	44
9	Consultants, laboratories, certifiers	3	38	41
10	Other	3	28	31
	Total	59	358	417

Source: Web based survey among stakeholders, December 2008

For many type of stakeholders some additional information was collected. This information is presented in the remaining of this section (e.g. Table 7.4) to get some better understanding of the background of the response group before we turn to the subject matter of the survey in the next subsections.

Table 7.4   Detailed characteristics of response group (n=417)

Stakeholder category	Detailed characteristics
17 consumer organisations	− 14 describe themselves as a private NGO (4 responses originate from the open survey. 10 have been invited, of which 6 state to have individuals as members; ranging from 29 to 700,000). − There are 3 organisations that have other organisations as members (2 open, 1 invited; 10 to 28 members). − One organisation describes itself as public, e.g. a consumer authority.
18 environmental organisations	− 14 are a private NGO (6 responses originate from the open survey. 8 have been invited, of which 5 state to have individuals as members. In addition 3 respondents from the open survey 3 have individual members (so in total 8). − The number of members for these 8 organisation range from 30 to 450,000. − There are 10 organisations that have other organisations as members (4 open, 6 invited; range from only 2 organisations to 3000 organisations as members). − Not one of these organisations describes itself as a public organisation.
15 trade unions	− 8 are an umbrella organisation, 7 are unions for specific sectors, e.g. transport, business services, graduates from university working in different sectors, trade, business administration etc.
79 employers' federations or trade associations, of these:	− 34 indicate to be an umbrella organisation, 43 are active for a specific sector (mining, manufacturing, construction, hotels, transport, other business services, lift manufacturers, bakery, consulting, energy, female enterprises, informatics, landscape architecture, electronic materials, orthopaedic, packaging, social care, etc.). − 27 originate from the open survey, 50 were invited to join the survey. − 76 of the 79 respondents provide information on the size of enterprises they represent: − All members are SMEs 26 − Most members are SMEs 24 − Both small and large enterprises 5 − All members are large enterprises 1
85 SMEs and 63 large enterprises, or 148 individual enterprises	− Manufacturing,75 − Construction,15 − Wholesale Trade,1 − Retail Trade,3 − Repair,1 − Transport and communications,6 − Other business services,12 − Personal Services,1 − Other ,34

24 public sector rep-resentatives	– ministries or part thereof (13). – consumer organisation (1) – environmental organisation (1) – health and safety organisation (1) – inspection bodies (5) – local authority (1) – national metrology institute (1) – a regulatory and educational body (1) – one semi governmental organisation (1).
44 universities and research institutes	– More answers possible: – - technical university or high school 12 – - different university or high school 4 – - technical test laboratories 5 – - other research organisation 31
41 consultants, labo-ratories, certifiers	– 31 consultancies, – 18 certifiers, – 18 (test) laboratories
31 stakeholder cate-gory 'others'	– academy of technical sciences; – association for regional development end entrepreneurship, a non governmental, non-profit organisation; – our main goal is to support local development in Poland by means of promoting entrepreneurship (including entrepreneurship on the part of people, companies, local authorities and NGOs) and increasing the flexibility of the employment market (through cooperation with various partners: public, social, private etc.); – educational charity/NGO; – an organisation aiming to change attitudes to disability and to serve disabled people (a large voluntary sector provider of care and support services for disabled people); – consultancy services for energy efficiency; – organisation of engineers; – statistical offices; – organisation for occupational health and safety; – association of users of standards; – a water supply company.

Source: Web based survey among stakeholders, December 2008

7.3.2 Awareness about and being informed on standardisation

Table 7.5 shows that 75% of the stakeholders feel to be (very much) aware of what standardisation is, only 3% not at all, and only 8% slightly (score 2). Obviously this describes the respondents to the survey rather than the potential stakeholders in general. Results for the open and the invited survey are almost identical.

Table 7.5 Awareness of standardisation (what it actually is)

	Numbers	Percentage
1 Not at all	11	3
2 …	33	8
3 …	57	14
4 …	100	25
5 Very much.	198	50
Sub-total	399	100
6 don't know / no answer	4	-
Total	403	-

Source: Web based survey among stakeholders, December 2008

To summarise this information the average score was calculated on this scale from 1 to 5. The resulting average score for any given group of respondents is higher if these respondents are generally more aware. For all respondents combined the average is 4.1.

Such averages allow an easy comparison of the position for each of the different type of stakeholders distinguished in this study in Table 7.6.

Table 7.6 Average score awareness standardisation (what it actually is) by type of stake-holder (scale 1 not at all to 5 very much)

		Score	N
1	Consumer organisations	3.8	17
2	Trade unions	3.0	14
3	Employers' federations, trade associations	4.1	72
4	SMEs	4.0	82
5	Large enterprises	4.0	62
6	Environmental organisations	3.4	16
7	Public authorities	4.7	23
8	Universities and research institutes	4.5	43
9	Consultants, laboratories, certifiers	4.6	41
10	Others	4.1	28
	Total	4.1	398

Source: Web based survey among stakeholders, December 2008

The most important observation is the consistently high scores in Table 7.6 across nearly all types of stakeholders. This high average is obtained in two steps:
- people that were approached to participate are more than averagely involved;
- the non-response is most probably responsible for a further selection bias.

Looking at the various subgroups, the differences are not very surprising:
- lowest scores with trade unions and environmental organisations. For consumer organisations the score is already similar to that of representatives of the business community.
- highest scores with public authorities and consultants, laboratories, certifiers.

The three groups of representatives from the business community score consistently high at around 4. It is known from a large scale representative survey among European SMEs that knowledge and awareness is generally lower[1]. Subsequently the present survey addressed the awareness about what standardisation might do for the own organisation. This follow up question was only asked to those who reported some general awareness on the subject in the previous question; as a result 386 respondents remain.

[1] The 2002 ENSR Enterprise Survey implemented in the framework of the Observatory of European SMEs, paid attention to standardisation. The majority of the SMEs (60%) consider standards to be very important. However only 39% of the SMEs receive relevant information on standards and standardisation, 55% did not. This result is mainly based on the lack of information of micro enterprises: 37% of medium-sized enterprises; 47% of small enterprises and 56% of micro enter-prises state that they did not receive such information. See 'Highlights from the 2002 Survey', Chapter 6: Technology and Standardisation, http://ec.europa.eu/enterprise/enterprise_policy/analysis/observatory_en.htm.

Table 7.7 Awareness of what standardisation may do for the organisation or its objectives, by type of stakeholder (scale 1 not at all to 5 very much)

		Average Score	N
1	Consumer organisations	4.1	14
2	Trade unions	2.9	14
3	Employers' federations, trade associations	3.7	72
4	SMEs	3.7	78
5	Large enterprises	3.9	59
6	Environmental organisations	2.9	16
7	Public authorities	4.4	23
8	Universities and research institutes	4.3	41
9	Consultants, laboratories, certifiers	4.3	41
10	Other	3.8	28
Total		3.9	386

Source: Web based survey among stakeholders, December 2008

Table 7.7 shows that the lowest awareness about what standardisation might do for the objectives of the organisation is among trade unions and environmental organisations. Among consumer organisations, the awareness of what standardisation might achieve is relatively high, even higher than with representatives of the business community. Table 7.8 shows that on a scale from 1 to 5, 75% of the respondents ascribe a 4 or 5 to the importance of standardisation for their organisation, in other words very high. This results in an average of just over 4.

Table 7.8 The importance of standardisation for the own organisation or enterprise

	Frequency	Percentage
1 Not al all	7	2
2 ...	29	8
3 ...	58	16
4 ...	132	36
5 Very much	145	39
Total	371	101

Source: Web based survey among stakeholders, December 2008

Table 7.9 The importance of standardisation for the own organisation or enterprise, by type of stakeholder

|	Average score	N
Consumer organisations	3.7	14
Trade unions	3.0	12
Employers' federations, trade associations	3.8	67
SMEs	4.1	75
Large enterprises	4.3	57
Environmental organisations	3.1	15
Public authorities, government departments and government agencies,	4.0	23
Universities and research institutes	4.1	41
Consultants, laboratories, certifiers	4.4	41
Other	4.2	25
Total	4.0	370

Source: Web based survey among stakeholders, December 2008

Consistent with information provided above, trade unions and environmental or-
ganisations ascribe the lowest importance to standardisation for their organisa-
tion (about 3, see Table 7.9).

The opinion of the total group of responding stakeholders on the information pol-
icy of the National Standards Body in their own country is shown in Figure 7.1

Figure 7.1 Assessment of the information policy of the NSB in own country
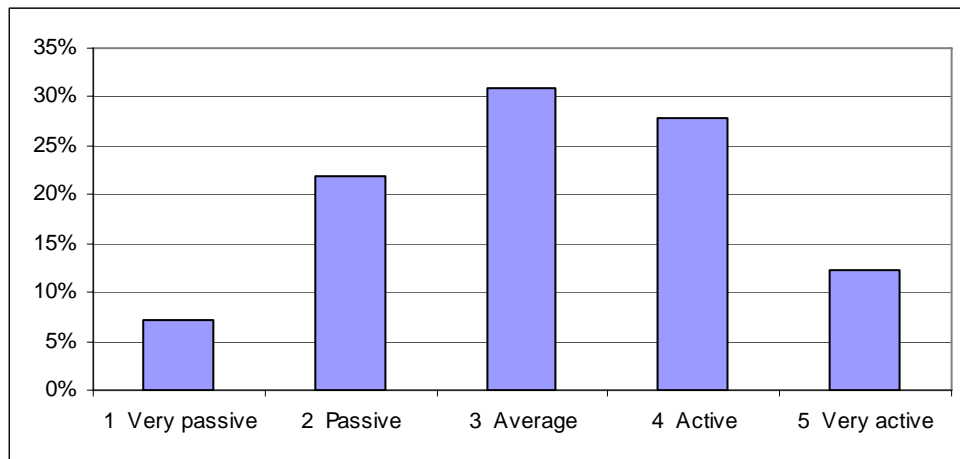
By type of respondent the results are shown in Figure 7.2. The more organisa-
tions are aware, and the more importance they feel standardisation is, the more
active they feel the information policy of the NSB is. This association may be ex-
plained in several ways.

Figure 7.2 Assessment of the information policy of the NSB in own country: score on a sca-
le from 1 very passive to 5 very active.

121
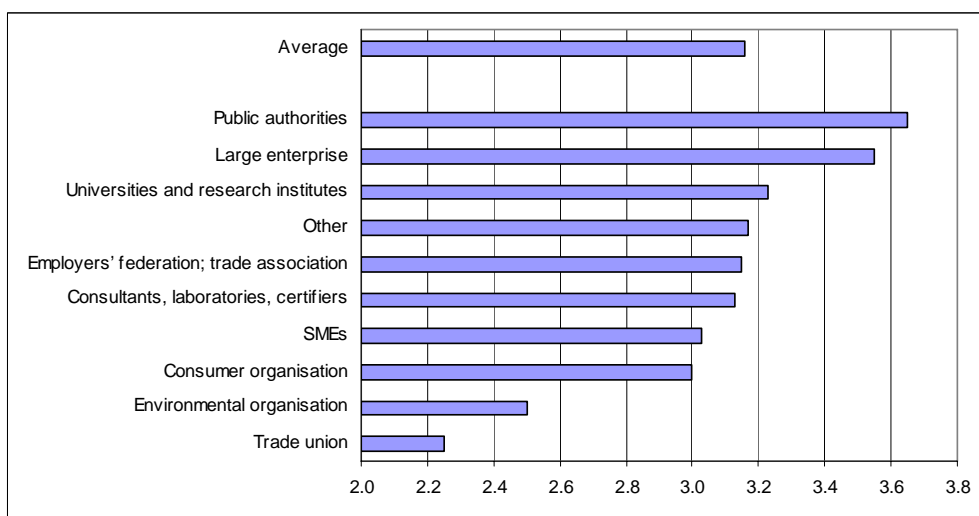
The more active the information policy is (towards that specific group of stake-holders), the more aware these stakeholders are about the relevance and importance of standardisation. But alternatively: the more aware organisations are, they more receptive they will be for information from the standardisation organisation. Organisation that may not be aware at all, are more likely to oversee or neglect information provided.

According to Table 7.10 one third of the respondents do not provide an answer (do not know) to the question whether the information policy of the NSB is specially targeted as specific groups such as consumers or SMEs.
From the remaining answers, 73% are of the opinion that such targeted approach does exist. The percentage of respondents that are of the opinion that this is the case varies substantially by type of stakeholder, even within the business community. All large enterprise answering the question (N=27) say yes, whereas the employers' federations/trade associations have the lowest score of all: just below 50%

Table 7.10 The percentage of stakeholders that are of the opinion that the information policy of the NSB is specially targeted at specific groups, by type of stakeholder

	Percentage	N
Large enterprises	100%	27
Consumer organisations	92%	12
Public authorities, government departments and government	87%	15
Universities and research institutes	86%	28
SMEs	68%	41
Consultants, laboratories, certifiers	68%	22
Trade unions	67%	3
Other	67%	15
Environmental organisations	64%	11
Employers' federations, trade associations	49%	47
Average	73%	221

Source: Web based survey among stakeholders, December 2008

7.3.3　　　　Actual involvement in standardisation and benefits seen

Respondents were asked to what extent (on a scale from 1. not at all to 5. very much) the own organisation participates in standardisation (Table 7.11; 7.12). Table 7.11 shows that over a quarter (27%) of the 347 respondents that provide information on their involvement in standardisation are not involved at all; another quarter is very much involved (26%). On the scale from 1 to 5 the average score is 3.0; this score is higher for the open survey (3.4).

Table 7.11 The extent to which organisation and enterprises are participating in the development of standards (not just using standards)

	Frequency	Percentage
1　Not at all	93	27
2　…	60	17
3　…	48	14
4　…	57	16
5　Very much	89	26
Total	347	100

Source: Web based survey among stakeholders, December 2008

By stakeholder, the average indicating the extent of participation is shown in Table 7.12.

Table 7.12 Participation in standardisation by type of stakeholder (average score on scale from 1 not at all to 5 very much).

	Average score	N
Universities and research institutes	3.8	40
Public authorities	3.8	21
Employers' federations, trade associations	3.4	66
Consultants, laboratories, certifiers	3.2	38
Consumer organisations	3.2	12
Large enterprises	2.7	54
Environmental organisations	2.6	14
Other	2.5	24
Trade unions	2.5	10
SMEs	2.2	67
Average	73%	346

Source: Web based survey among stakeholders, December 2008

There are 199 respondents that provide information on the number of technical committees in which they actually participated in during the last 5 years (See: Table 7.13).

Table 7.13 Number of technical committees in which enterprise or organisation participated during the last 5 years

Number of TCs (range)	Number of re-spondents	Percentage
0	15	8%
1 - 4	95	48%
5 - 9	31	16%
10 - 19	25	13%
20 - 49	19	10%
50 - 99	6	3%
100 - 600	8	4%
Total	199	100%

Source: Web based survey among stakeholders, December 2008

The frequencies as presented in Table 7.13 result in an average number of 20 technical committees (34 for the open survey, 19 for the survey by invitation). Obviously this average is highly influenced by the 8 very large players (large multi national companies) that participate each in 100 to 600 technical commit-tees. In Table 7.14 the number of technical committees in which the different type of stakeholders participated during the last 5 years s pictured.

Table 7.14 The number of technical committees in which the enterprise or organisation stated to participated during the last 5 years.

	Average	N
1 Consumer organisations	10	9
2 Trade unions	4	5
3 Employers' federations, trade associations	29	48
4 SMEs, i.e. enterprises employing up to 250 workers	5	29
5 Large enterprises, i.e. enterprises with more than 250 workers	24	23
6 Environmental organisations	6	8
7 Public authorities	26	12
8 Universities and research institutes	6	29
9 Consultants, laboratories, certifiers	29	25
Total*	18	188

Note: the various heterogeneous category of others have been omitted

Source: Web based survey among stakeholders, December 2008

The 11 stakeholders categorized as 'others' report a very high participation. As mentioned before, this category consists of a very heterogeneous group respondent.

Respondents have also been asked how many times they did participate in public enquiries. Results are presented in Tables 7.15 and 7.16.

Table 7.15 The number times the enterprise or organisation stated to have participated in a public enquiry

	Number	Percentage
0	25	14
1- 4	40	23
5 - 9	23	13
10 - 19	28	16
20 - 49	28	16
50 - 99	11	6
100 - 999	16	9
1000 - 2500	3	2
Total	174	100

Source: Web based survey among stakeholders, December 2008

On average stakeholders report to have submitted some fifty times feedback in a public enquiry. By type of stakeholder the averages as presented in Table 7.16 emerge.

Table 7.16 Number of times organisations and enterprises participate in public enquires (averages by type of stakeholder).

Type of stakeholder	Average	N
1 Consumer organisations	36	6
2 Trade unions	1	3
3 Employers' federations, trade associations	105	42
4 SMEs	17	27
5 Large enterprises	38	20
6 Environmental organisations	114	10
7 Public authorities	14	9
8 Universities and research institutes	42	26
9 Consultants, laboratories, certifiers	22	20
10 Other	28	11
Total	51	174

Source: Web based survey among stakeholders, December 2008

For various items it has been studied whether these are a motivation to be involved in standardisation. Hence a series of results as shown in Table 7.17 for the item 'be informed on on-going developments' are available.

Table 7.17 Importance of 'be informed on on-going developments' as a motivation to participate in standardisation.

	Frequency	Percent
1 Not al all	12	4
2...	35	11
3...	54	17
4...	83	26
5 Very important	134	42
Total	318	100

Source: Web based survey among stakeholders, December 2008

The results from Table 7.17 can also be expressed as an average score on a scale from 1 to 5: 3.9. In this way we can compare the various alternative motives evaluated in the survey (see Table 7.18).

Table 7.18 Importance of various motives to participate in standardisation (average score on scale from 1 not at all, to 5 very important.

Networking (getting to know people)	3.3
Make sure that standards are developed in domains where they are needed	3.7
Be informed at an early stage	3.9
Be informed on on-going developments	3.9
Contribute to better formulated standards with our knowledge and experience	3.9
See to it that potentially harmful issues are not incorporated in standards	4.0
Make sure that things that are important to us are properly incorporated in standards	4.1

Note: N = ranging from 314, to 320, on average 316

Source: Web based survey among stakeholders, December 2008

The most important motives are all related to actually influencing the contents of standards being developed. This alternative is considered very important by as much 50% of the respondents.

Table 7.19 Importance of motive 'Make sure that things that are important to us are properly incorporated in standards' to participate in standardisation

	Frequency	Percent
1 Not al all	12	4
2...	22	7
3...	41	13
4...	82	26
5 Very important	161	51
Total	318	100

Source: Web based survey among stakeholders, December 2008

In Table 7.19, the most important benefits that form a reason to participate in the standardisation process are listed for each type of stakeholders (for the employers' federation there are three reasons with the same average score on fourth position).
Scores above 4, indicate a very high percentage of respondents indicating very important. To illustrate:
– environmental organisations have a score 4.3 for 'make sure harmful issues are not incorporated', because 8 out of 12 respondents select 'very important' and another 2 go for important (score 4);
– trade unions obtain an average of 4.3 for 'make sure harmful issues are not incorporated', because 5 of the 7 trade unions select 'very important' and one opts for important (score 4).

Table 7.20 Importance of various motives to participate in standardisation (average score on scale from 1 (not at all) to 5 (very important), by type of stakeholder

Consumer organisations (N=11)	contribute to better formulated standards	4.5
	make sure important issues are incorporated	4.1
	be informed on on-going developments	3.9
	make sure harmful issues are not incorporated	3.9
Trade unions (N =7)	make sure harmful issues are not incorporated	4.3
	make sure important issues are incorporated	3.9
	make sure standards are developed where needed	3
	be informed on on-going developments / at early stage; contribute to better formulated standards	2.9
Employers' federations, trade associations (N=61)	make sure important issues are incorporated	4.5
	make sure harmful issues are not incorporated	4.3
	contribute to better formulated standards	4.2
	make sure standards are developed where needed	4.1
SME (N = 64)	make sure important issues are incorporated	4
	make sure harmful issues are not incorporated	3.9
	be informed on on-going developments	3.7
	be informed at earl stage	3.6
Large enterprise (N=48)	be informed on on-going developments	3.9
	make sure important issues are incorporated	3.9
	make sure harmful issues are not incorporated	3.8
	be informed at earl stage	3.7
Environmental organisation (N=13)	make sure harmful issues are not incorporated	4.3
	make sure important issues are incorporated	4.3
	contribute to better formulated standards	3.7
	be informed on on-going developments	3.5

Table 7.20   ... continued from previous page

Public authorities (N=18)	make sure important issues are incorporated	4.7
	make sure standards are developed where needed	4.5
	contribute to better formulated standards	4.5
	make sure harmful issues are not incorporated	4.4
Universities and research in-stitutes (N=37)	be informed at earl stage	4.3
	be informed on on-going developments	4.2
	contribute to better formulated standards	4.2
	make sure important issues are incorporated	4.2
Consultants, laboratories, certifiers (N=35)	be informed on on-going developments	4.2
	be informed at earl stage	4.1
	make sure important issues are incorporated	4
	contribute to better formulated standards	4
Other (N=23)	make sure standards are developed where needed	3.8
	be informed on on-going developments	3.7
	make sure important issues are incorporated	3.7
	be informed at earl stage	3.7

Source: Web based survey among stakeholders, December 2008

7.3.4 Barriers for participating in standards development and suggestions for improvement

Also Section 4 has been answered by – after correcting for do not know, no an-swer – by some 315 respondents.

Table 7.21 Existence of barriers for the organisation or firm to participate in standardisation

	Frequency	Percentage
1. Not al all	53	17
2.	62	20
3.	83	26
4.	79	25
5. Very much	38	12
Total	315	100

Source: Web based survey among stakeholders, December 2008

So the overall picture is that – starting from the assumption that 3 is the middle position on the scale – that some 37% state to face barriers much and 37% hardly any. This results in an average score on a scale from 1 to 5 of 3.0 (3.3 for open survey type N= 44, and 2.9 for survey by invitation N=271; total N= 315). This average score of 3.0 is used a benchmark to assess he position stated by the various types of stakeholders in Table 7.22.

Table 7.22 Extent to which barriers exist for the organisation or enterprise to participate in standardisation (average score on scale 1 not at all to 5 very important 5), ranked

	Average score	N
Public authorities	2.5	20
Large enterprises	2.6	47
Other	2.7	18
SMEs	2.8	65
Consultants, laboratories, certifiers	3.0	33
Employers' federations, trade associations	3.1	63
Universities and research institutes	3.1	36
Trade unions	3.4	7
Consumer organisations	3.5	13
Environmental organisations	3.9	13
Total	3.0	315

Source: Web based survey among stakeholders, December 2008

Subsequently it has been assessed whether respondents feel that these barriers are mainly related to the characteristics of the own organisation (internal) or more related to the characteristics and procedures of the standards bodies (external). This question has only been asked to those respondents that express any barriers, i.e. a score 2, 3, 4 or 5 with the previous question. 261 respondents remain.

Table 7.23 The extent to which barriers are internal or external

	Frequency	Percent
Mainly internal	50	20
A bit more internal	25	10
Both	91	37
A bit more external	17	7
Mainly external	62	25
Sub-total	245	100
Do not know / no answer	16	
Total	261	

Source: Web based survey among stakeholders, December 2008

In Figure 7.3 Extent to which barriers are considered to be internal or external
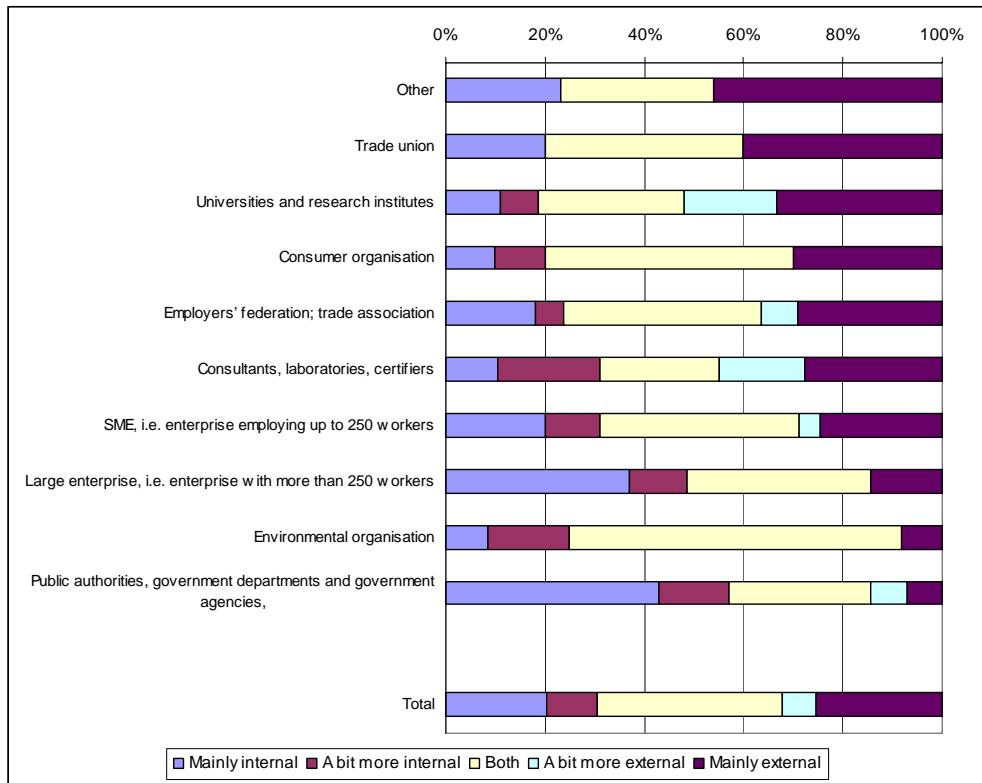
Note: number of respondents: Consumer organisation 10; Trade union 5; Employers' federation; trade association 55; SME 45; Large enterprise 12; Public authorities government departments and government agencies 14; Universities and research institutes 27; Consultants laboratories certifiers 29; Other 13; total 245

Source: Web based survey among stakeholders, December 2008

The categories others, trade unions and universities consider barriers mainly to be external (roughly 40 to 50%). Enterprises are the categories that mainly feel barriers are internal, i.e. related to characteristics of their own enterprise. It should be noted that this is even more so with large enterprises (nearly 50%) than with smaller enterprises (just over 30%). Environmental organisations take a different point of view, among these organisations two third of the respondents opt for 'both internal and external', much higher as with all other categories.

Finally 10 specific barriers were assessed by the respondents. These questions were answered by 339 respondents, of which – for the 11 specific items – on average 27 respondents answered don't know (8 %), so on average some 312 respondents gave an indication of the importance of the barrier on a scale form 1 (not at all) … to … 5 . very important

The full frequency table for the first item is again provided as an illustration in Table 7.24.

Table 7.24 The extent to which lack of awareness (information on what standardisation is, how it works) is a barrier

	Frequency	Percent
1. Not at all	114	35
2. …	79	24
3. …	59	18
4. …	41	13
5. Very important	31	10
Sub-total	324	100
No answer	15	
Total	339	

Source: Web based survey among stakeholders, December 2008

The survey results as presented in Table 2.24 – more than 50% of the respondents state that this is (hardly) any problem – results in an average score of 2.4. The average score for all 11 specific items is provided in Table 7.25 (ranked).

Table 7.25 Average score (higher is more important) of barriers (ranked).

Issue	N	Average score
Amount of time required	319	3.9
Travel and subsistence costs	305	3.4
The cost of participating in technical committees (fee)	293	3.4
The cost of becoming a member of standards body (fee)	289	3.2
Bureaucracy of the process	307	3.1
Perceived benefits for the organisation or enterprise itself are low	318	2.8
The process is too complicated, too technical	316	2.7
Not enough technical expertise or experts within our type of organisation	316	2.6
Lack of awareness (information on what standardisation is, how it works)	324	2.4
The language used in formulating the standards is too complicated & technical	319	2.3
Use of foreign languages	321	2.2

Source: Web based survey among stakeholders, December 2008

There is a substantial difference between the various potential barriers, as averages range from only 2.2 for use of foreign language to 3.9 for the amount of time required. To mark the large differences, the actual data collected is shown in Table 7.26 and 7.27. 'Amount of time required' is (very) important for 67% of the respondents, whereas foreign languages are not or hardly important for 65% of the respondents (This may be related to use of local language or use of foreign language without problem).

Table 7.26 The extent to which 'amount of time required' forms a barrier

	Frequency	Percentage
1. Not at all	15	5
2. …	34	11
3. …	57	18
4. …	89	28
5. Very important	124	39
Total	319	100

Source: Web based survey among stakeholders, December 2008

Table 7.27 The extent to which 'the Use of foreign languages' forms a barrier

	Frequency	Percentage
1. Not at all	139	43
2. …	72	22
3. …	48	15
4. …	35	11
5. Very important	27	8
Total	321	100

Source: Web based survey among stakeholders, December 2008

7.3.5 *Actual usage of standards and benefits seen*

Up to this point (section 5 of the questionnaire) we focussed on the standardisation process, reasons to participate etc. Now we will focus on using the standards.

312 respondents answer the questions in Section 5. Of these 312, eight do not provide (do not know) to which extent their organisation uses standards. For the remaining 304 the position is shown as in Table 7.28.

Table 7.28 The extent to which standards are used by the organisation

	Frequency	Percentage
1. Not at all	24	8
2. …	34	11
3. …	41	14
4. …	70	23
5. …very much	135	44
Total	304	100

Source: Web based survey among stakeholders, December 2008

In total 192 respondents provide information on the number of standards that the organisation or enterprise did acquire over the last five years.

The responses are summarized in Table 7.29.

Table 7.29   Number of standards acquired last 5 years

Number of standards acquired last 5 years	Percentage of respondents (N=192)
0	10%
1 - 9	17%
10 - 29	17%
30 - 99	17%
100 - 199	13%
200 - 499	12%
500 - 999	6%
1,000 - 9,999	6%
10,000 – 30,000	2%
0 – 30,000	100%

Source: Web based survey among stakeholders, December 2008

The number of standards acquired (average per organisation for 192 respondents) is as high as 600:
− open survey (N=18)   1,739
− survey by invitation (N=174)   483

However these results are strongly influenced by the 16 respondents with a very high number of acquired standards as shown in Table 7.30

Table 7.30 Number of standards acquired during last five years (top 16 organisations)

	Number of organisations	Number of standards acquired last 5 years
Employers' federation; trade association	2	1,000
Large enterprise	1	
Consultants, laboratories, certifiers	1	
Other	1	
Universities and research institutes	2	
SMEs	1	1,500
Public authorities, government departments and government agencies,	1	1,500
Large enterprise,	2	2,000
Large enterprise,	1	4,000
Consultants, laboratories, certifiers	1	10,000
Consultants, laboratories, certifiers	1	15,000
Large enterprise	1	25,000
Large enterprise	1	30,000
Total	16	-

Source: Web based survey among stakeholders, December 2008

For the remaining 176 respondents the average is still 98:
− open survey (N=16)   19
− survey by invitation (N=160)   106

Combining the information from Tables 7.28 and 7.29, the picture as shown in Table 7.31 emerges.

Table 7.31 The number of standards acquired by the organisation during the last five years.

Score on scale 1 (not al all using standards) to 5 (using standards very much)	Average	N
Score 2	4	17
Score 3	47	26
Score 4	360	43
Score 5	929	106
Total	600	192

Source: Web based survey among stakeholders, December 2008

The respondents have indicate on a scale from 1 to 5 whether a series of specific benefits are (or would be) important for using standards. For example for the item 'complying with (European) legislation' is considered to be (very) important by 205 of the 269 respondents, or 77% as shown in Table 7.32.

The average score for 'complying with European legislation for these 269 respondents is as high as 4.1.

Table 7.32 Importance of complying with (European) legislation as reason for using standards.

	Frequency	Percentage
1 Not at all.	20	7
2 .	14	5
3 .	30	11
4 .	61	23
5 Very important.	144	54
Total	269	100

Source: Web based survey among stakeholders, December 2008

The average score for the respondents (number answering ranging from 214 to 269, average 252) for the fourteen reasons specified are listed in Table 7.33.

Table 7.33 Average Importance of (potential) benefits of using standards

Issue	N	Average score
Complying with (European) legislation	269	4.1
Complying with requirements of customers	256	4.1
Products and services are up to date	263	4.0
To be in a position to communicate clearly and unambiguously with relevant parties in the market place	264	3.9
Compatibility of our products with other products is assured	244	3.8
Environmental interests are covered	267	3.8
Gives our products and services a better reputation in the market place	258	3.8
Improve Health and safety conditions at the work place	269	3.6
Easier access to markets in other countries of the EU/EFTA	241	3.4
Access to latest technology	246	3.4
Access to other markets outside the EU/EFTA	232	3.1
Reduce our costs	251	2.9
Reduce the number of models, different products in stock or being produced (variety reduction)	214	2.6
Average	252	3.6

Source: Web based survey among stakeholders, December 2008

Some of these benefits only apply a particular type of stakeholder such as 'access to markets' to respondents from the business community. Therefore these results are shown for each type of stakeholder separately in a series of bar charts.

Figure 7.4 Average importance of (potential) benefits of using standards for Consumer or-
ganisation
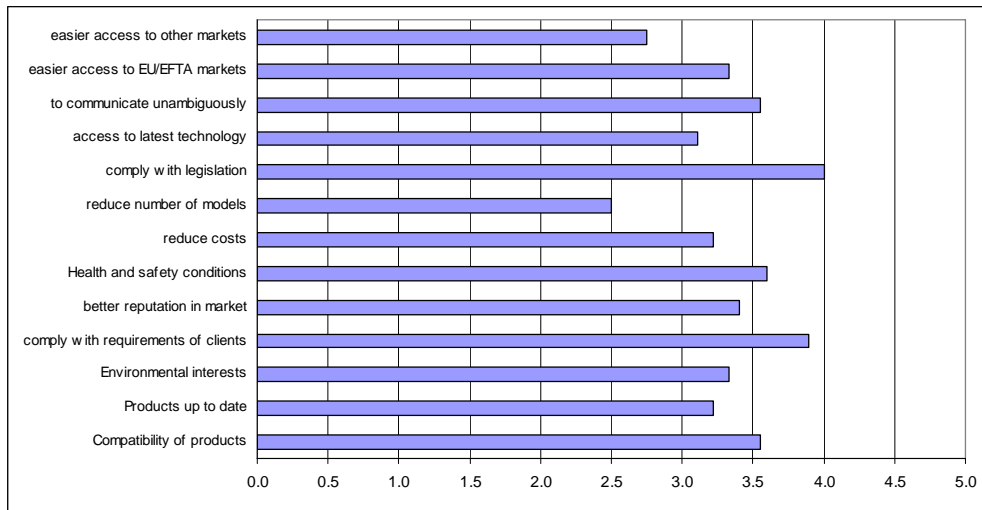
Source: Web based survey among stakeholders, December 2008

Figure 7.5 Average importance of (potential) benefits of using standards for Trade union
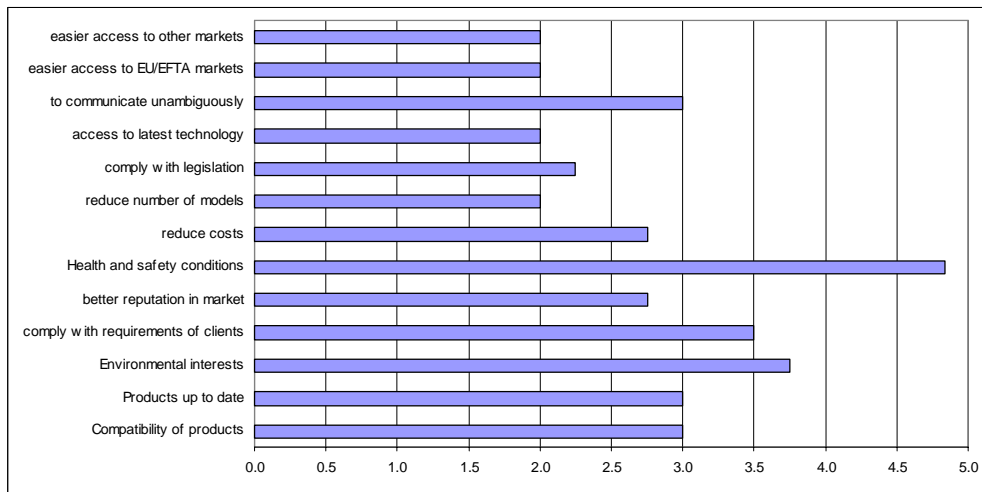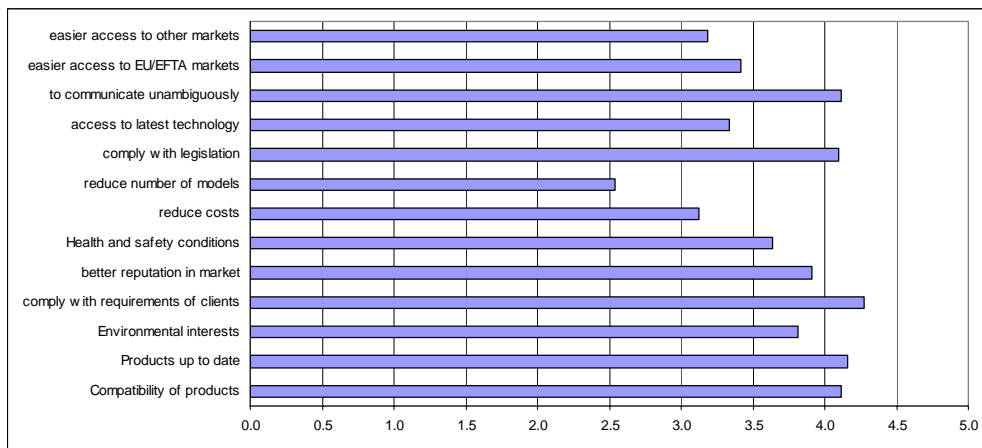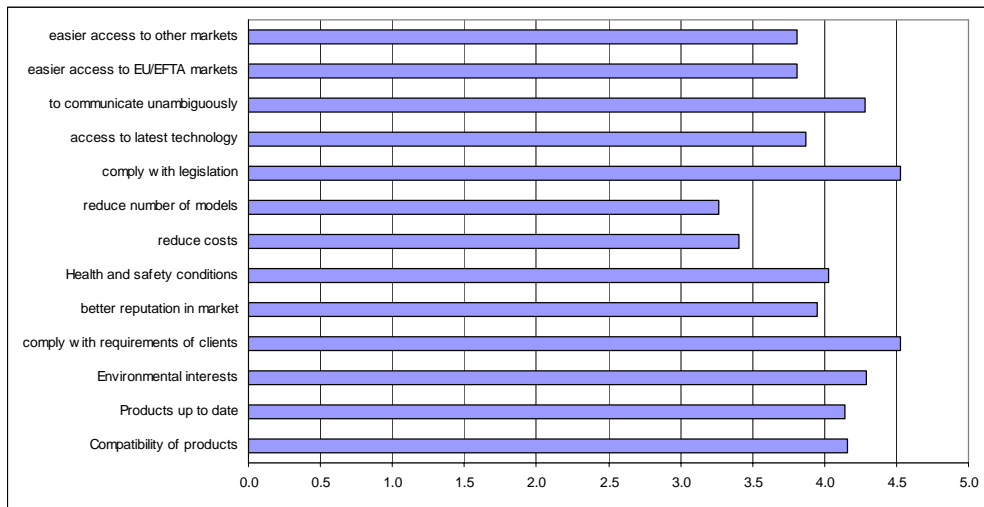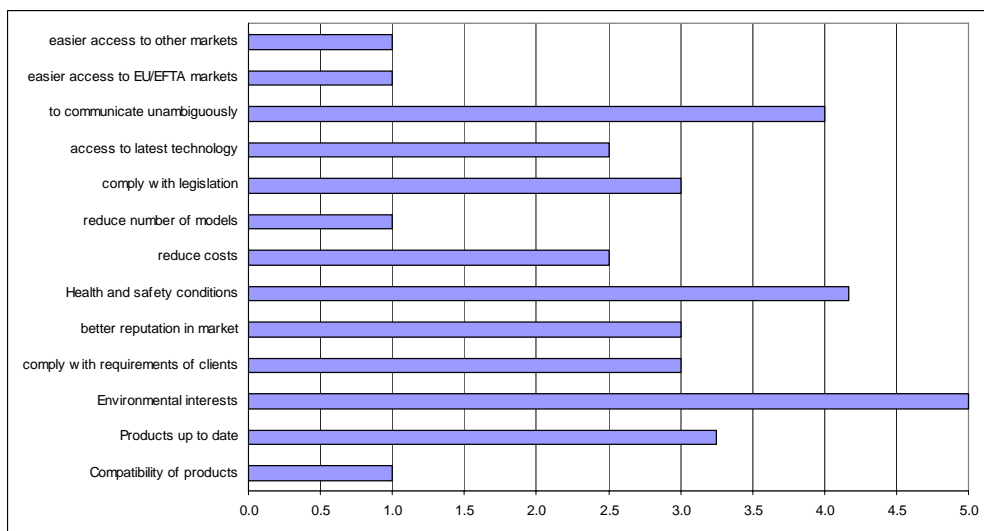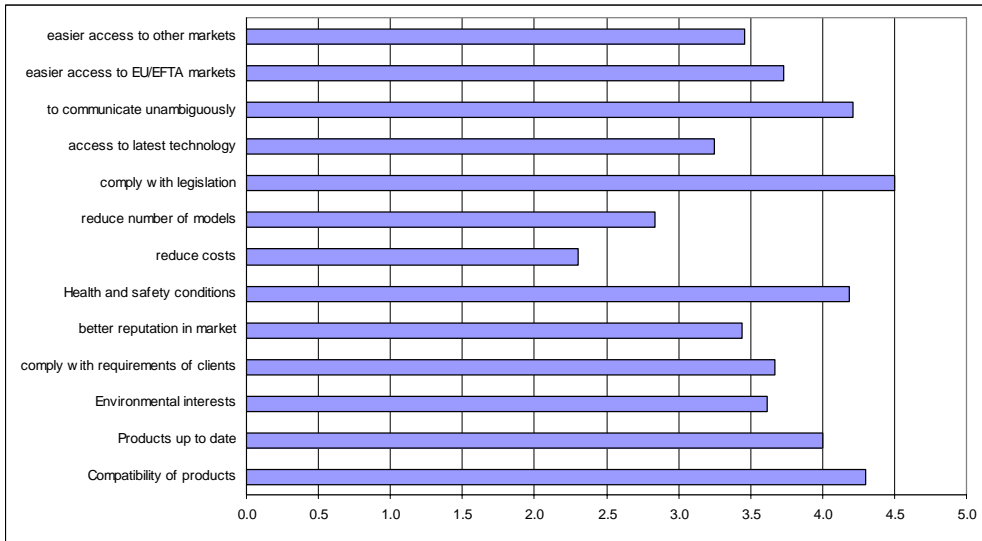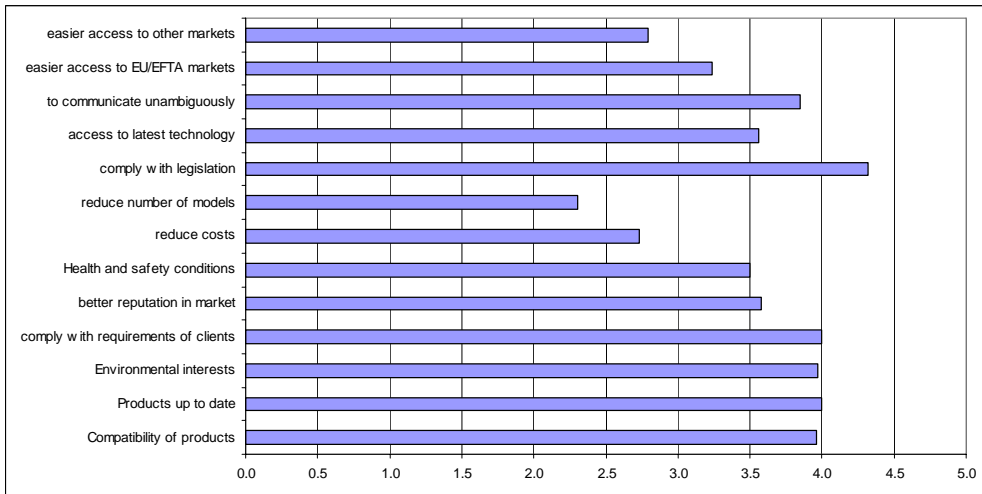

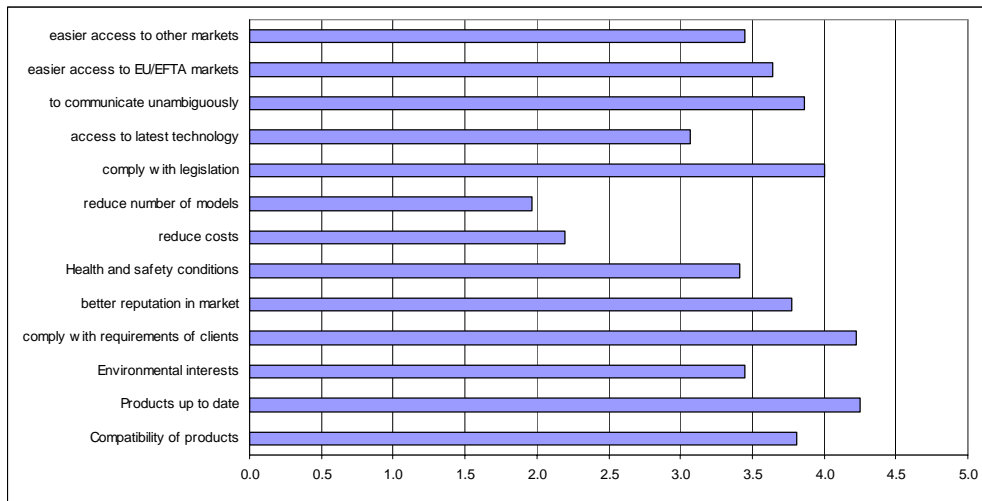*Source: Web based survey among stakeholders, December 2008*

Figure 7.6 Average importance of (potential) benefits of using standards for Employers' fed-
eration; trade association
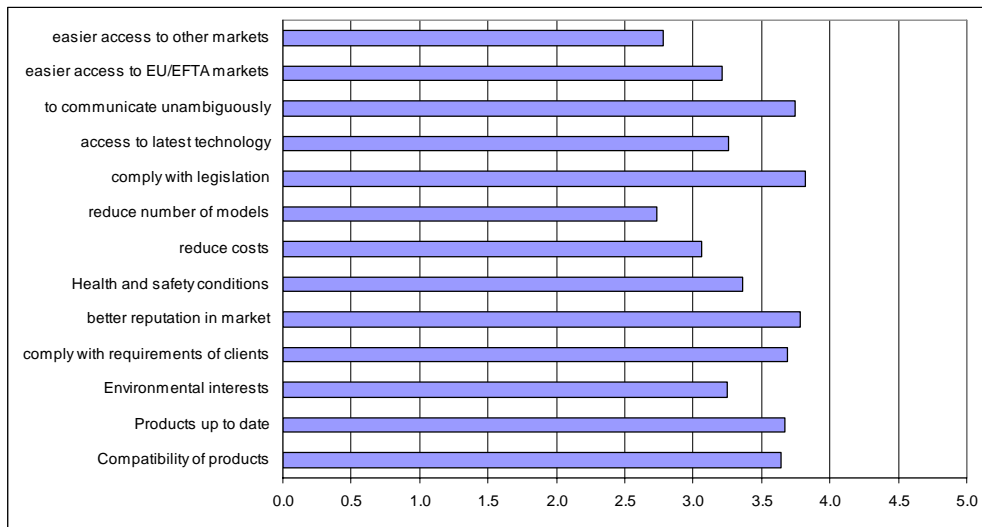
Figure 7.7 Average importance of (potential) benefits of using standards for SME

Figure 7.8 Average importance of (potential) benefits of using standards for large enter-
prise

Source: Web based survey among stakeholders, December 2008

Figure 7.9 Average importance of (potential) benefits of using standards for Environmental
organisation

Source: Web based survey among stakeholders, December 2008

Figure 7.10 Average importance of (potential) benefits of using standards for Public authorities, government departments and government agencies,

Source: Web based survey among stakeholders, December 2008

Figure 7.11 Average importance of (potential) benefits of using standards for   Universities and research institutes

Source: Web based survey among stakeholders, December 2008

Figure 7.12 Average importance of (potential) benefits of using standards, for Consult-
ants, laboratories, certifiers

Source: Web based survey among stakeholders, December 2008

Figure 7.13 Average importance of (potential) benefits of using standards for category
other
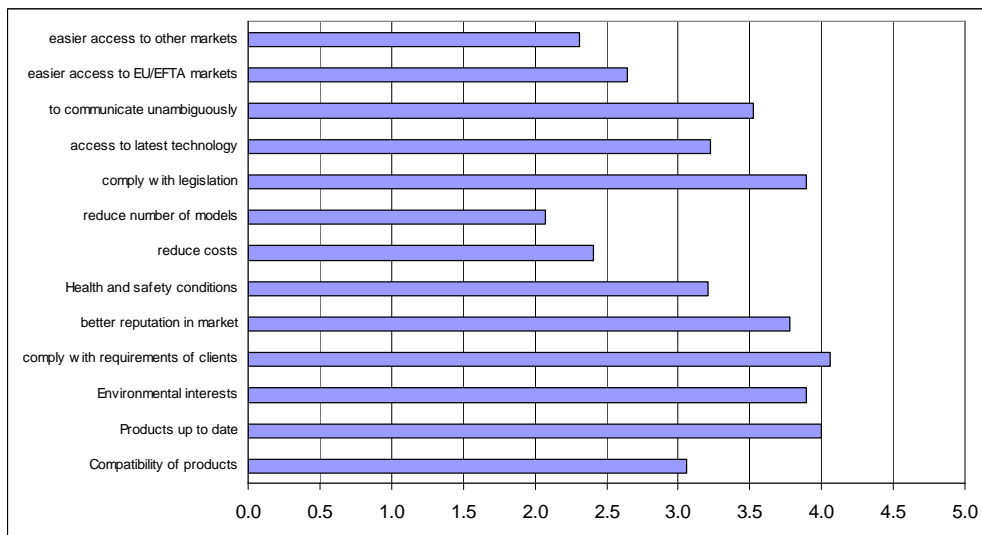
Source: Web based survey among stakeholders, December 2008

For several issues it has been established to which extend they are a barrier for using standards. For example the 'lack of information on which standards are relevant for the organisation or enterprise' is not al all relevant as a barrier for one third of the respondents, whereas - on a scale from 1 to 5 – 11% sate this to be an important barrier (4) and 17% even a very important barrier. For the 276 respondents that provide an assessment (here 28 opt for do not know / no answer), the average score on the scale from 1 to 5 is 2.6. Table 7.35 shows that this is an average score for the 9 items investigated. The score of 2.6 results from 53% scoring a 1 (not at all) or 2 versus 28 scoring a 4 or 5 (very important) as shown in Table 7.34.

Table 7.34 Lack of information on which standards are relevant for the organisation or enterprise

	Frequency	Percentage
1 Not at all.	90	33
2 ….	54	20
3 ….	55	20
4 ….	29	11
5 very important	48	17
Total	276	100

Source: Web based survey among stakeholders, December 2008

The top 3 barriers for access to standards are:
- price of standards
- cost of implementing the standards
- the number of cross references in the standards

The price of standards is considered to be an important barrier by 18% of the respondents (score 4) and even 34% are of the opinion that this is a very important barrier (score 5), together 52% of all respondents.

Table 7.35 The importance of various barriers for acquiring standards (average score on a scale 1 not at all to 5 very important)

Barriers	N	Score
Price of standards	272	3.4
Cost of implementation the standards in our organisation is too high	247	2.9
Number of references in text (to other standards etc.) is too high	262	2.7
Lack of information on which standards are relevant for the organisation	276	2.6
Lack of guidance on how to implement standards	261	2.6
Text of standards just too long	272	2.4
Text of standard is too complicated, language too technical	274	2.3
Text of standards is in foreign language	272	2.3
We do not know where to obtain standards	276	1.6
Average	268	2.5

Source: Web based survey among stakeholders, December 2008

The situation with regard to availability of standards in the national language - for those standards that are relevant for the own organisation – is considered rather positively by respondents. 23% state that less than 50% of those standards are available in the own language, but 59% report that 75% or more of those standards are available in the national language.

Table 7.36 Availability of standards in the national language

Percentage of standards	Frequency	Percentage
none	5	2
1 - 25%	25	12
26 - 50%	18	9
51- 75%	39	18
76 - 99%	74	35
all (100%)	50	24
	211	100

Source: Web based survey among stakeholders, December 2008

For the open survey, the percentage of respondents that report a high percentage of standards to be available in the national language is somewhat lower.

Finally, these stakeholders have been asked whether the fact that some standards are only available in a foreign language poses a problem for their enterprise or organisation. The answers on a scale from 1 (not at all) to 5 (very much) given are shown in Table 7.37.

Table 7.37   That some standards are only available in a foreign language poses a problem for the enterprise or organisation.

	Percentage
1 Not at all.	32
2 ….	29
3 ….	18
4 ….	12
5 very much	10
Total	100

Source: Web based survey among stakeholders, December 2008

Annex 1   Standardisation in Estonia

Introduction

Chapter 2 provided an overview of European standardisation to serve as a framework. However to illustrate that the European system is not a homogeneous structure in which only well known large organisations such as DIN and BSI operate, two cases have been selected to be described in an Annex:

– This Annex 1: The overall situation with regard to standardisation in Estonia;
– Annex 2 - The recent changes in the organisational structure in the Czech Republic towards a more directly state controlled standardisation system.

General background of standardisation in Estonia

In order to fully understand access to standardisation and standards in Estonia two important issues have to be considered. First, the historical background makes the situation in Estonia special compared to EU Member States without a Soviet history. As standards were mandatory documents in the Soviet Union used to regulate production and other processes there is still a considerable amount of people in Estonia not familiar with international standardisation principles. Standards are therefore sometimes considered to be the "matter of the state" and the business model of the National Standards Organisation remains unclear. A historical background of standardisation is briefly given in this section. Second important factor is the smallness of the country. There are about 40,000 active companies in Estonia, the majority of them belonging to the service sector. Even industrial companies are mostly subcontractors and therefore (wrongly?) not directly interested in participation in the standardisation processes. Access to standardisation and technical committees is more a problem to the National Standards Body (EVS) than to interested parties. Interested parties do not find it difficult to participate; rather it ids difficult for EVS to inform and attract stakeholders to participate to have balanced TCs.
[cf. Recommendation 3, 6, 8, 10]

Another peculiarity originating from the smallness of the country is the relatively active role of the state in the standardisation process. Despite of having only the third of ownership of EVS the state is by far the biggest financer of standardisation in Estonia covering about 70% of the activity costs and membership fees of international organisations. An overview of the institutional framework of standardisation and of state financing is also provided for in this section.

The paragraphs on access to the standardisation process and access to the standards documents are based on interviews with stakeholders in Estonia. Interviews were conducted with representatives of the following organisations[1]:

– Estonian Centre for Standardisation (EVS) – National Standards Body;
– Estonian Chamber of Commerce and Industry(EKTK) – the biggest and most representative union of enterprises;
– Ministry of Economic Affairs and Communications (MKM) – the ministry responsible for coordination of standardisation activities in Estonia;
– Estonian Technical Surveillance Authority (TJA) – coordinator of ETSI standardisation, member of ETSI;
– Metrosert Ldt - National Metrology Institute;

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[1] More than 40 stakeholders´ organisations were listed in order to select the candidates for interviews.

- Estonian Environmental Research Centre;
- Estonian Association of Construction Material Producers (EETL);
- Estonian Association of Architectural and Consulting Engineering Companies (EPBL).

Historical background

Estonia has quite a long history of mandatory standards due to the Soviet occupation that lasted until 1991. GOST standards were issued by the Committee of Standards, Measurements and Measuring Instruments which was under direct coordination of the Council of Ministers of the Soviet Union. GOST standards were mandatory documents and their legal power was similar to legal acts. Market surveillance was carried out by a governmental organisation which was at the same time involved in verification of measuring instruments and certification of testing laboratories. After re-establishing the Republic of Estonia in 1991 the Estonian Standardisation Board was introduced which is now responsible for standardisation, legal metrology and accreditation.

During the period of Estonian integration into the European Union that lasted until 2004 international and European principles of standardisation were introduced. According to the Technical Regulations and Standards Act which came into force on April 1, 1999, the right to act as the Estonian National Standards Body was prescribed to a non-profit non-governmental organisation – the Estonian Centre for Standardisation[1]. This organisation had to take over the functions of the Estonian Standards Board, which was a governmental institution, by 1st April 2000. The other functions of the Estonian Standards Board - legal metrology and accreditation - were assigned to the Estonian Technical Surveillance Authority (legal metrology) and to an independent accreditation organisation, the Estonian Accreditation Centre. The Estonian Centre for Standardisation became a full member of CEN and CENELEC on January 1, 2004.

Legal framework

The Technical Regulations and Standards Act provides among other the relationship between technical regulations, standards and technical specifications and the bases for the organisation of standardisation in Estonia.

The Act defines a technical specification, a technical regulation and a standard by using the definitions provided for in the Directive 98/34/EC of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical standards and regulations. The Act lays down also the conditions of making references to a standard in a legal act. According to the Act a technical regulation may refer to a standard. A reference to a standard shall be provided for as compulsory or recommended. Upon provision of a standard as compulsory in a technical regulation, the standard shall be an Estonian standard fully published in Estonian language.

In principle, standards are therefore voluntary documents. Although it is possible to make a standard or a part thereof compulsory by making a compulsory reference to it in a legal act, this practice is strongly not recommended by the Estonian Centre for Standardisation as it is not in line with the principles of standardisation – standards should not be compulsory to follow. In addition, the state has made all legal acts available for free on the Internet[2].

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[1] Web-page of the Estonian Standardisation Centre: www.evs.ee

[2] Electronic State Gazette www.riigiteataja.ee

As a referred standard becomes a part of legislation it might create confusion among the subjects of the law as the referred standards are not available for free despite the fact that they are mandatory to follow.

Institutional framework

According to the Technical Regulations and Standards Act the Estonian National Standards body is a non-profit association. The interests of the state in the Estonian National Standards body shall be represented by a government agency as a member. The right to act as the Estonian National Standards Body is granted by the Government to one standardisation body – the Estonian Centre for Standardisation. The right to act as the Estonian National Stands Body has been prescribed in a contract under public law between the Government of the Republic and the Estonian Centre for Standardisation in which the rights and obligations of the parties have been determined. The term of the contract may be up to ten years.

Founders of the Estonian Standardisation Centre (EVS) are the state (representative: Ministry of Economic Affairs and Communications), the Estonian Chamber of Commerce and Industry and the Estonian Employers´ Confederation. Presently, the founders are the only three members of the EVS. The highest body of the EVS is the general meeting of its members. The management board of the EVS consists of the representatives of its members. Every member has one representative. The Director General, who is responsible for everyday management of the EVS, is appointed by the management board.

EVS has also an advisory council which consists of representatives of the stakeholders who are interested and willing to participate in development of the EVS. The council, however, has no legal or administrative power.

Standardisation work is done by EVS technical committees and project committees. EVS has currently 33 technical committees and 2 project committees[1].

Standardisation procedures have been laid down in EVS guidelines:
- the procedure of drafting an Estonian standard;
- adoption of international and European standards in Estonian standards;
- establishment and working procedures of a standardisation technical committee and project committee;
- structure, formulation and presentation of standards.

The Estonian Centre for Standardisation is a full member of CEN and CENELEC, correspondent member of ISO and associated member of the IEC. The average number of employees in 2007 was 18.

State financing

The Estonian Standardisation Centre is funded from the state budget, membership fees, international co-operation projects and income obtained through providing services related to standardisation (including sale of standards).

According to the agreement between the Government and EVS the state is entitled to cover expenses of EVS related to:
- membership fees of international organisations;
- information services commissioned by the state, including the costs related to WTO enquiry point and standards library as well as the costs related to publishing the official journal of the EVS and other information intended for public use;

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[1] The detailed list of the committees is available at http://www.evs.ee/index.php3?lk=30

- elaboration and publishing costs of standards included in national standardisation scheme or otherwise ordered by governmental organisations;
- proceeding of harmonised standards.

According to the Technical Regulations and Standards Act, the Minister of Economic Affairs and Communications has formed a standardisation committee which has among others the task of compiling every year the national standardisation scheme. The national standardisation scheme is a document which comprises a list of standards the preparation or transposition of which into Estonian standards is deemed essential by government agencies. Each appropriate ministry is represented as a member in the committee. The representatives of the ministries submit to the committee written proposals regarding the inclusion of Estonian standards into the standardisation scheme. The committee submits its proposals to the Minister of Economic Affairs and Communications. The standardisation scheme shall be approved by the Minister by December, 1 every year.

State financing constitutes approximately 70% of the total turnover of the EVS (5.9 million EEK in 2007). The rest comes from sales of standards (ca 29%) and from additional services including training (1%).

Access to the standardisation process

Information about standardisation

The Estonian Centre for Standardisation makes information available on request on their website (www.evs.ee) and by monthly newsletters. EVS publishes every month a standardisation programme where interested parties can find information about all standardisation projects and their status. The website has the following structure:

- information about standardisation organisations (EVS, European and international);
- products and services (trainings, WTO enquiry point, standards catalogue, official journal, publications, campaigns etc);
- information about standardisation (objectives, principles, structure, processes, technical committees, national standardisation scheme, terminology etc);
- e-shop with a search engine.

The newsletter is published monthly and available for free on the website[1]. The content of the newsletter includes information about harmonised standards, WTO notifications, new Estonian standards, translations of standards for public consultations, European and national standards for comments, etc.

As regards active information policy, EVS offers to any interested person an opportunity to join an e-mail list called "information service". In the framework of this information service the clients receive every month an e-mail with the information published in EVS official newsletter. EVS has currently about 3 600 information service clients.

Members of the technical committees get additional information relevant for their field of activity from the EVS standardisation coordinator. This information covers recent developments in the field. Members of the technical committees are also informed about draft standards relevant to their field, documents for voting, etc.

For EVS it is a problem to find enough interested parties to whom they could give information. EVS seems to be very open to all interested parties and it tries to

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[1] http://www.evs.ee/index.php3?lk=159

use every opportunity to raise awareness about standardisation within the limits of the budget available for these activities.

The stakeholders considered can be allocated in three groups. The first group consists of partners who participate very actively in the standardisation process or in general in the coordination of standardisation. They are therefore well-informed about standardisation and activities of the EVS. Those partners are the Ministry of Economic Affairs and Communications (MKM), the Estonian Technical Surveillance Authority (TJA), the Association of Construction Material Producers (EETL) and the Estonian Chamber of Commerce and Industry (EKTK). MKM as being responsible for the coordination of standardisation in Estonia receives its information mainly from direct contacts with the EVS. The representative of the Ministry is also a member of the board of EVS. The ministry is also well-informed about the opportunities to request and search standardisation information and they are also involved in raising awareness about standardisation by participating as lecturers in training organised by EVS. The same can be said about EKTK whose representative is head of the board of EVS. TJA and EETL are involved in the work on the technical committees and are therefore regularly informed about new and draft standards. EETL has emphasised that there is sometimes more information provided by EVS that a technical committee can handle.

The second group is formed by the Estonian Environmental Research Centre and Metrosert whose specialists are involved in the work of technical committees, but in general are more end-users of standards. Both organisations are aware of the role and activities of EVS, however they find it not necessary to participate in the standardisation process directly. They use the web-page in case they need information or standards and are in general satisfied with the information provided.

The Estonian Association of Architectural and Consulting Engineering Companies (EPBL) forms a unique category due to their understanding of the standardisation process. EPBL is of the opinion that as standardisation is heavily supported by the state budget in Estonia, standards should be available for free on the Internet. According to the information available to MKM and EVS there are no other organised stakeholders who share the opinion of EPBL.

Expenses to be paid by stakeholders to participate in standardisation

There are three member organisations of the EVS (founders): the state, the Estonian Chamber of Commerce and Industry and the Estonian Employers´ Confederation. The Ministry and the Chamber are more involved in every-day activities of the EVS. The Employers´ Confederation is an umbrella organisation of trade associations and these are the unions who are more active in standardisation.

The membership fee has been 767 Euros per year equal to all members since the establishment of the EVS and there are no plans to change it. There are also no plans to enlarge the number of EVS members and there have not been any requests to become a member.

Although it is possible to become a member of the EVS and the membership fee is not high, there are no direct benefits of the membership. It can be a reason why the number of the members still equals the number of the founders. Another reason can be awareness - EVS is still quite often considered to be a governmental organisation due to the historical reasons explained before and financing provided by the state. Government is also the biggest commissioner of standardisation work.

Most of the stakeholders who were not directly involved in management were not aware of the legal status of the EVS or about the opportunity to become a member.

As regards participation in technical committees, EVS does not charge anything for this. On the opposite, it is very much encouraged and EVS faces sometimes difficulties to attract stakeholders to participate. TCs can introduce participation fees internally and some TCs have done it. This decision is made independently from EVS and fees are therefore agreed between members of a TC. According to the information received from EETL their TC7 (concrete works) and TC9 (infilling materials) were more active in starting their work and the members have paid both an establishment fee and a participation fee. The amounts have been € 200 – 1,000. EETL covers also some activity cost from its budget.

Participation in European mirror committees is organised differently. There is no general support scheme provided by EVS. EVS has occasionally supported participation in some very important fields by covering direct expenses (accommodation and travel), but this has been more an exception than a rule. The smallness of the country, limited human and financial resources of the TCs and separate enterprises have resulted in the fact that Estonia hardly participates in European standardisation. Another problem is that EETL does not receive information from CEN TCs via e-mail. It takes several months to get an answer to a question. Physical participation in the work would probably ease the problem, but CEN TCs should use Internet much more. [cf. Recommendation 12]

There are also examples where the costs to participate in European TCs is covered by the state. E.g. the Ministry of Environment covers the costs of the participants from EKK (Estonian Radiation Protection Centre) and in case of TJA the costs of the experts or employers of the TJA are covered from the budget of TJA. TJA is member of ETSI. The practice of TJA and the Ministry of Environment is however not widespread. The other relevant ministries (MKM as well as Ministry of Social Affairs) do not cover the costs of participation.

Other conditions to participate in standardisation

In order to participate in the elaboration of a standard a person has preferably to be a member of a technical committee or a project committee or have a cooperation agreement with EVS. The procedures related to these committees are identical to everyone[1]. In principle, any legal person established in Estonia can become a member of TCs. The only condition is the acceptance by the other members of the TC. A TC can introduce a membership fee if the members of the TC decide so. Participation in TCs is very much encouraged by EVS. However, trade associations and other stakeholders are invited to comment draft standards even if they are not members of the TC concerned. Draft standards can be studied for free in the premises of EVS. It is also possible to buy draft standards.

In order to participate in the work of a European technical committee, authorisation has to be received from the EVS. EVS in turn asks the opinion of the national mirror committee. In case there is no national mirror committee EVS uses its own experts for evaluation. EVS charges no fees from the experts.

The stakeholders did not bring out any obstacles to participate in the standardisation process in Estonia; the process was estimated to be adequate and relevant. The only problem that was mentioned several times was the lack of human and financial resources. That applies both to participation in Estonia and in the European standardisation process.

[1] See: EVS Guideline number 6.

Benefits for stakeholders to participate in standardisation

An employee of EVS did research in the framework of her master studies about satisfaction and interests of the participants in the standardisation process in 2006. Although the research did not differentiate stakeholders groups or cover direct estimations of the benefits it can be concluded that the most important benefit was the information advantage and better access to standardisation information.

Information advantage was also the most important benefit mentioned by the stakeholders. EETL has made an appropriate conclusion by saying that considering the smallness of the country Estonian stakeholders' opportunity to influence European standardisation is close to nothing (Estonia is a small economy and weighting of votes is applied in European procedures). This is in correlation with the input of Estonian entrepreneurs to European standardisation.

Other benefits mentioned are the usefulness of the standards that are produced during the participation process (EPBL) and the opportunity to translate some European standards into Estonian and to use them for regulatory purposes (TJA). As the vast majority of Estonian standards are international or European standards (ca 97%), the most important benefit brought about by EPBL is devaluated in Estonia. Most of the enterprises (including producers) are end-users of standards. Even the largest manufacturing enterprises are more involved in subcontracting and the standards used in the production process are prescribed by the main contractor. The construction sector and especially construction materials is the biggest exception in this model and also the most capable sector as regards participation in European standardisation. Enterprises involved in other sectors can be considered as end-users of standards.

MKM as the overall coordinator sees its benefit also in information advantage, but from a different point of view. Participating in the process gives them an opportunity to look at the processes as an insider. The information is used to improve the overall coordination and functioning of standardisation in Estonia.

Possibilities offered to interested parties to participate in strategic choices

Two most important organisations of enterprises are represented in the administrative board of the EVS. The third party is the state. In principle it would be possible to broaden the administrative board by adding more representatives of the stakeholders to the board[1]. However, as already described before there has been no request from the stakeholders to participate in the administrative board. Moreover, both EETL and EPBL who are members of the Estonian Employers´ Confederation expressed its satisfaction with the representation through the Confederation.

EVS does not have a technical board. EVS has an advisory council which consists of representatives of the stakeholders. The council does not have any legal or administrative power.

General assemblies are usually organised in writing as it consists of only 3 members and one of them being the Minister of Economic Affairs and Communications. It can be said that the general assembly is hardly involved in strategic choices of EVS. All the members of the general assembly have delegated this function to their representatives in the administrative board.

[1] See Statute of EVS.

Strategic choices about the standardisation agenda are made in cooperation with the interested stakeholders. As described before, standardisation in Estonia is quite heavily supported by the state. Therefore the debate about the standardisation agenda in the next period is mainly related to the debate about the national standardisation scheme funded by the state. All the interested parties are welcomed to make proposals to the scheme either to EVS or to the relevant ministry. The standardisation committee, formed by the Minister of Economic Affairs and Communications and consisting of the representatives of the relevant ministries (Ministry of Culture, Ministry of Agriculture, Ministry of Internal Affairs and Ministry of Social Affairs) is responsible for the final composition of the national standardisation scheme.

In addition to national standardisation schemes there are also some projects financed from the resources of EVS. Those projects are decided by the board of EVS. Again, all interested parties are welcomed to make suggestions.

All the stakeholders interviewed are aware of their possibilities to make suggestions in the national standardisation scheme and everybody (except from EPBL) is also satisfied with the possibilities offered to participate in strategic choices made by EVS. EVS is considered to be a competent organisation open to discussions. It has been emphasised by many stakeholders that participation in standardisation in Estonia is a matter of interest. Those parties who are interested have all the opportunities and procedures available.

Processes, procedures and support tools to promote access to standardisation

As has been described in the previous sections, in the case of Estonia the issue is not so much related to guaranteeing fair access to standardisation process, but rather to attract the relevant stakeholders to participate in standardisation at all. Therefore participation has been promoted by EVS and made free to everybody. Any legal person established in Estonia can become a member of a technical committee, read draft standards and comment on them for free. EVS participation guidelines can also be downloaded for free from the Internet.

There are no different strategies for different types of stakeholders, everybody is treated equally. It is easier for larger SMEs and for government-funded research organisations or laboratories to participate in standardisation due to the availability of more resources and competent personnel. The state supports standardisation through the Ministry of Economic Affairs and Communications by covering ca 70% of the activity costs of EVS as well as the fees to participate in the work of international and European organisations. This funding makes it possible to talk about standardisation in such a small country like Estonia at all. The relevant rules and procedures are described by the Technical Regulations and Standards Act and the agreements between EVS and MKM. Other ministries or agencies such as the Ministry of Environment, TJA or Estonian Rescue Board[1] support elaboration or translation of some standards occasionally. There are no other stakeholders who would be willing to financially contribute to standardisation (except from some enterprises participating in technical committees).

It would be worth to consider the fact that EVS devotes only ca 2.5% of its budget to awareness raising campaigns and trainings. Taking into account the

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[1] The Rescue Board is a government agency operating within the Ministry of Internal Affairs, which has a directing function in planning emergency preparedness, operational management of rescue services and in exercising state supervision.

structure of the Estonian economy where the majority of the companies are committed to subcontracting allocation of more funds to awareness raising would probably not increase participation in standardisation; however, it could have some effect on the sales of standards.

Rules and procedures of the development of a standard

The EVS Guideline on operation of technical committees[1] establishes operational procedures of technical committees. It is suggested that all technical committees should consist of the relevant stakeholders – producers, consumers, education and research organisations, public authorities etc. According to EVS Guideline 2 – Procedures for developing Estonian standards - a standard will only be adopted as Estonian standard in case the relevant technical committee or working group that has elaborated the standard has built consensus on the standard. The methods of how to build consensus have not been specified in the guideline and the technical committee can therefore also use voting.

EVS does not have a special procedure for composing national delegations to European technical committees. In order to participate in the work of a European technical committee, authorisation has to be received from the EVS. EVS in turn asks the opinion of the national mirror committee. In case there is no national mirror committee EVS uses its own experts for evaluation. The ability of the representative to cooperate with different stakeholders is considered during the evaluation process as well as whether the person represents a sufficiently wide range of stakeholders. EVS does not usually authorise a single enterprise without the support of the relevant technical committee or interest group.

Public consultations are organised for the adoption of every Estonian standard. In case of elaboration an original national standard an information note is published in order to give an opportunity to all the interested parties to join the process. When the draft standard is ready EVS informs stakeholders about the draft standard and invites everybody to comment on it. The public opinion poll would last for 2 months. In case a European standard is planned to be adopted as Estonian standard the public poll lasts also 2 months. In case an Estonian standard is translated into Estonian the draft translation is also put on the public opinion poll that lasts 1 month. Information about new public consultations is published every month in the EVS newsletter as well as on the website. All drafts are available in electronic format and the comments are accepted via e-mail. There are no different procedures for harmonised standards.

In general the stakeholders were satisfied with the process of standards development[2]. Most of them do not follow standardisation information on a daily basis (except from TJA and EETL). The general trust in EVS is good and the stakeholders believe that in case there is some important issue on which they have to comment, EVS will inform them separately.

Differences in the standardisation process

Awareness of different models that exist in standardisation is very low. Stakeholders are in general aware of the existence of different standardisation organi-

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[1] See: EVS Guideline 6

[2] Unfortunately EPBL did not agree to comment on standardisation procedure as according to their opinion the whole process of standardisation should be nationalised or privatised. They are not satisfied with the situation where government participates in private organisation which is also committed to "standards business" (sale of standards). According to their estimation standardisation should be either a 100% public or 100% private activity with the requirement that standards are made available for free.

sations at international and European level, but not about their internal proce-
dures. No stakeholder could list any other standardisation model. As regards
consortia standardisation, the question is not relevant in Estonia as there are no
companies that are large enough to be committed to consortia standardisation.
EVS has no difficulties with different procedures for areas of CEN, CENELEC and
ETSI. They are not able to comment on standardisation in private consortia be-
cause of a lack of information.

MKM is of the opinion that different organisations at international and European
level make the system extremely expensive for a small country. Estonia would
therefore prefer to have one single standardisation organisation at least in
Europe to minimise membership fees and the costs related to administration and
human resources. [cf. Recommendation 7]

According to the position of EETL, Estonia should not be committed to interna-
tional standardisation and should concentrate only on European standardisation
because of the limited resources.

*Examples of less satisfactory functioning of the standardisation sys-
tem*

It seems that the standardisation system works properly in Estonia. EVS has no
information that consensus could not be reached due to or in relation with condi-
tions of access to the standardisation process. There have been very few exam-
ples of misusing the standardisation process, but EVS does not want to describe
the details.

The rest of the stakeholders interviewed could not think of any negative experi-
ence or examples.

Actions to improve access to standardisation

EVS has the following ideas and plans to improve standardisation:

– EVS could cover the participation costs of experts who would like to partici-
  pate in European standardisation. This has already been done in very few
  cases and the stakeholders are very interested in this service. The only prob-
  lem is that it would demand resources either from the state budget or from
  EVS which in turn would result in price increase of standards, introduction of a
  fee to technical committees etc.

– EVS could spread more information about the benefits and opportunities stem-
  ming from participation in standardisation. The main target group would be
  entrepreneurs' associations. EVS acknowledges the importance of including
  consumer associations to the process of standardisation. However, so far the
  efforts have not been fruitful – the consumers do not have enough resources
  or interest.

According to the view of EVS the stakeholders should organise themselves more
in order to participate in standardisation. It is very difficult for individual compa-
nies to find the necessary resources for participation. There are still stakeholders
who are not aware of the international principles of standardisation and seem to
live in Soviet times. Standardisation for them is a government-organised proce-
dure and EVS is seen as an organisation with the only obligation to sell stan-
dards. It is necessary to raise awareness of the stakeholders and introduce the
whole process of standardisation.

The majority of the stakeholders are satisfied with the access to standardisation and have no suggestions to improve it. The only suggestions received concerned the use of the Internet. EVS is currently in the process of improving its information systems and web-based access to standards is one outcome of this development.

MKM would centralise the overall coordination of standardisation even more. This concerns mainly the state budget. Every ministry is currently responsible for financing standardisation projects from its own budget. That has created a situation where some ministries are much more involved in standardisation than others. The proposal of the MKM is to concentrate these funds under the responsibility of MKM in order to guarantee more equal access to all stakeholders and better coordination of standardisation work.

From time to time there are complaints that standards are too expensive and if they were cheaper they would be used more. EETL doubts that and is of the opinion that the role of the price of standards is overestimated. For them the will to use standards is much more relevant. [cf. Recommendation 13]

EETL is much more concerned about the matters of construction materials and standardisation in this field. There is hardly any common system as regards to the Construction Products Directive and the standards related to this. Every member state has created its own system and the same should be done in Estonia. Coordination needs to be established in terminology, the level of details etc. EPBL however is of the opinion that price is the most important factor why standards are not enough used. According to their estimation there would be considerable increase in the use of standards if they were available for free on the Internet.

Access to standards and other standard documents

Conditions to obtain standards and other standard documents

There are equal conditions for members and non-members of EVS to obtain standards. The only preferred group are the members of technical committees who have free access to working documents. Also the members who participate in drafting a standard get a free copy of the standard. There are no differences as regards to different groups of stakeholders.

EVS uses some price reduction for students, university libraries and schools. It is also possible to get a discount while buying larger quantities. There are no specific arrangements to offer a tailor-made selection of documents for specific target groups.

EVS cannot provide statistics as regards to different stakeholders or target groups. The 5 most sold standards are original Estonian standards mainly in the field of construction. EETL who is the major stakeholder in the construction industry considers it very important that EVS has compiled several sets of series of testing standards related to construction products. Those have proven to be very useful for EETL both content and price-wise. It is not important for EETL to have other tailor-made selection of documents.

Most of the stakeholders are aware of the price reductions and special conditions for the technical committees. Better access to standards and other standard documents is suggested to be realised by better usage of the Internet. European standards organisations were suggested to use much more the Internet and e-mail than they currently do.

Standards and other standard documents available in national language

The decision whether to translate a European standard into the national language is made on the basis of whether there is an interested party who would be willing to finance the translation. There are no obstacles from EVS side to organise translation work. Whether translations will be financed by the state is decided by the standardisation committee in the framework of compiling the national standardisation scheme. Translations financed by the resources of EVS have to be very well justified. It means that the number of final beneficiaries, the importance of the standard and the translation costs are analysed prior to the decision.

Considering the smallness of the country only 5% of the standards stock is in Estonian (the only official language in Estonia). 4.1% of European harmonised standards are available in the national language.

The stakeholders have different opinions about the language issue. Some of them would estimate that if standards were available in Estonian, it would increase the use of them (EETL, EKTK, EPBL, TJA). Other organisations are of the opinion that the language does not matter as the persons using standards are usually experts in their field and therefore capable to use standards in other languages. Moreover, translations are never perfect and create therefore situations where standards in different languages could lead to different interpretations. Translating standards also causes delays in implementing them (EKK, Metrosert, MKM).

It seems that whether a standard is available in the national language is dependent on the sector – it is obviously more important in the construction sector where original standards are more used and less important for laboratories that are used to work with documents in English. Standards to which a mandatory reference has been made in a legal act form an independent category as such standards have become part of legislation and have to be in Estonian.

Information on availability of standards and other standard documents

EVS has made available a catalogue of standards on their website and in order to easily find a standard a search engine can be used in the web-shop. In addition, EVS publishes its official newsletter every month with the following information: information about harmonised standards, WTO notifications, new Estonian standards, translations of standards for public consultations, European and national standards for comments, etc. Stakeholders wishing to receive standardisation news as an e-mail are welcomed to join EVS information service.

In general the stakeholders are happy with information availability. The only exception is EPBL that supports the idea of having all the standards available for free on the Internet. All stakeholders use Internet and are aware of the opportunities provided by web-shop. Those participating in the work of technical committees, get information also via these committees. Most stakeholders are also aware of the information service and some of them are using it. Others consider it as too much and claim that they don't need such detailed and updated information (e.g. MKM).

EKK has proposed to update the information service and provide an opportunity to select some lists of standards and to get automatic notice in case there is new information about those standards. It could be very useful for accredited laboratories that have to use the latest versions of standards.

Use of the Internet

EVS offers an opportunity to receive information about standards available on-line and to order standards on-line (distribution by e-mail or by post). Other opportunities to use the Internet have been described in the previous sections.

It is possible to have free access to draft standards in the premises of the EVS. Otherwise they should be bought. Comments on draft standards via e-mail are accepted by EVS. As regards to people with disabilities, their needs have unfortunately not been considered when developing the website.

All stakeholders interviewed are aware of the opportunities available on the webpage of EVS. Most of them are also aware that members of TCs receive draft standards for free. It is of utmost importance for stakeholders to have an opportunity to get information, comment on it and buy standards via the Internet. [cf. Recommendation 12]

Other distribution channels

EVS has some cooperation agreements to sell standards, but these have not been effective. Considering the smallness of the Estonian economy and the sales numbers it is far too expensive to open a separate shop and as the price of standards in Estonia is among the lowest in Europe selling in commercial shops is not profitable.

The most reasonable and expected development in the field of distribution is improving the website of the EVS in order to make the search more effective and enable also downloads. Another objective of EVS is to make the complete set of standards accessible via the Internet. That would create considerably cooperation opportunities with trade associations, libraries and regions.

Most of the stakeholders are satisfied with the current situation and do not see the need for other distribution channels (EETL, EKTK, TJA, Metrosert, MKM). However, these organisations are situated in Tallinn (the capital of Estonia) and therefore the location is the same as EVS. If municipalities or organisations situated in other parts of the country would have been interviewed, the answers would probably have been more critical. Currently the only way to have a free opportunity to read standards exists only in the premises of EVS and in the largest libraries as the information system of EVS does not allow on-line access to EVS´ database. However, as already said earlier, the web-based access is under development and starts operating in 2009.

User guides for standards

EVS has issued very few user guides due to the very limited market in Estonia and it is therefore not possible to estimate whether the guides are considered to be an appropriate response to the criticism concerning the complexity of the text of standards. The stakeholders are not very enthusiastic about the user guides. Some consider them to be helpful, others find them confusing. The major problem with user guides is however financing. In case there are not enough funds available to translate standards the state cannot afford to support elaboration of user guides. To finance them from the budget of EVS they would have to be financially profitable.

EVS has a client service offering information about standards and general standardisation issues. They do not provide assistance on how to implement a standard and they do not explain the content of standards. There are few consultancy organisations that are able to advice about the implementation of stan

dards (mostly quality management series). EETL provides regularly a small overview about standardisation to its members. The overview is concentrated on construction products and explains the requirements of the construction products directive. EPBL offers its members also consultations about standardisation and the use of standards.

Collection of standards

According to the information received from EVS nobody has ever wanted to get a complete collection of standards. There have been requests to have access to the collection of standards. In principle it would be possible to provide collections of standards, but not as a separate product. For this the rules and conditions are not in place. The full collection of ETSI standards is available both in EVS and TJA as TJA is a member of ETSI. TJA uses the full collection of ETSI standards. As regards to targeted collections, they have been introduced in few areas such as construction and electricity. EVS has plans to develop in the future such specific sets of standards. Trade associations such as EETL would appreciate if specific sets of standards would be available and they would use them. The same applies to TJA who would appreciate the set of IEC CISPR standards that could be used for market surveillance purposes. EKK as a laboratory could also use a set of standards in case a new field is introduced in their laboratory. An opportunity to have the full set of standards could ease the introduction.

Availability of other documents than approved standards

It is possible to buy technical specifications and workshop agreements from EVS. The bases of availability are the same as in case of approved standards. It means that the members of technical committees have usually free access to these documents and other interested stakeholders have an opportunity to get acquainted with the documents in the premises of EVS or to buy them.

Annex 2   Organisational changes in the Czech Republic

Introduction

Chapter 2 provided an overview of European standardisation to serve as a framework. However to illustrate that the European system is not a homogeneous structure in which only well known large organisations such as DIN and BSI operate, two cases have been selected to be described in an annex:
– Annex 1: The overall situation with regard to standardisation in Estonia;
– This Annex 2 - The recent changes in the organisational structure in the Czech Republic towards a more directly state controlled standardisation system.

Organisational change in the Czech Republic

The Czech Standards Institute (CNI) stopped being an independent organisation on December 31, 2008 and became part of the Czech Office for Standards, Metrology and Testing (COSMT, in Czech language: UNMZ[1]). COSMT is a budgetary organisation subordinated to the Ministry of Industry and Trade. COSMT's mission is to perform tasks set out in Czech legislation on technical standardisation, metrology and testing and tasks related to the harmonisation of Czech technical regulations and standards with the technical regulations of the European Union.

Until now, CNI acted as independent institution that cooperated with COSMT on issuing technical standards. CNI was responsible for the development of standards according to the needs of interested parties. It used contracted parties for standards development.
The aim of this transformation is to improve access to standards by the technical community and all other stakeholders. The idea is that standards should be more comprehensive and cheaper to obtain. Printed standards will cost about 50% of the current price and IT will be used more broadly and effectively. It will allow a user in one technical field to have easier access to quoted standards in other fields. State institutions as well as industry including SMEs will be more involved to improve tuning the state economic policy to entrepreneurial needs of industry and SMEs.

It will also be easier to harmonize standards development on national, European and international levels already in the initial phases. This system will prefer those developers of standards that can cover wider and more complex technical areas to improve consistency and comprehensiveness of standards. It will be easier to better coordinate technical terminology and forms how standards are presented. These important developers will be marked as 'Centres of Technical Standardization' (CTS).

National standards committees[2] (TCs) will keep their role as advisory bodies for the National Standards Body. Their task is a complex assessment of standards development in the field of their technical competence and suggesting to the National Standards Body adequate solutions. The activity of TCs is based on integrating interests of different stakeholders to achieve effective solutions in tech-

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[1] COSMT was established by the Czech National Council Act No. 20/1993 Coll. as the Organisation of the State Administration in the Field of Standards, Metrology and Testing.

[2] The official name in the Czech Republic is Technical Standards Committee (TSC).

nical standards. All interested parties can nominate members to TCs. In relation to the above mentioned new approach to standards development tasks, it will be necessary to assess individual TCs from the viewpoint of their abilities to adopt new methods, harmonize needs of all stakeholders and achieve set goals.

As concerns the development of standards, only 10% are original Czech standards in areas where European or international standards do not exist. About 90% are adopted European or international standards from which about 60% are translated into the Czech language.

To summarize changes in the standards development system and their goals, it can be said that it should combine advantages of centralized coordination with the creative potential of independent interested parties. It is expressed in the following points.
- In the new system IT should dominate in development as well as in the distribution of standards.
- This is the main tool for attaining lower prices and to make technical standards as well as standard development process better accessible especially for SMEs, research fellows and their teams, technical schools and universities.
- Standards development should better coordinate needs and contributions of all interested parties and make the system of standards more effective, coherent and comprehensible.
- It should create a new impulse for broader usage of technical standards. While standards are based on new results of science, research and practical skills, they can effectively force technical and economic development.

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On 14 June 1985, the European Commission submitted to the Council its White Paper on the completion of the internal market which sets out a timetable for the measures required for the completion of the single market by 31 December 1992 at the latest. The legislative technique of the New Approach was introduced with reference to Single Market legislation.

European Commission, Guide to the implementation of directives based on the New Approach and the Global Approach, Luxembourg: Office for Official Publications of the European Communities, 2000

European Commission, Directive 98/34/ec of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services, *Unofficial consolidated version prepared by the services of the Commission*

European Commission SEC (2001) 1296, Commission staff working paper, European Policy Principles on International Standardisation, Brussels 26.7.2001

European Commission, SEC (2004) 1251, Commission staff working document 'The challenges for European standardisation'

This paper has been developed in support of a Commission Communication "On the role of European Standardisation in the Framework of European policies and legislation" (COM(2004) 674 final, Brussels 18-10-2004). As a follow-up of the European Parliament's Resolution in 1999 and of both the Council Resolution of 28 October 1992 and the Council Conclusions of 1 March 2002 on European standardisation, the Commission has analysed the areas in which standards play a role to support European legislation and policies beyond the legislation establishing the Single Market for goods and services

http://europa.eu.int/comm/enterprise/standards_policy/index.htm

European Commission, EMC directive (89/336/EEC) of the European Union about Electromagnetic Compatibility Directive 89/336/EEC.

Manufacturers of electrical or electronic products wishing to sell into the European Union using the CE Marking route must comply with the EMC Directive. The EMC Directive is seen as the most complex and far reaching of all directives that have been introduced into the European Union. It applies to nearly all electrical and electronic products made, and compliance with the EMC Directive is mandatory. In order to comply with the EMC Directive, products must have an adequate level of immunity from external disturbances and not cause interference with other products/systems. Compliance with the EMC Directive became mandatory January 1, 1996.

European Commission, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, Action Plan: The European Agenda for Entrepreneurship, COM(2004) 70 final, 11 February 2004.

European Commission, Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee, Towards an increased contribution from standardisation to innovation in Europe, Com(2008) 133 final, Brussels, 11.3.2008.

The communication underlines that the European institutions have underlined the contribution standards could and should make to innovation (policy). This is judged to be important for further strengthening the European economy as well as directly in competition in standard setting from emerging powers, who consider standardisation an important strategic asset. One of the nine key elements identified by the Commission for focussing EU standardisation policy on innovation is (item 5) to facilitate the access to standardisation of all interested stakeholders, in particular SMEs, but also users/consumers and researchers. This will facilitate the uptake of innovation by the market. Under this item European and National Standards Bodies are also invited to reconsider their business model in order to reduce the cost of access to standards, with the ultimate goal of providing free access to standards developed in support of EU legislation and policy (note: meaning for European Harmonised standard only, ENs).

European Commission, Green Paper Entrepreneurship in Europe, COM(2003) 27 final, 21 January 2003

European Commission, Enterprise and Industry DG, Action plan for Standardisation, Brussels, 15 March 2007, final

European Commission, Enterprise and Industry DG, Action plan for Standardisation, Brussels, April 2006, final

European Commission Enterprise and Industry DG, European standardisation flyer - Questions and answers, Office for Official Publications of the European Communities, Luxembourg, not dated

European Commission, Resolution on the report from the Commission to the Council and the European Parliament 'Efficiency and Accountability in European standardisation under the New Approach', OJ C 150 of 28 May 1999

Farrugia Francis E., Malta Standards Authority Chairman, The Malta Financial and Business Times, 5 September 2001.

Chairman of the Malta Standards Authority MSA refers to the architecture of the huge megalithic temples (the oldest free standing stone structures of the World, claimed to be 1,000 years older than the pyramids in Egypt and Stonehenge in UK), to suggest that the Maltese are even earlier pioneers in the use of standards than the Egyptians

GHK and Technopolis, Evaluation of the EU actions for the promotion of craft and SMEs' interests in the European standardisation area, Final Evaluation report submitted to DG Enterprise and Industry, 27 February 2009.

Hill, John L., Education About Standardisation: A Challenge of Today, Sun Microsystems, 7 February 2007.

The basis idea is that standardisation is rather important. Worldwide standards are for example forming a basis for international trade. This concerns not only standards covering the tradables but also accounting practices, freight containers, etc. The author states that the standardisation is stagnant. Practitioners are leading the standard institutions but proper education about standardisation is lacking. The author would like serious efforts being made to pursue education about standardisation and that in the next decade companies, organisations and governments could recruit graduates in the subject.

Hill, John L., ICT Standardisation: Changing the World for a better Tomorrow, Sun Microsystems.
The hypothesis is that the needs of the market place in terms of timeless, functionality and interoperability are no longer met. In continues by stating hat standardisation should contribute to preventing market dominance of a few powerful providers by fostering the use of standards-based products over proprietary products (Standards – IPR).
KNU Coordinating unit for environmental organisations' work on standardisation, flyer on the joint project by the German League for Nature Conservation and Environmental Protection2, the German association of environmental protection action groups and the German branch of Friends of the Earth (BUND) that works on getting the voice of environmentalist heard within DIN. http://www.bund.net/fileadmin/bundnet/pdfs/umweltschutz_normung/KNU-Flyer_en.pdf
Ministry of Economic and Business Affairs and Ministry of Science, National Standardisation Strategy of Denmark, May 2006, Technology and Innovation, København. The study acknowledges that standardisation is of great and comprehensive business policy importance as standards play an important role in terms of corporate competitive power and product development. Standards ensure a common cross-national language hence facilitating global trade. At the same time, standards contribute to ensuring that societal requirements are complied with regarding, for example, product quality, consumer safety and environmental friendliness. The Danish publication states that Denmark already has a good standardisation system today, but that there is a need for developing it further to ensure that it matches the great challenges of the years ahead. Its long-term goal is to ensure that Denmark is among the countries that achieve maximum societal and business effect from the overall standardisation effort. .
Future financing for the CEN System, Roland Berger & Partner GmbH – International Management Consultants, December 2000. Available at: http://www2.nen.nl/cmsprod/groups/public/documents/bestand/200840.pdf
Schraven, Jacques (Chairman NEN), The Taboos of standardization, presentation September 2007. In this presentation Mr. Jacques Schraven, seems to have tried to awaken his audience by telling some (inconvenient) truths such as 'formal standardisation loses market share'; 'nationality becomes less relevant, therefore direct company access is needed'; 'organisational development of NSBs lags behind', 'standards are difficult to obtain, thus the one-stop shop should be reopened'; 'half of standardization money is wasted, but standardisation is still a bargain'.
Smith, Adam, An Enquiry into the nature and causes of the Wealth of Nations, 1776 In this economists' classic an important issue is the division of labour. It marks the beginning of the value chain. No longer one craftsman that controls the entire process from the raw material up to the final product, but production broken down into a series of linked activities. Standards obvious play an important role in making this possible.

Swann, Peter (2000), The economics of Standardisation, Final report for Standards and Technical Regulations Directorate, Department of Trade and Industry (DTI), London

This econometric study by Swann et al. showed that (technical) standards do not (on average) create technical barriers to trade, but rather increase imports and hence competition within an industry. Available as PDF file at the website of DTI: http://www.dti.gov.uk/files/file11312.pdf

Temple, Paul and Geoffrey Williams, The Benefits of Standards, A CEN Management Centre Publication, CEN, 2002 All CEN publications can be ordered from: CEN Sales Point, ON - Austrian Standards Institute, Heinestraße 38, A-1021 Vienna.

Temple, Paul et. Al. The empirical economics of Standards, DTI Economics Paper No. 12, June 2005

This report presents the findings of three projects to investigate the role and impact of standardisation on economic performance. Study 1 presents a count of UK public standards published since 1901 and examined the contribution of standards to economic growth. Study 2 focuses on standards and the international transmission of technology. Finally the third study considers the relation between standardisation and innovation using data from the Community Innovation Survey (CIS).

Vries, Henk de, Standardization - What's in a name, Terminology - International Journal of Theoretical and Applied Issues in Specialized Communication, 4, 1, 55-83, 1997 (rectification in 4, 2).

Vries, Henk de See, Standards for the Nation, Doctoral Thesis, 1999, (also published as Standardization: A Business Approach to the Role of National Standardization Organisations, Kluwer 1999.