



ANEC, the European consumer voice in standardisation

**Preliminary study on benefits of consumer participation
in standardisation to all stakeholders**

Final Report
November 13th 2014



EXECUTIVE SUMMARY

1. This study, commissioned by ANEC, the European consumer voice in standardisation, is an early investigation into the impact of consumer participation in the standardisation process.
2. The study focuses in particular on the role of ANEC in the standardisation process and the resulting impacts on industry. It also aims to pave the way for further research in the field and includes recommendations for future studies.
3. The research approach is based on three case studies:
 - ANEC campaign for the removal of the exclusion/limitation clause from the Standards on the safety of household appliances (EN 60335);
 - ANEC campaign for safer baby walkers (EN 1273); and
 - Accessibility standards for public procurement of ICT products (Standard EN 301 549).
4. Where possible, the study aims to quantitatively examine the impacts on industry. The approach is primarily illustrative and arriving at a single robust impact estimate is beyond the scope of this study.

Standardisation and its role within broader EU policy

5. The importance of involving consumers in the standardisation process has been highlighted in a number of European policy documents.
6. Standardisation has also been recognised as a crucial tool in responding to a range of economic, social, and environmental trends facing the EU, including population aging, development of ICT technologies, globalisation of supply chains, and environmental challenges.
7. The 2012 Standardisation Regulation made integration of societal issues and societal stakeholders in the standardisation process part of the legal basis for the European standardisation system. ANEC is central to ensuring that this integration takes place.

Role of ANEC in the standardisation process

8. ANEC plays a unique role by representing consumers in the standardisation process. While it is seen as effective and has a number of success stories, it also faces substantial resource constraints.
9. ANEC's contributions into the three standards investigated as part of this study occurred at different points in the standardisation process and have been viewed positively by consulted stakeholders.
10. ANEC commissioned research to help set the agenda for the revision of the Standard EN 60335 on household appliances. It also exerted political pressure to ensure a revision and effective follow-up of Standard EN 1273 on baby walkers.

11. In the case of the development of standards on ICT accessibility, it worked together with the European Disability Forum to ensure that resulting requirements are appropriate and contributed to recognising the standard's applicability beyond the public procurement field.

Impact of consumer participation in the standardisation process

12. While the three standards investigated in the study have been welcomed by the industry, arriving at specific impact estimates is difficult.
13. No evidence has been found that revisions to baby walker and household appliances standards contributed to lowering the number of complaints or increasing the market size. This is primarily due to the fact that the standards are seen as preventive rather than reactive and are not used for marketing purposes. One identified potential impact related to the revised baby walker standard helping avoid future reputational damage as a result of accidents.
14. There are indications that the ICT accessibility standard could be beneficial to industry by improving product usability and expanding the user base, with 110 million Europeans estimated to benefit from improved ICT accessibility.
15. In all cases adaptation costs depend on individual firms and their products. Many costs are likely to be one-off costs, meaning that benefits generated by the standards are likely to outweigh the costs in the long run.

Conclusions and recommendations

16. Overall, the three case studies show that ANEC has been effective in ensuring that societal considerations are taken into account in the standardisation process and has contributed to generating benefits to both consumers and industry.
17. While consumer participation and ANEC's role have been viewed positively, it has been difficult to arrive at quantitative impact estimates. This suggests that any future research in this area should include a substantial qualitative component to effectively capture all impacts.
18. Future research on the impact of consumer participation in standardisation should also take into account different types of standards and the different ways in which they can generate benefits, including standards focusing on safety and accessibility, as well as reactive and preventive standards.
19. This study focused on industry impacts. A larger-scale study should take into account impacts on consumers, public authorities, and environment to provide a more comprehensive picture of the role consumers play in European standardisation.

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1 Introduction

This document constitutes the final report of the preliminary study concerning the economic impact of consumer participation in the standardisation process. The study has been commissioned by ANEC, the European consumer voice in standardisation.

The report synthesises the findings from three case studies examining ANEC's contribution to different European standards. It focuses on analysing the different modalities of consumer contribution to standardisation as well as the impacts of this contribution, in particular for the industry. Since the study also aims to pave the way for further research in the area, the report also includes recommendations for future studies.

The document is structured as follows:

- Section 2 briefly outlines the scope and methodological approach to the study;
- Section 3 discusses European standardisation and its role within broader EU policy;
- Section 4 presents ANEC and synthesises the case study findings concerning ANEC's contribution to the standardisation process;
- Section 5 synthesises the findings concerning the Impact of consumer participation in the standardisation process; and
- Section 6 outlines the conclusions and recommendations.

The Annex contains the full case study reports, an analysis grid, a list of interviews, and the interview guide.

2 Study approach

- Particular focus is on the role of consumers and ANEC in standardisation and the resulting impacts on industry.
- Study approach is based on three case studies: ANEC campaign for the removal of the exclusion/limitation clause from the Standards on the safety of household appliances (EN 60335); ANEC campaign for safer baby walkers (EN 1273); and accessibility standards for public procurement of ICT products (Standard EN 301 549).
- Where possible, the study aims to quantitatively examine the impacts on industry. The approach is primarily illustrative and arriving at a single robust impact estimate is beyond the scope of this study.

This section outlines the methodological approach adopted in the study. The data collection is based on **case studies** illustrating the benefits arising from consumer contribution to standardisation, with a particular focus on economic benefits to industry. Specifically, the case studies are comprised of:

- an **interview programme** with key stakeholders involved in the standardisation process; and
- **desk research** focusing on both setting out the context of the case studies, and complementing interview findings in order to provide illustrations of likely impact.

The case studies, the scope of the study, and the approach to analysing impacts are described in more detail in the following sections.

2.1 Case study selection

The final case study selection agreed with ANEC is presented in the following table.

Table 1 - Case study selection

Case Study	Justification for selection
Case study 1: ANEC campaign for the removal of the exclusion/limitation clause from the Standards on the safety of household appliances (EN 60335).	<ul style="list-style-type: none"> • One of ANEC's oldest projects and success stories. • The case is premised on the inclusion of consumer groups that have traditionally been overlooked by industry. • The case study is linked to European Commission's accessibility agenda and its initiatives concerning vulnerable consumer groups
Case study 2: ANEC campaign for safer baby walkers (EN 1273)	<ul style="list-style-type: none"> • The case study illustrates the work in one of ANEC's priority areas of child safety.
Case study 3: Accessibility standards for public procurement of ICT products (Standard EN 301	<ul style="list-style-type: none"> • Demonstrates ANEC's work beyond the domain of consumer goods • The case study is linked to European Commission's accessibility

The three case studies are outlined in more detail below:

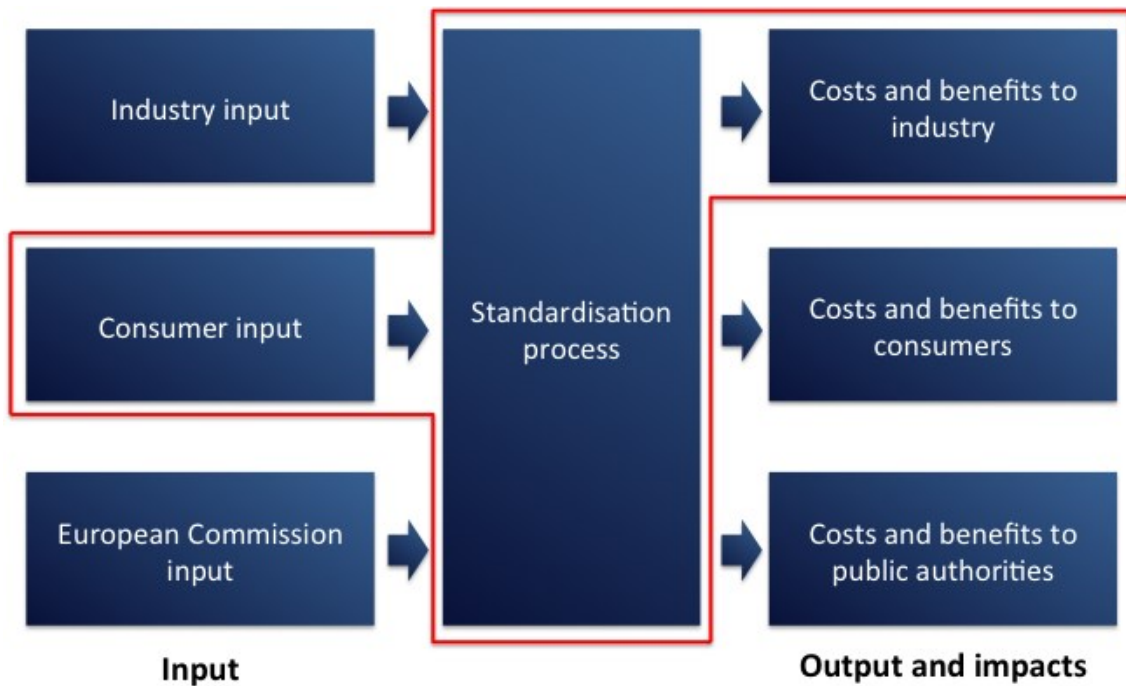
- **ANEC campaign for the removal of the exclusion/limitation clause from the Standards on the safety of household appliances (EN 60335):** The first case study examines ANEC's campaign for the removal of the general exclusion clause from the Standard EN 60335, which applies to electrical household appliances. Effectively, the exclusion clause limits the safe use of electrical household appliances by "children and the infirm without supervision". This case study illustrates the need for consumer input to a standard that had in some respects become out-dated in the modern social context. The initial standard was developed in the 1960s where the use of household appliances differed widely from today's: Children, in particular, were not expected to use household appliances by themselves or be left unsupervised¹.
- **ANEC campaign for safer baby walkers (EN 1273):** The issue surrounding the safety of baby walkers dates back to the early 1970s when concerns were raised in several countries regarding the injury risks associated with the product. Baby walkers have been a popular nursery item for the past 30 years as they are seen as giving give parents more freedom during the period when the child requires continuous attention. The popularity of the product has also been reinforced by the assumption that it aids an infant's walking ability. However, there is no scientific evidence indicating that baby walkers support mobility development. Instead, both anecdotal and scientific evidence point to a large number of injuries resulting from their use. In particular, injuries most often relate to infants falling down the stairs or acquiring burns due to the increased reach and speed afforded by the walker. After eight years of drafting a revised Standard EN 1273 responding to the safety concerns was adopted in 2005.
- **Accessibility standards for public procurement of ICT products (Standard EN 301 549):** The final case study relates to the European Standard EN 301 549 setting out accessibility requirements for public procurement of ICT products and services. The standardisation procedure was initiated based on a mandate (m/392) issued by the European Commission in 2005 to the three European Standards Organisations (ESOs), with the aim of providing a single source of detailed practical and functional accessibility specifications in relation to ICT. The objective of the Standard is to harmonise e-accessibility in the Internal Market to the benefit of consumers with disabilities as well as elderly consumers.

¹ ANEC. (2008). Position paper – Safety of Household Appliance for all. Available at: <http://www.anec.eu/attachments/Annex%201%20to%20ANEC-ML-2008-0173.pdf>

2.2 Conceptual model of the European standardisation process and study scope

The following figure outlines a basic conceptual understanding of the European standardisation process.

Figure 1 - European standardisation process



As shown in the figure above, for the purpose of the study we distinguish between an **“input” side** of the process, referring to the human and financial resources dedicated by industry, consumer organisations and the European Commission, and the **“output” side**, concerning the immediate outputs and broader impacts of the resulting standards. The case study research covers both the input and output sides of the process, as well as the standardisation process itself (i.e. discussions with the relevant ESO working groups), although it focuses specifically on **consumer input** into the process and its **impact of on industry**.

2.3 Approach to arriving at quantitative impact estimates

The objective of the study is to build on existing research by arriving, where possible, at quantitative estimates to illustrate the economic added value of consumer input into standardisation.

Given the timescales and resources available, it is beyond the scope of the study to arrive at a single robust aggregate impact figure. Instead, the approach used in the study is **illustrative**, focusing on quantitative illustrations of likely impacts and their likely implications on aggregate level.

In addition, it is important to take into account the fact that consulted stakeholders are generally unaware of the specific costs and benefits of standards and that the initiatives investigated are relatively recent, meaning that many impacts can also not yet be observed. In order to address these challenges, we strived to arrive at illustrative quantitative estimates by combining **bottom-up** and **top-down** approaches:

- A **bottom-up** approach focuses on collecting qualitative information on the impact of standardisation processes. Particular emphasis is on identifying the most important impacts for industry and public authorities and, where possible, arriving at estimates of magnitude. At this point we also take into account the lean process analysis approach, by aiming to identify which elements, if any, of the lean process framework² are likely to be affected under each case study. The key sources for the bottom-up research include interviews and desk research undertaken for each case study.
- The **top-down** approach focuses on gathering data on the aggregate costs faced by the relevant industry players, as well as data on the overall market for the products and services investigated. Given limited data availability, the information collected does not directly relate to the case studies, but relates to comparable products, sectors individual Member States or third countries. Key information sources for the top-down element of the approach include secondary data on the industries covered as part of the case studies and similar initiatives outside of the EU.

It is important to note that while this approach allows to arrive at quantitative indications of industry impacts, it does not allow to monetise the potential consumer benefits, such as improved well-being or reduced health risks. Quantitative analysis of such impacts is therefore excluded from the study, although, where available, qualitative information relating to these impacts is presented.

² Eisenegger, P., Hart, A. and Pindar, A. (2008) "A fuller picture" - A lean process view of consumer law and its enforcement

3 Standardisation and its role within broader EU policy

- The importance of involving consumers in the standardisation process has been highlighted in a number of European policy documents.
- Standardisation has also been recognised as a crucial tool for responding to a range of economic, social, and environmental trends facing the EU, including population aging, development of ICT technologies, globalisation of supply chains, and environmental challenges.
- The 2012 Standardisation Regulation made integration of societal issues and societal stakeholders in the standardisation process part of the legal basis for the European standardisation system. ANEC is central to ensuring that this integration takes place.

In its Communication on a strategic vision for European standards the European Commission defines standards as “voluntary documents that define technical or quality requirements with which current or future products, production processes, services or methods may comply”. They are a result of a “voluntary cooperation between industry, public authorities and other interested parties collaborating within a system founded on openness, transparency and consensus”³. This section briefly outlines the European standardisation system, highlighting recent developments and objectives, as well as the link between standards and societal challenges on the EU agenda.

3.1 European standardisation system

The **European Standardisation Organisations** (ESOs) comprised of CEN, CENELEC and ETSI are the cornerstone of the European standardisation system. They are independent associations governed by private law. Nevertheless, they are formally recognised by the European Commission and play an important role in the governance of the Single Market whilst contributing to economic growth in the EU.

Standards help break down a number of non-tariff barriers to trade which might hamper the free flow of goods and services within the internal market. They are therefore trade enhancing by correcting information asymmetries and efficiently harmonising different national specifications. The Commission Communication also highlights the role of standards in ensuring consumer safety and as tools for increasing innovation and interoperability of technological systems. It however also recognises that in the future standards are likely to play a larger role in a wider range of areas. As a result, the 2011 Communication identifies a number of strategic objectives:

³ European Commission (2011) Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee - A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy by 2020

- Standards need to be quickly available – especially but not only – to assure the interoperability between services and applications in the field of information and communications technologies
- Standards must keep pace with ever faster product development cycles
- European standards developed by the European standardisation bodies will need to respond to an increasing demand, as a tool to support many European policies and legislation⁴

In response to these objectives, **Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European standardisation** set out the legal basis for European standardisation. The Regulation aims at modernising and improving European standardisation and calls, among others, for increased involvement of social stakeholders in the standardisation process.

3.2 Consumers, standardisation and the European Commission agenda

In the 2012 Standardisation Regulation the European Commission has identified, health and safety and the protection of workers, consumers and the environment, as issues of vital public interest and that should therefore be better integrated into the standardisation system. Similarly, the ANEC Strategy for the period 2014-2020⁵ recognises a set of developments of particular relevance to consumers' role in standardisation. These broad trends include **social, economic, technological and environmental developments**, including:

- global financial crisis;
- increasingly large proportion of manufacturing taking place outside of Europe, leading to more global supply chains;
- larger role played by BRICS countries (Brazil, Russia, India, China and South Africa) in international standardisation;
- EU enlargement;
- aging European population;
- development of ICT technologies, also complex and converging ones, and a shift towards an online economy leaving some consumers behind; and
- increasing pressures on the environment and climate change.

⁴ European Commission (2011) Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee - A strategic vision for European standards: Moving forward to enhance and accelerate the sustainable growth of the European economy by 2020

⁵ ANEC (2013) ANEC Strategy 2014-2020. Available at: <http://www.anec.org/attachments/ANEC%20Strategy%202014-2020%20booklet.pdf>

A number of EU-level policy initiatives introduced in light of the above developments highlight the importance of standardisation in addressing potential challenges. These include the Communication on the Single Market Act, and the Communication on a Digital Agenda for Europe, which highlighted the importance of interoperability. In addition, the Communication on the European Disability Strategy recognised the importance of standards in optimising the accessibility of the built environment, transport and ICT.

At the same time, the European Council Conclusions on standardisation and innovation of 25 September 2008, the Access to Standardisation study carried out by DG Enterprise and Industry in 2008 and the EXPRESS report setting a vision for European standardisation in 2020, all highlighted the importance of integration of societal stakeholders and consumers in the standardisation process⁶.

While, as noted above, the **2012 Standardisation Regulation has made the participation of societal stakeholders part of the legal basis for European standardisation**, it is organisations such as ANEC that play the frontline role in ensuring that societal concerns are effectively taken into account. The role of ANEC and the findings concerning its contribution to standardisation based on the case study research are outlined in more detail in the following section.

⁶ ANEC (2013) ANEC Strategy 2014-2020. Available at: <http://www.anec.org/attachments/ANEC%20Strategy%202014-2020%20booklet.pdf>

4 Role of ANEC in the standardisation process

- ANEC plays a unique role by representing consumers in the standardisation process. While it is seen as effective and has a number of success stories, it also faces substantial resource constraints.
- ANEC's contributions into the three standards investigated as part of this study occurred at different points in the standardisation process and have been viewed positively by consulted stakeholders.
- ANEC commissioned research to help set the agenda for the revision of the Standard EN 60335 on household appliances. It also exerted political pressure to ensure a revision and effective follow-up of Standard EN 1273 on baby walkers.
- In the case of the Standard on ICT accessibility, it worked together with the European Disability Forum to ensure that resulting requirements are appropriate and contributed to recognising the standard's applicability beyond the public procurement field.

This section presents ANEC, its overall role within European standardisation and outlines the case study findings with regard to the modalities of consumer participation, and ANEC's participation more specifically, in the standardisation process.

4.1 ANEC and its mandate

ANEC (European Association for the Co-ordination of Consumer Representation in Standardisation) operates as an umbrella group governed by a General Assembly, composed of representatives from 28 Member States three EFTA countries, Former Yugoslav Republic of Macedonia, and Turkey, and a Steering Committee elected from General Assembly members. The ANEC Secretariat based in Brussels is responsible for carrying out ANEC's activities.

ANEC's mission, as set out in the strategy document for 2014-2020 is as follows:

“ANEC is unique in delivering the collective European consumer interest in the development of standards and related legislation, through the activities of its national members, experts and Secretariat, in order to achieve optimal levels of consumer protection, welfare and sustainability”⁷.

It does so by promoting and defending the interest of European consumers in the following areas:

⁷ ANEC (2013) ANEC Strategy 2014-2020. Available at: <http://www.anec.org/attachments/ANEC%20Strategy%202014-2020%20booklet.pdf>

- In the development or revision of European legislation and public policies;
- Within the political and technical bodies of the European Standardisation Organisations as well as in other standards development organisations; and
- In European policy fora related to the use of standards and the application of conformity assessment schemes for products & services⁸.

ANEC's thematic activities are addressed by eight standing Working Groups on Chemicals, Child Safety, Design for All, Domestic Appliances, Environment, Information Society, Services, and Traffic.

The **key challenge faced by ANEC is the increasingly limited pool of human and financial resources** available for its activities. The 2013 evaluation report examining the EU 2007-2011 financial contributions to ANEC notes that while it is an effective and efficient organisation that made significant contributions by representing consumer interests in the standardisation process, it faces increasing difficulties in attracting national experts to participate in its activities for no or limited compensation. The evaluators conclude that "more or at least stable EU funding is therefore critical to ensure the continuing viability of ANEC"⁹.

Despite these challenges, ANEC has had a range of **success stories**. Among others, it contributed to improving standards on:

- lighters, by introducing childproofing devices and the prohibition of child-appealing novelty lighters;
- banning of chords in young children's clothing;
- introducing a chemical resistance test for the rotating disc of electric food processors, reducing the risk of fracture; and
- limiting noise levels in toy products¹⁰.

This report aims to provide a more detailed analysis of ANEC's contribution to standardisation by investigating three recent case studies. The outcomes of the case study research are described in more detail in the following section.

4.2 ANEC and modalities of consumer participation in the standardisation process

One of the key objectives of the study is to understand the ways in which consumer participation, and ANEC specifically, contributed to the standardisation process, which

⁸ ANEC (2013) ANEC Strategy 2014-2020. Available at: <http://www.anec.org/attachments/ANEC%20Strategy%202014-2020%20booklet.pdf>

⁹ Van Dijk Management Consultants, ICF GHK (2013) Evaluation of EU 2007-2011 financial contributions to EU-level consumer organisations (ANEC)

¹⁰ See <http://www.anec.eu>

constitutes the “input” part of the conceptual framework of standardisation outlined previously. This can in turn be combined with findings concerning the impact of this participation, or the “output” part of the framework, which is discussed in the next section.

It is important to note that a standard is always the result of a compromise between the different stakeholders involved in the development process. **Majority of stakeholders interviewed, both industry and consumer organisations, agree that consumer input into the standardisation process is needed and results in better and more relevant standards.**

The case studies conducted as part of this project serve as an illustration of the different ways in which ANEC has made a contribution to the standard development process. In the case of **the removal of the exclusion clause from the Standard on the safety of household appliances (EN 60335)**, the involvement of ANEC occurred at a few stages of the process:

- In 2005, ANEC commissioned qualitative research investigating the use of common household appliances by families in selected EU Member States. The study confirmed the findings of national-level studies conducted in the UK and Germany, showing that young children do frequently use the relevant appliances¹¹.
- ANEC proposal formed the basis for the establishment of Working Group 4 within the Technical Committee 61 of CENELEC charged with preparing safety standards for household appliances.
- ANEC-funded research subsequently prompted the mandate (M/392) from the European Commission in support of the revision¹².

In the case of the **campaign for safer baby walkers and the revision of Standard EN 1273**, some stakeholders highlighted the lack of consumer participation at national level and noted that ANEC was needed in order to remedy the strong presence of industry and laboratories. This has also been confirmed in earlier research¹³. The role of ANEC in developing the revised Standard was also more diverse, with interviewees identifying the following input.

- Prompting the initial revision of the EN1273 resulting in a more rigorous safety standard.

¹¹ ANEC. (2008) Position paper – Safety of Household Appliance for all. Available at: <http://www.anec.eu/attachments/Annex%201%20to%20ANEC-ML-2008-0173.pdf>

¹² See <http://www.anec.eu/attachments/Annex%201%20to%20ANEC-ML-2008-0173.pdf>

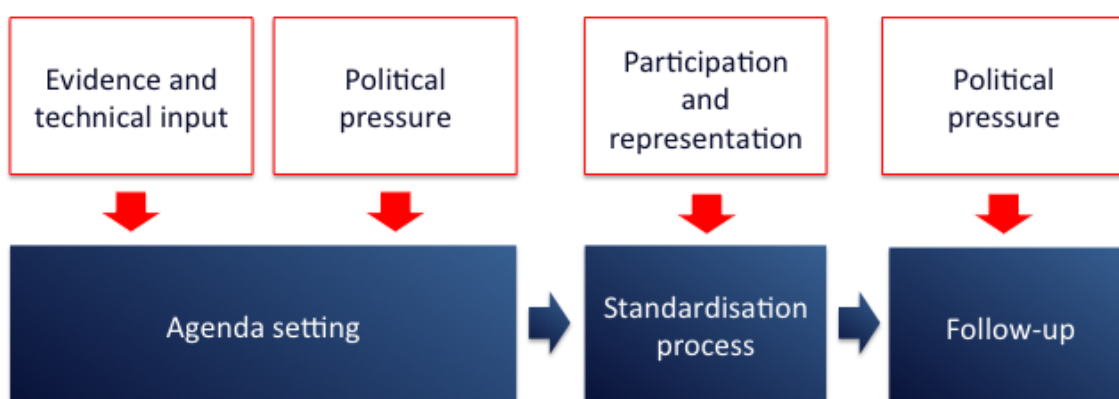
¹³ See for example: van Elk, Koos & van der Horst, Rob (2009) Access to Standardisation Study, Final Report, EIM Business & Policy Research.

- Involvement in the discussion at political level of the content of the mandate which is believed to have had a significant impact on the outcome of the Standard.
- Incorporating the stair fall requirement, testing requirements as well as the requirement relating to the wider base of the product which are the key revisions perceived to make the baby walkers safer.
- Encouraging the European Commission and the PROSAFE Forum for a follow-up action on the compliance, implementation and enforcement of the EN 1273:2005. This resulted in the Joint Action in 2009-2010 coordinated by PROSAFE investigating the compliance level of EN 1273:2005.
- Encouraging the publication in the Official Journal of the European Union, thus harmonising the Standard under the General Product Safety Directive.

Finally, in the case of contribution to the **accessibility standards for ICT procurement (EN 301 549)**, ANEC's role was primarily to represent the perspective of consumers and people with disabilities in the standardisation process alongside the European Disability Forum (EDF). While EDF has been an important stakeholder, the presence of ANEC as a further consumer voice was considered valuable in light of difficulties encountered during the negotiations. Consulted stakeholders noted that this input contributed to ensuring high technical requirements, as well as well as to recognising the Standard's applicability beyond the public procurement area, paving the way for potential spill-overs.

The three case studies show different ways in which ANEC and consumer participation in general can input into the standardisation process.

Figure 2 - Modalities of ANEC contribution to the standardisation process



As shown in the figure above:

- In the case of the Standard on the safety of household appliances (EN 60335), ANEC's role was mainly in providing **technical input and evidence that helped put the revision of the Standard on the agenda.**
- In the case of standard EN 1273 on baby walkers, ANEC exerted **political pressure on the European Commission, European Standardisation Organisations, and other bodies to ensure revision and effective follow-up of the Standard.**
- Finally, in the case of the accessibility standards for ICT procurement (EN 301 549), ANEC's **participation in the standardisation process itself alongside EDF contributed to a Standard better suited to consumer needs,** especially those of consumers with disabilities.

In all three cases, these contributions have resulted in revisions, which can potentially be of benefit not only to consumers, but also to the industry. These potential impacts are presented in the following section.

5 Impact of consumer participation in the standardisation process

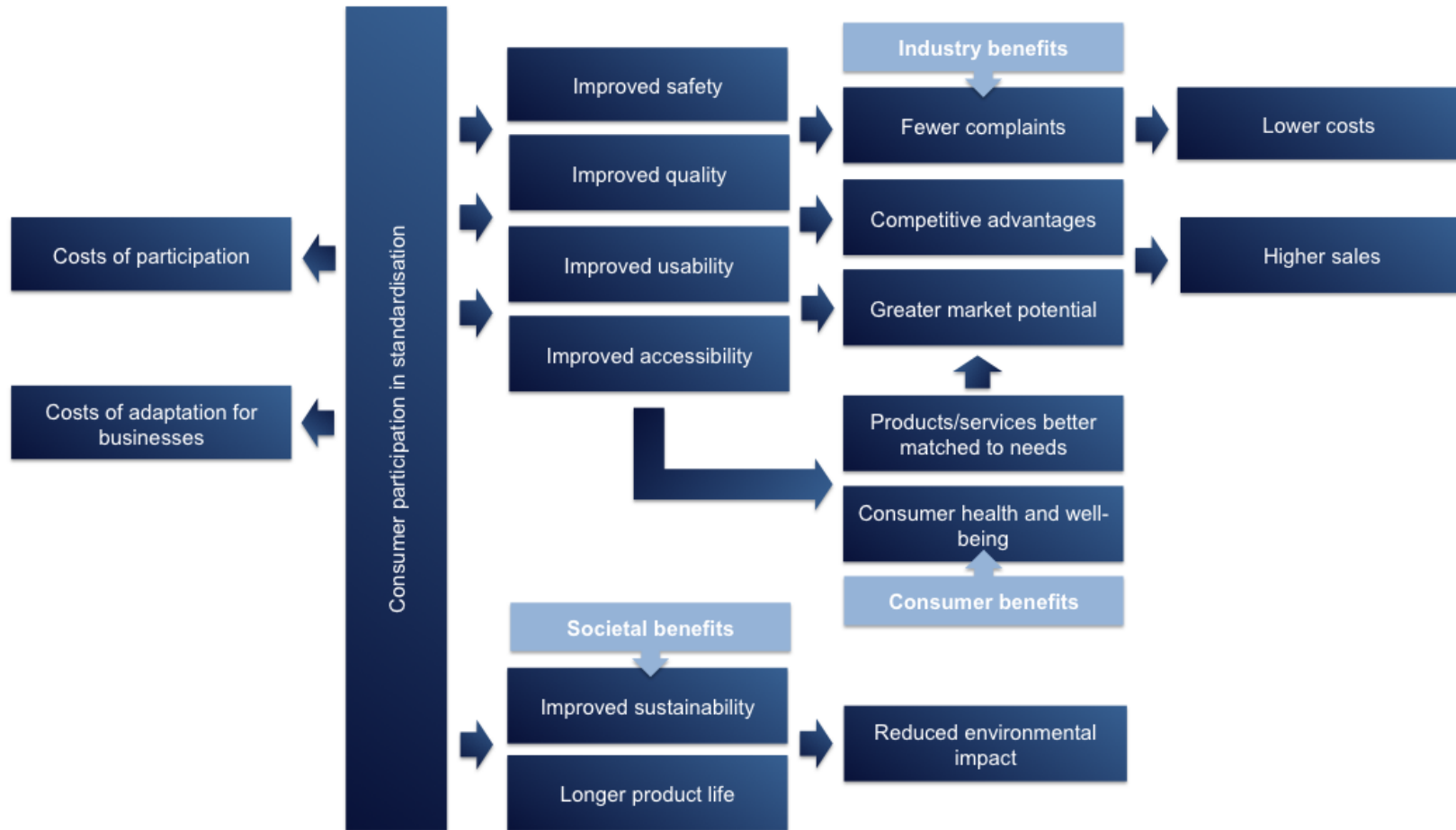
- While the three standards investigated in the study have been welcomed by the industry, arriving at specific impact estimates is difficult.
- No evidence has been found that revisions to baby walker and household appliances standards contributed to lowering the number of complaints or increasing the market size. This is primarily due to the fact that these standards are seen as preventive rather than reactive and are not used for marketing purposes. One identified potential impact related to the revised baby walker Standard helping avoid future reputational damage as a result of accidents.
- There are indications that the ICT accessibility Standard could be beneficial to industry by improving product usability and expanding the user base, with 110 million Europeans estimated to benefit from improved ICT accessibility.
- In all cases adaptation costs depend on individual firms and their products. Many costs are likely to be one-off costs, meaning that benefits generated by the standards are likely to outweigh the costs in the long run.

This section discusses the impacts attributed to consumer participation in standardisation on the basis of the three case studies. Particular focus is on examining the potential benefits to industry set against the likely costs associated with consumer participation in the process.

5.1 Impact framework

A conceptual framework showing the impact of consumer anticipation is a useful tool for structuring the analysis of impacts in that it visualises the hypothetical impact chain. This in turn makes it possible to use the case studies in order to verify to what extent any of these impacts have materialised.

Figure 3 - Impact framework



As can be seen in the figure above, there are two main ways in which consumer participation in standardisation can result in monetary benefits to the industry:

- One transmission path involves **lowering the number of complaints** due to improved safety, quality, usability, and accessibility of products and services. Lowering the number of complaints can have substantial economic impact, with a UK study estimating that a total of 120¹⁴ million complaints are made yearly in the UK, with an average cost per complaint estimated at £200. Although litigation is less common in the EU than in other jurisdictions (such as the US), costs of handling complaints also include legal costs and costs of settlements, which have substantial impact on a single business.
- The second transmission path involves effectively **expanding the potential market** by offering products or services that are of higher quality, safer, accessible to a wider range of consumers, or better suited to their needs.

Both these potential transmission paths are investigated in more detail in the following section.

5.2 Identified impacts of consumer participation in standardisation

As noted in the previous sections, there are a number of ways in which ANEC can contribute to consumer participation in standardisation. This can involve agenda-setting, participating in and representing consumer interests in standardisation process, or exerting pressure on key actors to ensure effective follow-up of the standards. In the case of the **Standard on household appliances (EN 60335)**, besides removing the exclusion clause from the Standard, consulted stakeholders pointed to the following revisions which can be attributed to ANEC's participation:

- New requirements regarding the size of ventilation holes: The revised Standard stipulated that the ventilation hole for appliances must be smaller than a child's finger in order to prevent children to access the moving and hazardous parts of the appliances. Thus, testing requires the use of the size of a child's finger.
- Requirements concerning the accessibility of information: This relates primarily to the information booklet and the instructions in the manual and on labels to be in larger print to facilitate reading for those with vision impairments.

In the case of the **ANEC campaign for safer baby walkers (EN 1273)**, as noted above the key changes included the stair fall requirement, testing requirements, and a requirement regarding the base of the baby walker. In the case of the **accessibility standards for ICT procurement (EN 301 549)** impacts on the Standard included

¹⁴ Eisenegger, P., Hart, A. and Pindar, A. (2008) "A fuller picture" - A lean process view of consumer law and its enforcement

ensuring stricter technical requirements, as well as well as to recognising the Standard's applicability beyond the public procurement area.

5.2.1 Benefits of consumer participation to industry

Stakeholders consulted across the three case studies were generally supportive of consumer participation in the standardisation process. Where standards concerned specific products, such as household appliances and baby walkers, industry stakeholders welcomed the revisions, citing the need for updating out-dated standards and highlighting the fact that standards contributing to improving the quality products are ultimately beneficial to the industry.

Identifying specific monetary benefits is however more challenging. In order to do so it is helpful to first understand the motivations behind the three standards. Overall, the standards covered in the case studies could be classified using a two-fold typology:

- **safety standards** aiming to protect consumers; and
- **accessibility standards** aiming to ensure that products or services can be accessed by a wider range of consumers.

The case study concerning safer baby walkers (EN 1273) could be seen as an example of the former standard and the case study on the accessibility standards for ICT procurement (EN 301 549) as an example of the latter type. The ANEC campaign for the removal of the exclusion clause from the Standard on the safety of household appliances (EN 60335) could in turn be seen as combining both safety and accessibility elements.

Drawing on the impact framework presented above, one would therefore expect that the **safety-oriented standards** could generate benefits by reducing the number of consumer complaints and any costs associated with these complaints (i.e. legal costs). The research conducted as part of these case studies has however shown little evidence of that effect. The key reason given for this was that both the **baby walker and household appliance standard revisions were primarily preventive rather than reactive**. This means that rather than lowering the number of existing complaints, they aimed to prevent future accidents and complaints.

Increased product safety could also generate industry benefits by making the products more attractive **to consumers** (who would, for example, upgrade to newer products complying with stricter safety standards). This effect is however also not observed, since safety **standards are not used for marketing purposes** in way that, for instance, energy labelling could be. There are however examples of safety labels and safety claims contributing to product sales (such as the UK Kitemark label), which

suggests that industry actors could to some extent use safety-oriented standards for marketing purposes.

The main financial benefit resulting from revising the safety standards identified by stakeholders related to **preventing future reputational damage to the baby walker producers** due to potential accidents. Since existing evidence suggests that the market for baby walkers is substantial but continuously shrinking, a revised standard that contributes to reducing the future market erosion even by a few points could constitute a tangible benefit for the industry over a longer period of time. Although data availability does not allow to arrive at robust impact estimates, annual sales of baby walkers in the EU were estimated at over €20 million. Using this number as a basis, a reduction in the annual decline of the market by a few percentage points (i.e. from 5% to 2% a year) over a ten-year period is likely to exceed adaptation costs, assumed to be 10% of the sale price.

Looking at **standards and aspects of standards focusing on accessibility**, one would expect that such standards could contribute to growing the potential market for the products and thus contributing to increasing sales. Also in this case the **research has not identified clear impacts on sales**, although in the case of the accessibility standards for ICT procurement (EN 301 549) this could be attributed to the Standard being very recent. While substantial research has been conducted to date on business cases for accessibility, drawing clear causal links between standardisation and a potential untapped market potential is challenging, in particular since compliance is often the initial hurdle. Nevertheless, both in the case of ICT accessibility and household appliances, there are examples of industry players making use of the business cases for accessibility. Even if the motivation is mainly linked to marketing or public relations, this appears to confirm that **there is commercial value in accessibility for industry players**, especially given that number of individuals likely to benefit from accessibility in the ICT, including both people with disabilities and the elderly, is estimated to amount to 110 million across the EU¹⁵.

Overall, the research shows that while consumer **participation in the standardisation process and, by extension, the role of ANEC, are viewed positively**, it is more **difficult to identify specific monetary benefits** resulting from this participation. This in turn suggests that focusing purely on monetary costs and benefits may not effectively reflect the contribution of consumers and consumer organisations to the standardisation process.

5.2.2 Costs to industry

¹⁵ Technosite, Tech4i2, AbilityNet, NOVA (2012) Study on Economic Assessment for Improving eAccessibility Services and Products

Although arriving at monetary estimates of benefits to industry is challenging, it is nevertheless important to also investigate the potential costs to industry.

Overall, **estimating potential costs across the three case studies has also proven difficult**, mainly due to the fact that **costs will depend on the individual manufacturers' supply chains and the way their products have been engineered and designed**. In the case of household appliances, complying with the standard can have relatively low costs or can involve extensive product re-design and hence high engineering costs. For baby walkers, existing studies found cost of redesign to be relatively high (estimated at around \$4 in the US¹⁶ and assumed to be €3 in Europe or 10% of the sale price), but, as noted above, they could be seen as primarily one-off costs which should be set against the longer-term benefits.

Finally, costs of complying with ICT accessibility standards could also be substantial, but there are a number of factors that can help limit these costs:

- Global ICT providers are able to draw on their investment in accessible products from outside of the EU where such standards are more established, such as in the US. There is evidence that large ICT providers take a more global approach to accessibility, which in turn can help them reduce compliance costs as long as requirements are not overly different¹⁷.
- ICT industry players will be able to pass some of the costs of improved accessibility onto both public bodies and consumers.
- While ensuring accessibility requires on-going costs of updating and maintenance¹⁸, it is expected that considerable portion of the costs will refer to a one-off investment.

Overall, **costs associated with compliance with standards developed or revised to reflect consumer contributions will not be evenly distributed across any industry**. This means that while for some businesses the adaptation costs will be limited, for others they are likely to exceed any benefits in the short term. At the same time, such costs are likely to be one-off or be partially passed onto consumers, suggesting that, over time, adaptation to revised standards may become cost-beneficial also for these industry segments.

¹⁶ Rodgers, G.B. and Leland, E.W. (2008) in Wagenaar, A. C. and Burris, S. C. (2013) Public Health Law Research: Theory and Methods

¹⁷ See for instance a posting by the Microsoft Director of Accessibility Policy and Standards available at: <http://blogs.msdn.com/b/accessibility/archive/2014/03/24/europe-new-accessibility-procurement-standard.aspx>

¹⁸ See Microsoft input into the Fourth Listening Session of the Federal CIO Council available at: <https://cio.gov/wp-content/uploads/2012/09/Stanford-listening-session-06-17-2011.docx>

6 Conclusions and recommendations

- Overall, the three case studies show that ANEC has been effective in ensuring that societal considerations are taken into account in the standardisation process and has contributed to generating benefits to both consumers and industry.
- While consumer participation and ANEC's role have been viewed positively, it has been difficult to arrive at quantitative impact estimates. This suggests that any future research in this area should include a substantial qualitative component to effectively capture all impacts.
- Future research on the impact of consumer participation in standardisation should also take into account different types of standards and the different ways in which they can generate benefits, including standards focusing on safety and accessibility, as well as reactive and preventive standards.
- This study focused on industry impacts. A larger-scale study should take into account impacts on consumers, public authorities, and environment to provide a more comprehensive picture of the role that consumer organisations play in European standardisation.

This section draws together the key findings from the case studies synthesised in the previous sections. Given the preliminary nature of the study, particular focus is on recommendations for future research directions concerning consumer contribution to standardisation.

6.1 Consumer participation

The examined case studies show that **consumer participation has been an important driver behind the revision of the standards** in the first two case studies. Specifically these case studies found that the contribution of consumer stakeholders related to highlighting the deficiency of existing standards from a consumer perspective, starting or contributing to political discussion resulting in standardisation mandates, and contributing to introducing more stringent safety requirements. **The consulted stakeholders, including industry stakeholders, have also viewed consumer participation positively.**

Even though it is likely that a revision of EN 60335 and EN 1273 would have occurred without consumer input, it is plausible to argue that this will have taken longer without the input provided by ANEC, while the accessibility requirements in the case of EN 301 549 would have been less strict without EDF and ANEC input. The three case studies therefore demonstrate ways in which ANEC has:

- **provided technical input** and evidence that helped put the revision of the standards on the agenda;
- **exerted political pressure** on the European Commission, European Standardisation Organisations, and other bodies to ensure revision and effective follow-up of the standards; and
- **participated in the standardisation processes** to ensure the resulting standards are better suited to consumer needs.

ANEC therefore appears to **effectively fulfil its role in ensuring that societal interest and societal stakeholders are represented in the standardisation process**, which in turn has been recognised as an important pillar of the overall European employment, productivity and social cohesion goals.

6.2 Evidence of impact on industry

Consulted **industry stakeholders saw the impact of consumer input and subsequent standards or standard revisions as overall positive**, citing up-to-date standards and resulting higher quality products as beneficial to industry as a whole. At the same time all three cases illustrate the **difficulties in arriving at robust aggregate figures of the economic contribution of consumer input into standardisation process**. To a large extent this is due to the standards being relatively recent and therefore the medium to long-term economic contribution of the standards cannot yet be fully assessed.

Two hypotheses for **safety standards** set out in the conceptual impact framework concerned reduction in number of complaints and increased consumer trust in the products and services, resulting in higher sales. The study found **no evidence of impact on complaints and legal costs and evidence that safety standards can have commercial value also appeared to be mixed**. Instead, one impact identified, and which could to some extent also be illustrated quantitatively, concerned avoiding negative publicity and as a result further market erosion in the case of baby walkers. The **low importance of consumer complaints and their costs as a potential impact could be attributed to the fact that the standards investigated were primarily preventive rather than reactive**.

With regard to **accessibility standards**, it was difficult to draw clear conclusions concerning the hypothetical link between universal design and accessibility and a potential for the target market to grow as a result. This can partly be attributed to the standards being relatively new, as well as to availability of data. Nevertheless, numerous examples of businesses using accessibility as part of a commercial strategy suggests that **there is commercial value in making products accessible to a broader range of consumers**.

Finally, the research found that **costs** across the three case studies are likely to differ substantially between individual producers, with some segments of the industry facing relatively low costs compared to others. This in turn suggests that even where there is little evidence of substantial benefits, **a number of industry players are likely to see a net benefit resulting from the standards**. Conversely, **companies facing higher adaptation costs may not be able to experience net benefits in the short-term, but they might materialise in the longer term**, given that many costs are likely to be one-off costs.

6.3 Recommendations

While the study has shown the **challenges in demonstrating the impact of consumer participation** in standardisation, it has shown that **stakeholders across the three case studies viewed ANEC's input positively**. It has also shown that **industry actors welcomed consumer input** into the standards, seeing them as an impetus for improving their products. This in turn suggests that **ANEC is effective in fulfilling its role**, which yields support for ensuring sufficient future funding of its activities.

In terms of further research in the area, the case study findings suggest that:

- While additional research is needed to better understand the impact of consumer participation, a **purely quantitative study is not likely to effectively reflect the benefits of consumer participation**. The overall positive assessment of consumer participation combined with limited quantitative information on its benefits suggests that **future research, also as part of future impact assessments and evaluations in the field, should combine qualitative and quantitative methods for assessing the impacts**.
- The current study tackled only one aspect of consumer participation in standardisation. In order to present a more comprehensive picture, a **larger scale study focusing also on impact on consumers, environment and public authorities would be beneficial**.

In terms of investigating the impact on industry, specific lessons learned from the current study include:

- Any **future research should make a distinction between safety and accessibility standards, as well as preventive and reactive standards**. This typology is likely to determine the type of impacts that can be effectively observed and analysed.
- **Analysis of impacts on complaints and resulting costs should primarily focus on reactive safety standards**.

- Arriving at any quantitative impact estimate requires **robust assumptions concerning the levels of compliance**. This is an area where primary research is likely to provide significant added value.
- Similarly, **the way a standard is communicated to consumers is likely to be an important determinant of monetary benefits** to industry. This is another area that could be investigated in the future.

If a larger study was to be carried out in this area, it should therefore:

- **cover impacts on consumers, environment, and public authorities** to present a more complete picture of consumer input into standardisation;
- **include a large qualitative research element** to effectively capture costs and benefits. Given that this study encountered challenges in identifying and approaching key stakeholders, substantial resources should be dedicated to this element of any future study;
- **conduct primary research on level of compliance with the standards and the ways this is communicated to consumers**, if at all; and
- **select the case studies based on a typology of standards** to effectively cover different mechanisms through which impacts can be generated.

7 ANNEX 1: Case studies

This section presents the three case studies undertaken as part of this project. The case studies constitute the main data collection and analysis activity of this preliminary study. Each case follows the same basic structure:

1. The background of the standard is explained in detail together with the key input and contribution of ANEC and other consumer organisations.
2. A conceptual understanding of impacts based on the conceptual impact framework (see Section 5) is presented. This helps to guide the data collection and analysis and allows the research team test the hypotheses against the data collected.
3. Costs and benefits to industry are presented in more detail.
4. Finally, the key findings of each report are outlined. This feeds directly into conclusions and recommendations set out in Section 6.

7.1 Case study 1: ANEC campaign for the removal of the exclusion clause from the standards on the safety of household appliances (EN 60335)

7.1.1 Background and context of consumer participation

The first case study examines ANEC's campaign for the removal of the so-called general exclusion clause¹⁹ from the Standard EN 60335, which concerns electrical household appliances. The case study examines ANEC's contribution in bringing about the revision of the Standard and its subsequent economic impacts for industry.

7.1.1.1 *Product characteristics*

The objective of the Standard EN 60335 is to ensure that all electrical household products are safe, both in terms of failure and at the end of life. It covers a wide range of electrical appliances intended primarily for household use. This includes toasters, irons, lawn mowers, and other personal consumer goods items such as shavers and hairdryers. However, the Standard also covers appliances for commercial use, such as appliances used in professional kitchens for cooking, appliances for commercial cleaning and commercial washing, spin extractors and tumble driers.

7.1.1.2 *Motivations for the standardisation mandate*

The original EN 60335 Standard dates back to the 1960s, when the intended usage and available technology of household appliances differed widely from today's²⁰. Effectively, the initial Standard contained what has been labelled an "exclusion clause" or "limitation clause", which limited the safe use of electrical household appliances by "children and the infirm without supervision". In this vein, appliances adhering to this Standard did not necessarily have to take into account the usage by children and other consumers with diverse accessibility requirements. This can be attributed to the different social landscape prevalent at the time of the initial standardisation process and the notion that specifically children were not expected to use household appliances by themselves or be left unsupervised. Thus, with social norms changing in the last decades, a need has emerged for consumers to provide input into the Standard, which in some respects become out-dated.

In 2005, ANEC commissioned qualitative research investigating the use of common household appliances by families in selected EU Member States. The evidence showed that young children do use the relevant appliances on a frequent basis, despite the exclusion clause. This research was also supported by findings from studies

¹⁹ Some stakeholders indicated that they preferred the term "limitation clause" rather than exclusion clause

²⁰ Data obtained in interviews.

conducted by the UK government as well as British and German consumer organisations²¹.

In addition, with an ageing population that wants to stay independent for as long as possible, it has been deemed imperative that household appliances are also designed to take into account universal design principles and be accessible to the widest range of consumers possible²². This in turn is believed to also make appliances easier to use for consumers without disabilities²³.

The revision of the Standard was founded on the perceived discriminatory nature of the Standard EN 60335 and drew on the evidence produced by the research commissioned by ANEC. Following an ANEC proposal, Working Group 4 was established within the Technical Committee 61 of CENELEC charged with preparing safety standards for household appliances. This was also followed by a mandate (M/392) from the European Commission in support of the revision, which was prompted by research funded by ANEC²⁴.

7.1.1.3 Main features of the Standard

EN 60335 is a highly technical standard and since its scope covers a range of appliances, it is difficult to highlight all of its detailed features. Instead, stakeholder interviews have indicated that ANEC's and other consumer organisations' contribution to the standardisation process has been of a conceptual rather than technical nature, focusing on the usage and inclusion needs.

According to the interviewed stakeholders, the following features of the revision can be attributed to the input from the ANEC's participation:

- Requirements in regards to the size of ventilation holes: the revised Standard stipulated that the ventilation hole for appliances must be smaller than a child's finger in order to prevent children to access the moving and hazardous parts of the appliances. Thus, testing requires the use of the size of a child's finger.
- More accessible information: this relates primarily to the information booklet and the instructions in the manual and on labels to be in larger print to facilitate reading for those with vision impairments.

According to stakeholder input, ANEC's key contribution, together with national consumer associations, relates mainly to highlighting the need for removal of the

²¹ ANEC. (2008) Position paper – Safety of Household Appliance for all. Available at: <http://www.anec.eu/attachments/Annex%201%20to%20ANEC-ML-2008-0173.pdf>

²² The revised EN 60335 does not set out to meet the needs of those individuals with complex disabilities or access requirements (from data obtained in interviews).

²³ See <http://www.anec.eu/anec.asp?p=recent-research-reports&ref=07-01.01-01>

²⁴ See <http://www.anec.eu/attachments/Annex%201%20to%20ANEC-ML-2008-0173.pdf>

exclusion clause and producing the evidence-base leading to the revision of the Standard. Some stakeholders consulted have argued that it is likely that the Standard would be revised in any case. However, it appears safe to assume that this came sooner due to the input and research carried out by ANEC, which prompted the mandate and the subsequent revision of the Standard.

7.1.2 Theoretical impact framework

An early understanding of the expected impacts of consumer participation in the standardisation process relating to Standard EN 60335 was developed in order to understand the conceptual contribution of the Standard.

Based on desk research, the impacts of the Standard relate mainly to the safer and inclusive use of appliances and the indirect benefits of increasing the usability of the household appliances. Hence, the hypotheses with regard to industry impacts can be summarised as follows:

- Improved accessibility leads to greater market potential, which in turn ultimately leads to higher sales.
- Safer products reduce number of complaints and resulting costs and lead to higher consumer confidence in the appliances available on the market, resulting in lower costs and higher sales.

7.1.3 Analysis of impacts

The following sections examine the theoretical impacts set out above and present and analyse the data collected concerning benefits and costs to industry.

7.1.3.1 *Benefits*

The revision of the Standard EN 60335 is very recent and therefore some interviewees have been reluctant to draw any wider conclusions from the effects of the updates. This concerns in particular any potential economic benefits stemming from a more inclusive Standard.

All the stakeholders interviewed agree that the revised Standard has brought increased benefits to industry as the previous standard was out-dated and did not follow contemporary consumer trends. In addition, the revised Standard has also been valuable in addressing new risks stemming from the emergence of new technologies, which was not covered by the older standard and which in turn may help to reduce the risk of incidents.

However, stakeholders diverge on the perceived benefits to the industry resulting from the Standard. Consulted industry stakeholders have argued that the additional requirements were not based on actual accidents, but on technical analysis of potential accidents. In this vein, the stricter requirements were mainly preventive in nature and thus some stakeholders have noted that there are no observed changes in accident levels. This in turn suggests that the hypothetical impact on complaints and legal costs is not likely to be observed. In addition, no evidence has been found that complaints and related costs have been seen as a substantial cost to industry to date.

Interviews with industry stakeholders have also indicated that the removal of the exclusion clause does not necessarily contribute to market growth resulting from the use of appliances by the targeted consumer groups. This is mainly attributed by the stakeholders to the lack of knowledge and understanding among consumers with regard to the benefit and value of standards. This also implies that standards are not an obvious marketing tool such as, for instance, energy efficiency labels, which communicate clear benefits and costs savings to end-users.

There are however indications that some commercial benefits could be derived from publicising safety features resulting from compliance with the standard. The experience from the UK shows that the Kitemark, a certification mark of the British Standards Institution (BSI) focusing on product safety, is recognised and valued by consumers and thus holds marketing value for the industry. BSI found that 72% of a 1,000 polled UK adults recognised the mark and that over 70% would also choose a product with a Kitemark over a similarly priced product²⁵. The mechanism for extracting marketing value from a standard such as EN 60335 is of course different in that it is not accompanied by a label and, assuming full compliance, does not give a single producer an advantage. However, it supports the hypothesis that effective advertisement of safety features could have commercial value.

The other mechanism through which industry could derive benefits from the Standard is related to the increased adoption of elements of the “design for all” or “universal design” approaches by the household appliances industry. While little specific data is available on the benefits to industry of a more inclusive approach, there are examples of producers highlighting “senior-friendly” design elements of their products²⁶. This could be seen as a response to the demographic changes and suggests that industry players recognise the commercial value of designing their appliances accordingly. Given that over a quarter of EU population is projected to be aged 65 or over by 2040²⁷ and that it is estimated that 15% of the European population suffer from some type of

²⁵ See http://www.kitemark.com/business/for_manufacturers.php

²⁶ See for example http://www.siemens.com/innovation/apps/pof_microsite/_pof-fall-2010/_html_en/cooking-up-a-better-life.html or <http://www.geappliances.com/home2025/#kitchenSect>

²⁷ Eurostat Population projections

disability²⁸, the potential commercial benefit of such an approach could yield large rewards over time and the removal of the exclusion clause is likely to contribute to this.

7.1.3.2 Costs

As will also be seen in the other two case studies, it is very difficult to estimate costs to industry with regard to the revised Standard. The stakeholders consulted as part of this case study have argued that the most significant cost to businesses are the engineering costs associated with re-designing the products. It is estimated by interviewed stakeholders that 90% of costs would fall in this category, while the remaining 10% are costs related to the necessary modification of information and labels, such as translation costs, graphic design cost and any re-labelling.

The extent of the engineering costs will depend on each individual manufacturer and the product lines of the specific producers. For example, industry stakeholders have argued that costs will vary depending on the new requirements introduced and how close these standards are to existing products. For example, one of the key modifications in the revised Standard calls for smaller ventilation holes. Depending on the make and model of the household appliance, there may be a need to re-design the cooling system as a smaller opening may have consequences for the construction of the appliance. However, on the other hand revised requirements on the measurement of ventilation openings may instead need only little adaptation. Thus, stakeholders have indicated that it is not possible to arrive at specific cost estimates.

One could therefore conclude that these costs will not be evenly distributed by the industry. This means that for at least one portion of the industry, the producers needing to make only limited adaptations to their products, any benefits are likely to exceed costs over time. In addition, given that the estimated costs of modification of information and labels are seen as relatively low, it is likely that the benefits of providing accessible information will also outweigh the costs.

7.1.4 Key findings

The following points summarise the key findings from the case study:

- The key contribution of ANEC is the commissioning of the research laying the foundation for the revision of the Standard. The revised Standard is not based on extensive accident data, but instead on the notion that the existing Standard was discriminatory in nature and should be revised.
- The fact that the Standard is very recent means that a more comprehensive analysis of industry impact of the Standard has not been possible, although it is generally seen as a positive development for the industry.

²⁸ See http://www.edf-feqh.org/Page_Generale.asp?DocID=12534

- While the evidence with regard to the hypothesis concerning commercial value of safer products is mixed in the absence of accidents, complaints and potential litigation, there are indications that more inclusive household appliances can yield indirect economic benefits over time, with some producers recognising this.
- The costs of complying with the Standard are likely to consist primarily of engineering costs, which will be substantial for some, but not all, producers. This in turn implies that costs are likely to be relatively low for at least some producers, meaning that net benefits could be observed over time in a subset of the industry.
- Costs of providing more accessible information are generally believed to be low, meaning that this element of the revised Standard is also likely to yield a net benefit over time.

7.2 Case study 2: ANEC campaign for safer baby walkers (EN 1273)

7.2.1 Background and context of consumer participation

This case study examines the impact of consumer participation relating to the Standard EN 1273:2005 concerning the safety of baby walkers and their testing requirements. The objective of Standard EN 1273:2005 is to ensure that baby walkers available on the market are as safe as possible for the intended and foreseeable possible uses. In particular, the study focuses on ANEC's work to bring forth a revised Standard and investigates the economic benefits of improved product safety to the industry.

7.2.1.1 *Product characteristics*

The issue surrounding the safety of baby walkers dates back to the early 1970s when concerns were raised in several countries around the injury and hazard risks associated with the product²⁹. A baby walker is a nursery product comprised of a seat surrounded by a rigid frame designed for infants who are able to sit up but not yet able to walk. Baby walkers have been a popular nursery item globally for the past 30 years as they are presumed to give parents more freedom during the period when the child requires continuous attention.

The popularity of the product has also been reinforced by the assumption that they aid an infant's walking ability. However, there is no scientific evidence indicating that baby walkers support mobility development. Instead, both anecdotal and scientific evidence point to a large number of injuries resulting from their use. In particular, injuries most often relate to infants falling down the stairs or acquiring burns due to the increased reach and speed afforded by the walker. It is important to note that injuries do not occur due to defective products, but instead due to the inherent characteristics of the product itself. In this vein, baby walkers are often described as "non-essential nursery products" in the available literature.

7.2.1.2 *Motivations for the standardisation mandate*

Canada³⁰ and the US were two of the first countries to formulate safety standards in relation to baby walkers³¹. These standards were mainly driven by extensive injury data and campaigns from paediatricians and consumer associations. For example, data collected in Canada showed that there were 1,935 baby walker injuries reported among children aged 5 - 14 months of age in 1990-2002. Figures from the US reveal that an estimated 25,000 baby walker injuries were occurring each year prior to the

²⁹ See http://ec.europa.eu/consumers/archive/reports/rights_child_safety_prod.pdf and based on data obtained in interviews.

³⁰ Since 2004 there is a complete ban on the selling of baby walkers in Canada.

³¹ Data obtained in interviews.

implementation of the US standard in year 1998³². However, the US statistics only cover hospital accident data, whereas it is believed that the actual figure is much higher due to many injuries being treated by general practitioners and thus not statistically documented. In addition, it is also believed that some injuries would be minor and not requiring medical care, thus leaving a much larger number of accidents unrecorded.

In Europe anecdotal evidence, country-specific studies and national standard development gave in the 1990s the impetus to revise the then current European baby walker Standard (EN1273 dating from 1994) in order to make the products safer by preventing injuries. According to stakeholder interviews, the initial discussion in the mid-1990s concerning a European mandate was initiated by the Austrian Ministry of Economics after a campaign by the Consumer Council of the Austrian Standards Institute, which highlighted the need for a revision of the existing Standard³³. In particular, this was driven by the high accident data collected from different Member States set against the lack of perceived benefits associated with the product. Data on child injuries from nine European countries collected in the period 2002-2007 showed that more than 90 per cent of baby walker injuries are to the head, with 31 per cent of them causing brain injury and 35 per cent causing skull injury.

Consumer associations in some Member States, such as Portugal, tried to persuade retailers to adhere to codes of conduct in relation to baby walkers as well as implementing a de facto ban by requesting retailers not to stock the baby walkers in their assortment. However, due to the size of the market and the popularity of the product at this time, there were no retailers agreeing to this ban.

In 1997, the European Commission issued a mandate (M/253) to CEN requesting a revision of the EN 1273 Standard. While the American standard provided a blueprint for the standardisation process, the European Standard was preceded by tests in relation to speed and stability. These tests were made at the request of different consumer organisations, which was influenced by consumer participation in the mandate discussions. In particular, stakeholder interviews have pointed towards the importance of ANEC during the mandate discussions and argue that no other European-level organisation would have been able to partake in the discussions with the European Commission at the same level. This is believed to have had a strong influence over the outcome of the standardisation process and the results of the finalised Standard.

7.2.1.3 Main features of the Standard

The main requirement in the Standard stipulates that the baby walker must incorporate a brake system, which stops the wheels if they lose contact with the floor. This is important if, for instance, a child is about to fall down a flight of stairs. This was the

³² ANEC research.

³³ See <http://www.verbraucherrat.at/en/projects/child-safety/baby-walking-frames>

most important revision from the earlier versions of the EN 1273 Standard and is also thought to be the key factor contributing to the improved safety of the product. Data from stakeholders have indicated that the same outcome would not have been achieved without the contribution from diverse consumer associations, which insisted that the stair fall mechanism was an imperative requirement to make baby walkers safer.

7.2.1.4 Adoption of the Standard

Eight years since commencing the drafting of the Standard, it was approved by CEN on March 3rd 2005. This delay was mainly due to the difficulties in compromising on the requirements and the testing procedures. However, once the Standard was adopted it took a further three years for the Standard to be published in the Official Journal of the European Union. This delay was primarily a result of calls from some stakeholder groups for a total ban on sales of baby walkers in Europe, which prompted the European Commission to postpone its decision to publish the Standard. Stakeholders state that the decision by the European Commission to harmonise the Standard under the General Product Safety Directive (GPSD) in 2008 was largely due to the campaign from ANEC together with the European Child Safety Alliance. This campaign involved position statements as well as research illustrated by accident data available at Member State level.

In 2009, PROSAFE carried out a Joint Action involving 10 Member States examining 36 models of baby walkers available on the market. The primary objective of the Joint Action was to ensure that the baby walkers placed on the EU market are safe and carry the appropriate warnings and instructions, while assessing the level of compliance found on the marketplace.

The report found that only 53% of baby walkers are in conformity with the Standard and the remaining 47% do not conform to one or more requirements of EN 1273. Evidence from Sweden suggests that the number of accidental injuries as a result of baby walkers going down stairs remains at the same level as before 2005. However, according to stakeholder interviews, the models that failed the tests were largely following the old Standard and not the EN 1273.

The PROSAFE report resulted in a new revision of the Standard being currently discussed. Although this work item has not yet been activated in CEN's Technical Committee 252 (Working Group 1), it has been argued that a revision will not critically change the safety requirements of the product, but will instead relate to the reproducibility of the tests, which has been known to cause some difficulties, with laboratories revealing different outcomes in the tests.

7.2.1.5 ANEC contribution

According to stakeholder input, ANEC's key contributions together with national consumer associations to the standardisation process can be summarised as follows:

- Prompting the initial revision of the EN1273 resulting in a more rigorous safety standard;
- Involvement in the discussion at political level of the content of the mandate which is believed to have had a significant impact on the outcome of the Standard;
- Incorporating the stair fall requirement, testing requirements as well as the requirement relating to the wider base of the product which are the key revisions perceived to make the baby walkers safer;
- Encouraging the European Commission and the PROSAFE Forum for a follow-up action on the compliance, implementation and enforcement of the EN 1273:2005. This resulted in the Joint Action in 2009-2010 coordinated by PROSAFE investigating the compliance level of EN 1273:2005; and
- Encouraging the publication in the Official Journal of the European Union, thus harmonising the Standard under the General Product Safety Directive.

The next section examines the economic impact following the contributions of consumer participation.

7.2.2 Theoretical impact framework

An early understanding of the expected impacts of consumer participation in the standardisation process relating to Standard EN 1273 was developed in order to understand the conceptual contribution of the Standard.

It is important to note that EN 1273, just as most standards in the area of childcare products, is a safety standard. Thus, our hypothesis relating to the economic benefits for industry primarily concerns the improved safety of the products. Alongside lower number of accidents, basic hypothetical industry impacts resulting from consumer participation in drafting the Standard could include:

- reduced number of complaints and lower resulting costs; and
- greater market potential due to heightened popularity of baby walkers stemming from the products being viewed as safer, which in turn benefit the industry through higher sales.

7.2.3 Analysis of impacts

The following sections examine the theoretical impacts set out above and present and analyse the data collected concerning benefits and costs to the industry.

7.2.3.1 *Benefits*

All stakeholder interviews indicate that EN 1273 has had an overall positive impact on the market for baby walkers, as it has introduced more stringent standards on the products that are being sold. Looking at the key impact on child safety, in the US, where accident and emergency data is more detailed, baby walker-related injuries to children under 15-months of age dropped 57%-75% in 5 years after the ASTM 997 Standard came into force³⁴. There is no similar injury database for the EU, however, anecdotal evidence points towards the number of accidents being reduced as a result of the introduction of the Standard. In particular, falling down the stairs is cited as the risk that baby walker models complying with the Standard help avoid.

With regard to industry impacts, consulted stakeholders argue that EN 1273 is benefiting industry as it helps to create safer products, which are in turn better products and hence benefit the industry. However, there appears to be less evidence of specific monetary benefits stemming from producing safer and, as a consequence, better products. Research has found no evidence of complaints, litigation or injury claims being a major cost to industry pre- or post the implementation of the EN 1273. Some stakeholders have indicated that this is due to the fact that injuries do not occur due to defective products, but due to the characteristics inherent in the product itself. In this vein, a manufacturer is able to claim that the product is safe and accidents occur due to the improper use and lack of supervision by adults.

In addition, stakeholder interviews indicate that the revised Standard (i.e. stricter requirements) does not have any impact on consumer perceptions and in this vein, it holds very little marketing value. According to interviewed stakeholders, this is mainly due to consumers assuming products that are placed on the market to be safe.

Hence, the key identified benefit to industry relates to avoiding potential risks due to accidents and their consequent market impact. Estimating the magnitude of such impacts requires an understanding of:

- the likelihood of accidents occurring;
- their likely impact in terms of response by media and consumers and subsequent impact on producers; and
- the structure and size of the market for baby walkers.

³⁴ See

<https://www.productsafety.gov.au/content/item.php?itemId=973820&nodeId=9e599cdf9ebe0bd66605e22a4dd38315&f=n=Regulation%20impact%20statement%20%E2%80%94%20Baby%20walkers.pdf>

With regard to likelihood of accidents, data from the US and Canada highlighted substantial numbers of baby walker injuries. Al-Nouri and Al-Isami (2006) present data collected from a sample of mothers of 100 of children admitted to an emergency room and find that 94% of children using baby walkers sustained accidents, with 82% of these accidents resulting in head injuries. In addition, mechanical defects in baby walkers accounted for 36% of the accidents³⁵. While this study is not necessarily representative of a broader EU landscape, it does indicate that baby walker accidents remain common.

Drawing conclusions with regard to the impact of the accidents is more complex. On one hand, as noted above, where accidents do not occur as a result of a malfunction, individual producers are often able to avoid litigation and hence accidents may not have substantial impact on individual producers. On the other hand, stakeholder experts argue that baby walkers are much less popular today than 20 years ago, with one factor influencing the popularity of the product believed to be campaigns from different consumers associations as well as paediatricians warning parents about the hazards relating to the product. This in turn suggests that despite some stakeholders believing that consumers assume products placed on the market to be safe, consumer demand is affected by safety concerns.

Overall, however, given that malfunctioning of individual products does not appear to be the key source of accidents (even if still accounts for over a third of accidents, as noted in the study above), the risks that producers can avoid are less likely to resemble high-profile recall and safety notice cases, such as that of the Maclaren strollers³⁶ which is linked by some observers to the US arm of the company filing for bankruptcy³⁷. Instead, a standard is more likely to contribute to slowing or partially reversing the aforementioned trend of falling demand for baby walkers. The risks industry players can avoid due to the Standard can therefore be better understood as risks of consumers turning increasingly against baby walkers.

There is no available data on the market for baby walkers in the EU, but a 2001 US study puts annual sales of baby walkers at over 3 million³⁸, while a 2008 study puts this figure closer to 600,000³⁹. Combining the number with the number of births in the US at approx. 4 million yields a range of approx. 15-75 baby walkers sold per 100 births. Applying this figure to the EU28 would yield a range of 750,000 to 3.75 million baby walkers sold annually in the EU. Even taking the lower estimate to represent a more accurate picture of the EU situation, this would suggest that a substantial number of baby walkers are still sold in the EU. Using that lower estimate and assuming that the

³⁵ Al-Nouri, L. and Al-Isami, S. (2006) Baby walker injuries, *Annals of Tropical Paediatrics*, 2006 Mar 26(1)

³⁶ See for instance http://europa.eu/rapid/press-release_IP-09-1874_en.htm?locale=en

³⁷ See for instance: http://dealbook.nytimes.com/2012/03/02/maclaren-a-stroller-maker-in-bankruptcy/?_php=true&_type=blogs&_r=0

³⁸ See <http://pediatrics.aappublications.org/content/108/3/790.full>

³⁹ Rodgers, G.B. and Leland, E.W. (2008) A retrospective benefit-cost analysis of the 1997 stair-fall requirements for baby walkers, *Accident Analysis and Prevention*, 40(1)

retail price of baby walkers in the EU is €30, also a low estimate, the size of the baby walker market in the EU could amount to €22.5 million annually.

While lowering the rate annual rate of market decline by, for instance, one to five percentage points would constitute a relatively limited benefit to be shared among a number of market players, it is possible that over time these benefits could still outweigh the one-off and recurring costs of complying with the Standard, as discussed below.

7.2.3.2 Costs

It has been difficult to estimate the costs of the Standard on industry. This is dependent on the different manufacturers, their supply chains and the modifications that are necessary for individual products to comply with the Standard. The final cost also depends on the extent to which producers can pass costs onto consumers. One estimate of the actual cost of redesigning baby walkers comes from a US study, where Consumer Product Safety Commission estimated the additional cost of baby walkers redesigned to avoid stairway falls to be \$4⁴⁰.

Since the key question concerns the relationship between benefits and costs for the industry, the above figure could be used as an indication of likely cost. Assuming that only half of all costs have been passed onto consumers, the total additional cost per walker could be \$8 or approx. €6, with half of this cost being borne by the producers. This would in turn amount to a total cost of €2,250,000 for 750,000 baby walkers sold annually, or approx. 10% of the final price and hence the total market size.

While it is unlikely that the Standard and resulting reduction in the number of accidents could help avoid the total market size falling by 10% in a single year, over time the cumulative benefit of avoiding market erosion will grow, while the costs to producers are likely to fall, especially if some of these costs are one-off costs. This in turn implies that the producers are likely to see a net benefit over time.

7.2.4 Key findings

The following points summarise the key findings from the case study:

- Consumer participation in the standardisation process has contributed to initiating the discussion on a revision of the Standard, as well as to influencing the content of the mandate issued by the European Commission.
- Without consumer organisations highlighting the need for stricter safety requirements, it is possible that a revision would have occurred at a later stage

⁴⁰ Rodgers, G.B. and Leland, E.W. (2008) in Wagenaar, A. C. and Burris, S. C. (2013) Public Health Law Research: Theory and Methods

and safety requirements would not have been as rigorous. This is evidenced by efforts of some consumer organisations to introduce, unsuccessfully, a de facto ban on sales of baby walkers, prior to the introduction of the EN 1273.

- There is a lack of European-wide injury data, which makes it difficult to draw any wider conclusions concerning the outcome of the Standard. However, anecdotal evidence from industry and consumer organisations supports the notion that accidents have been reduced as a result of the Standard. This is strengthened by evidence from the US, where accidents dropped by 57-75% five years after the introduction of the US safety standard.
- All stakeholders consulted agree that the Standard has constituted a positive development for the industry, although the economic benefits relate to avoiding negative publicity associated with the products rather than reducing the number of complaints or actively raising the popularity of baby walkers.
- Avoiding risk of negative publicity can in turn contribute to slowing down a decline in the market for baby walkers, with the benefit of avoiding this erosion likely to outweigh compliance costs over time.

7.3 Case study 3: ANEC's contribution to the accessibility standards for ICT procurement (EN 301 549)

7.3.1 Background and context of consumer participation

This case study examines the European Standard EN 301 549 setting out accessibility requirements suitable for public procurement of ICT products and services. The Standard was initiated based on a mandate (m/392) issued by the European Commission in 2005 to the three European Standards Organisations (ESOs), with the aim of providing a single source of detailed practical and functional accessibility specification in relation to ICT.

The objective of the Standard is to harmonise e-accessibility in the Internal Market to the benefit of consumers with disabilities as well as elderly consumers. Both industrial and societal stakeholders (EDF and ANEC) took part in the standardisation process from the beginning. This case study focuses on the contribution of ANEC as well as EDF, as in this case both organisations can be seen as representing consumers.

7.3.1.1 *Product and service characteristics*

The Standard covers a wide range of products and services related to ICT. The specific categories of products and services covered include:

- ICT with two-way voice communications;
- ICT with video capabilities
- Hardware
- Web
- Non-web documents
- Software
- Documentation and support services; and
- ICT providing relay or emergency service access.

Although the title suggests that the Standard is to be used exclusively for public procurement, the section on the scope of the Standard notes that the “[...] document might be useful for other purposes such as procurement in the private sector”. However, even constrained to the procurement market, the scope of the Standard is substantial. The public procurement market is the single biggest market for ICT products and services⁴¹. In this vein, the use of public spending power is believed to boost overall accessibility in the ICT sector as well as upgrade accessibility skills in the industry.

⁴¹ See http://www.mandate376.eu/ws2/2011-10-28_ANEC_presentation_M376.pdf

7.3.1.2 Motivations for the standardisation mandate

According to stakeholder interviews the main reasons for the issuing of mandate 376 were two-fold:

- The slow uptake of accessibility by industry despite policy processes at national and European levels⁴²; and
- similar developments in the US and later legislation on the accessibility of ICT products and services⁴³. One of the important objectives of the mandate was to minimize any differences between accessibility requirements used in US public procurement and those in use in Europe.

7.3.1.3 Main features of the Standard

As noted above, the Standard covers a wide range of products and services, setting out a number of “statements” with regard to functional performance in the cases of:

- Usage without vision;
- Usage with limited vision;
- Usage without perception of colour;
- Usage without hearing;
- Usage with limited hearing;
- Usage without vocal capability;
- Usage with limited manipulation or strength;
- Usage with limited reach;
- Photosensitive seizure triggers;
- Usage with limited cognition; and
- Privacy

This is followed by a range of specific technical requirements for products and services set out earlier in this section, the detailed discussion of which is outside of the scope of this report.

7.3.1.4 Adoption of the Standard

⁴² See http://portal.etsi.org/stfs/STF_HomePages/STF333/STF333.asp

⁴³ Section 508 of the rehabilitation Act, “requires US federal agencies to develop, procure, maintain and use electronic and information technology that is accessible to people with disabilities – regardless of whether or not they work for the federal government”. See further Plucke, M. (2013) Accessibility Requirements for Public Procurement of ICT Products and Services in Europe

The standardisation work was conducted in two phases. The first phase saw the establishment of ETSI Specialist Task Force which was charged with identifying accessibility requirements and gaps where no accessibility requirements existed while mapping existing national, European and international standards and technical specifications⁴⁴. ANEC was represented in the task force, which was key in preparing the drafting of the Standard⁴⁵.

It is important to note that a number of challenges were encountered during the process. EDF in its Position on the Standard EN 301 549⁴⁶ notes that at later stages in the process EDF input was disregarded due to its observer status. While the organisation welcomes the Standard and sees it as “a step towards a more accessible ICT environment for persons with disabilities” it highlights a range of problems, including:

- no explicit requirements present in the section on functional performance;
- a range of generic requirements not being included in the cross-cutting generic part of the Standard; and
- specific concerns with regard to closed functionality, audio bandwidth, real-time text (RTT), framerate, alternatives to video-based services, captioning playback, and audio description playback.

According to EDF, these issues mean that in some situations non-accessible products or services (i.e. those not offering RTT support) can effectively conform to the provisions of the Standard.

The process of adoption of the Standard is still in progress. The Standard itself was published in February 2014 along with the following accompanying documents:

- TR 101 550 – Documents relevant to EN 301 549 "Accessibility requirements suitable for public procurement of ICT products and services in Europe"
- TR 101 551 - Guidelines on the use of accessibility award criteria suitable for public procurement of ICT products and services in Europe
- TR 101 552 – Guidance for the application of conformity assessment to accessibility requirements for public procurement of ICT products and services in Europe

This is however still to be complemented by an Accessible ICT Procurement Toolkit, the final deliverable of the standardisation process.

⁴⁴ Data obtained in interviews and verified through: <http://www.anec.eu/anec.asp?p=archives&ref=02-01.01-01&ID=221>

⁴⁵ See <http://www.anec.eu/anec.asp?p=archives&ref=02-01.01-01&ID=221>

⁴⁶ See <http://bit.ly/1e0l15b>

7.3.1.5 ANEC and EDF contribution

As noted above, the consumer contribution to the Standard has faced obstacles, with some elements not covered in the final Standard. Nevertheless, consulted stakeholders stressed the importance of consumer input in ensuring high technical requirements, as well as in contributing to the Standard recognising its applicability beyond the public procurement area. In this vein, these contributions helped raise the level of accessibility the Standard calls for and also helped to set the scene for potential spill-overs beyond public procurement.

7.3.2 Theoretical impact framework

An early understanding of the expected impacts of consumer participation in the standardisation process relating to Standard EN 301 549 was developed in order to understand the conceptual contribution of the Standard.

The key expected impact associated with consumer contribution into the development of the Standard is that of more accessible ICT products and services used in public procurement than would have been the case without this contribution (and, of course, without the Standard being present in the first place). The hypothetical second order impacts in turn concern potential spill-overs into the private sector, which in turn can result in improved accessibility of business-to-consumer (B2C) ICT products and services, as well as those used in workplaces (business-to-business, B2B).

The key positive impact for the producers would in turn relate to their ability to reach a wider and more diverse range of users than previously, resulting in a positive impact on their revenues and potentially contributing to offsetting the costs of adaptation to the Standard. While compliance with the Standard should also put producers in a better position with regard to public procurement, this effect is largely independent of consumer participation in the process, since compliance with a less consumer-oriented standard would still result in an improved competitive position in the public procurement market. Hence, this effect will not be discussed in the following sections.

7.3.3 Analysis of impacts

The following sections examine the theoretical impacts set out above and present and analyse the data collected concerning benefits and costs to the industry.

The key challenge in analysing the costs and benefits associated with the adoption of the Standard EN 301 549 is the fact that the Standard has only been adopted in February 2014. As a result, none of the hypothetical impacts of the Standard outlined above would have been realised. This in turn means that the analysis of likely costs and benefits associated with the Standard needs to draw on experience from third

countries. Hence, the next sections draw primarily on the US experience, where the revised Section 508 of the Rehabilitation Act of 1973 was adopted in 1998. Section 508 requires US Federal bodies to make their ICT products and services accessible to people with disabilities. While it is a law that applies to Federal agencies, it is accompanied by a set of technical standards and hence can be compared to Standard EN 301 549, the development of which was inspired by Section 508.

7.3.3.1 Benefits

In order to understand to what extent consumer participation in the development of a standard such as EN 301 549 can positively impact the industry, it is important to determine:

- the extent to which industry players comply with the Standard;
- the subsequent changes industry players implement to a broader range products beyond public procurement (the spill-over effect);
- the degree to which these changes further positively impact on the revenues of the industry players.

With regard to compliance, the experiences with similar standards in third countries are mixed. A 2012 Australian study on accessible communication critically reviewed the Section 508 initiative and noted that the US Federal administration still purchased products with “poor accessibility features”⁴⁷, while as of 2011, 13 years after the revised Section 508 has been adopted, web accessibility has also been lacking⁴⁸. Given that the US approach combines legislation with technical standards and is seen by the authors of the study as “the strongest compliance regime” out of the approaches studied (including those used in Australia, Japan, Canada, Ireland, the United Kingdom, and the at the time on-going work on Mandate 376), the fact that a number of compliance challenges are still observed, suggests that compliance in the EU is likely to be at least as problematic.

Assuming a level of compliance, the next step in the assessment is to understand the extent to which a spill-over effect is likely to occur. Such spill-overs have been identified as a likely benefit of standardisation in existing studies. For instance, US Access Board’s regulatory assessment of the costs and benefits of the electronic and information technology accessibility standards notes that “it is likely that software manufacturers will modify and sell one version of their products with accessible features to the government and to the private sector in response to these standards”⁴⁹.

⁴⁷ Turner (2012) in University of Wollongong and GSA Information Consultants (2012) Accessible Communications - tapping the potential in public ICT procurement policy

⁴⁸ University of Wollongong and GSA Information Consultants (2012) Accessible Communications - tapping the potential in public ICT procurement policy

⁴⁹ See <http://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/background/regulatory-assessment/chapter-5-estimated-benefits-of-standards>

Yet, there appears to be relatively little quantitative evidence of this process working in practice.

It is worth noting that there are other mechanisms through which accessibility standards in public procurement can contribute the ICT industry making their products and services more accessible:

- For companies already working on and investing in accessibility existence of public procurement standards can serve as a means of demonstrating a return on investment, thus helping to justify future investment⁵⁰.
- Similarly, one potential barrier to accessibility of ICT is the fact that demand for certain features is not well known in advance and can constitute a risk to producers. This risk can be minimised using existing standards⁵¹.
- In Japan, population aging constituted a commercial incentive that contributed to Japanese industry's successful investment in accessible devices (20 million of accessible phones and laptops have been sold between 2001 and 2011)⁵². Accessibility standards in the public procurement area can be used to guide similar industry initiatives, potentially contributing to even more accessible products and services.

Overall, despite a number of mechanisms through which standards are likely to improve accessibility across the ICT industry, there appears to be little hard evidence demonstrating this effect, which in the US could be attributed to compliance challenges.

Were the above mechanisms functioning, the final element of assessing likely benefits to the industry concerns that of a business case for accessibility. There are a number of examples of such business cases being made by industry players (i.e. Apple's use of accessibility as part of its broader brand and marketing strategy⁵³) or NGOs (i.e. W3C guidelines for developing a business case for web accessibility highlighting increased website usage). Stakeholder interviews also indicated that there is increased interest in accessibility among technology companies, based on the assumption that if "extreme" end-users are well catered for by the products and services, they will also serve the cross-section of the population very well.

One way of approaching a question of a business case is to estimate the potential growth in the number of users that ICT providers can reach. A 2012 study on e-

⁵⁰ See Microsoft input into the fourth Listening Session of the Federal CIO Council available at: <https://cio.gov/wp-content/uploads/2012/09/Stanford-listening-session-06-17-2011.docx>

⁵¹ University of Wollongong and GSA Information Consultants (2012) Accessible Communications - tapping the potential in public ICT procurement policy

⁵² University of Wollongong and GSA Information Consultants (2012) Accessible Communications - tapping the potential in public ICT procurement policy

⁵³ See G3ict (2012) Benefits and Costs of e-Accessibility - A G3ict Business Case White Paper Series

accessibility conducted for the European Commission⁵⁴ estimated the total number of individuals likely to benefit from accessibility in the ICT sector across the EU to be 110 million, including both people with disabilities and the elderly. The study estimates that e-commerce gains to the private sector resulting from improved web accessibility would range from €68 million to €1.4 billion. This is based on a finding that there is a gap of 12% between people with disabilities and the rest of the population in the EU with regard to internet use (i.e. if additional 12% of people with disabilities used the internet, their average internet usage would equal that of the entire population), Assuming that this figure would apply to ICT as a whole, this would yield up to 13.2 million additional users of more accessible ICT products and services. Using the latest 2013 Eurostat figures on the prevalence of computer showing 78% of all individuals EU to have used a computer within the last twelve months and assuming this to represent the potential market for ICT, additional 13.2 million ICT users would represent an up to 3% increase in the number of ICT users. This could in turn be taken as an indication of the likely impact in terms of an increased market potential attributed to an accessibility standard.

7.3.3.2 Costs

An analysis of costs to industry associated with the Standard is problematic, since, as noted above, the Standard covers a very wide range of products and services. One can expect that the costs will vary by organisation, its product or service, as well as its current accessibility practices. The US Access Board assessment provides some cost indications for software and hardware modifications:

- Total costs of modifying general office software (estimated to be 80% of the public procurement software market) are estimated to range from \$110 to \$456 million per year. This reflects the assumption that 30% of software will satisfy the standards and require no modification, 40% will require moderate modifications, and the remaining 30% significant modifications.
- The increase in costs in order to make self-contained hardware products accessible (i.e. products where accessibility features cannot be added by a third party and which need to be designed to be accessible) is estimated to range from 5% to 20%⁵⁵.

Overall, while the US experience suggests that compliance costs can be substantial, it is important to note that there are a number of factors, which are likely to contribute to reducing the actual cost impact on the industry:

- Firstly, global ICT providers will be able to draw on their investment in accessible products from outside of the EU where such standards are more

⁵⁴ Technosite, Tech4i2, AbilityNet, NOVA (2012) Study on Economic Assessment for Improving eAccessibility Services and Products

⁵⁵ See <http://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/background/regulatory-assessment/chapter-5-estimated-benefits-of-standards>

established, such as in the US. There is evidence that large ICT providers take a more global approach to accessibility, which in turn can help them reduce compliance costs as long as requirements are not overly different⁵⁶.

- Secondly, as assumed in the US Access Board assessment, ICT industry players will be able to pass some of the costs of improved accessibility onto both public bodies and consumers.
- Finally, while ensuring accessibility requires on-going costs of updating and maintenance⁵⁷, it is expected that considerable portion of the costs will refer to a one-off investment.

7.3.4 Key findings

The following points summarise the key findings from the case study:

- The fact that the Standard is very recent means that a more comprehensive analysis of industry experience with the Standard and hence testing the hypotheses with regard to potential benefits is not yet possible,
- Experience from the US shows that there are a number of mechanisms through which an accessibility standard for public procurement can lead to spill-over effects resulting in a wider range of products and services becoming more accessible.
- Existing research on business cases for industry and experience from the area of web accessibility suggests that improved accessibility is in turn likely to bring about a benefit to the industry.
- While costs of compliance can be substantial, there are a number of ways in which ICT providers can reduce these costs. In addition, the costs are likely to fall over time after the initial investment.
- Consumer participation in the Standard has contributed to maintaining high accessibility requirements across most technical areas and to the recognition that the Standard can be of relevance beyond the field of public procurement. This can, in turn, help achieve better accessibility outcomes, as well as contribute to ensuring that a spill-over effect takes place in the EU.
- The key barriers relate to initial compliance with the Standard. The US experience shows that even over a decade after the revised Section 508 was introduced, a number of compliance challenges were still present.

⁵⁶ See for instance a posting by the Microsoft Director of Accessibility Policy and Standards available at <http://blogs.msdn.com/b/accessibility/archive/2014/03/24/europe-new-accessibility-procurement-standard.aspx>

⁵⁷ See Microsoft input into the fourth Listening Session of the Federal CIO Council available at: <https://cio.gov/wp-content/uploads/2012/09/Stanford-listening-session-06-17-2011.docx>

8 ANNEX 2: Analysis grid

Table 2 - Analysis grid

Research question	ANEC campaign for the removal of the exclusion clause from the standards on the safety of household appliances (EN 60335)	ANEC campaign for safer baby walkers (EN 1273: 2005)	ANEC's contribution to the accessibility standards for ICT procurement (EN 301 549)
Stakeholder interviews			
What has been the nature of consumer participation in the standardisation process?	ANEC commissioned the research, which laid the foundation for the European Commission mandate which prompted the revision of the original EN 60335 Standard. ANEC was also actively involved throughout the standardisation process.	National-level consumer stakeholders highlighted the need for a revised European Standard in regards to baby walkers. This prompted a discussion around a mandate by the European Commission, to which ANEC contribution laid in the high-level political discussion around the content of the mandate.	ANEC and EDF were part of the task force involved in the development of the Standard and were, along with the European Commission, the main actors representing consumers and people with disabilities in the process.
What were the expected impacts of consumer participation?	Expected outcome of the Standard was to ensure the inclusion of vulnerable consumer groups.	Expected impact of the Standard was a reduction in the number of accidents resulting from more stringent safety requirements of the revised Standard.	Expected outcome was to ensure appropriate accessibility requirements, as well as ensure that the Standard applies to a wide range of products and services.
How successful has this participation been?	Stakeholder interviews indicate that there was a clear agreement between diverse stakeholders that the original Standard was discriminatory and should therefore be revised. However, some of the specific requirements were met with resistance from industry.	Stakeholder interviews indicate that participation and cooperation between the different stakeholders have been positive. This is mainly due to the fact that child safety is crucial to industry as well as end-users. However, stakeholders have remarked that there has been insufficient consumer participation at national level, which has made the contribution from ANEC imperative.	The participation encountered challenges in that some requested elements were not included. Nevertheless, EDF welcomed the Standard and noted that it contributed to ensuring requirements in specific areas were adequate (but not in all areas), as well as contributing to the recognition that the Standard can be used beyond the area of public procurement.
What is the level of compliance by industry?	EN 60335-1 falls under the Low Voltage Directive, which implies presumption of conformity.	See below and the Joint Action by PROSAFE in regards to baby walkers.	It is still too soon after the adoption of the Standard to make this assessment.
Is there evidence of the Standard achieving its objectives?	Stakeholders consulted argue that the Standard has introduced newer and more inclusive safety requirements. However, whether this has led to a more inclusive use of household appliances	Only anecdotal evidence from experts arguing that accidents have been reduced after the introduction of the Standard.	It is still too soon after the adoption of the Standard to make this assessment.

	falling under EN 60335 is inconclusive.		
What are the benefits to industry?	Benefits cited to industry include the increasingly safer products. However, the monetary value of safer products could not be verified.	Safer nursery products with reduced hazard risks are of benefit to industry. This is due to the adverse economic impact negative publicity can have on industry.	It is still too soon after the adoption of the Standard to make this assessment.
What are the costs to industry?	Costs depend on manufacturer and how costs are absorbed through different pricing strategies. 90% of costs are estimated to be related to engineering costs with further 10% believed to be related to new labelling, graphic design and translation of information booklets. It is not possible to arrive at an aggregate figure for the entire industry.	Costs depend on manufacturer and how costs are absorbed through different pricing strategies. Most of the costs are believed to be related to re-designs of the baby walkers. However, the cost of this will depend on individual product lines. It is not possible to arrive at an aggregate figure for the entire industry.	It is still too soon after the adoption of the Standard to make this assessment.
Desk research			
What is the level of compliance by industry?	No studies are available on compliance levels. However, EN 60335-1 falls under the Low Voltage Directive, which implies presumption of conformity.	PROSAFE study examining 36 models of baby walkers on the market found that 47% failed one or more requirements in the Standard. However, stakeholder interviews have indicated that the models tested were adhering to the previous EN 1273 Standard and not the revised one examined.	Experience from the US suggests that compliance with accessibility standards can be problematic and a similar effect is likely to be observed in the EU
Is there evidence of the Standard achieving its objectives?	No studies or available secondary material were found on the EN 60335.	No accident figures are available due to the lack of a European injury database. However, evidence from the US suggests that accidents are reduced after the introduction of the US-equivalent to the EN 1273:2005.	Experience from the US suggests that despite limited compliance, accessibility standards can spur on increased accessibility across the ICT sector.
What are the benefits to industry?	There is no available documentation on the benefits to industry of the EN 60335.	There are no studies available on the benefits to industry of safer baby walkers.	There are a number of mechanisms through which accessibility standards can benefit ICT producers, with some spill-over effects acknowledged by ICT providers. At the same time, there is little evidence of the magnitude of actual impacts.
What are the costs to industry?	No figures are available through secondary	No figures are available through secondary	While costs of compliance with accessibility

sources.

sources.

standards can be substantial, they are likely to decrease over time after the initial investments. In addition, large ICT providers can draw on initial investment to comply with standards in other jurisdictions. Industry players are also unlikely to bear all of the compliance costs, with some costs likely to be passed onto public bodies and consumers.

9 ANNEX 3: Stakeholder interview list

Case study 1: ANEC's campaign for safer household appliances (EN 60335)

Interviewee	Organisation	Status
Chiara Giovanni	ANEC	Completed
Michal Zakrzewski	CECED	Completed
Fabio Gargantini	CENELEC	
Albert Enting	CENELEC	Completed

Case study 2: ANEC's campaign for safer baby walkers (EN 1273: 2005)

Interviewee	Organisation	Status
Jocelyn Loumeto	AFNOR	Completed
Tania Vandenberghe	ANEC	Completed
Sandra Nascimento	APSI - Associação para a Promoção da Segurança Infantil	Completed
Franz Fiala	Consumer Council at the Austrian Standards Institute	Completed
Frederic Hausemer	European Federation of Nursery Products	Completed
Robert Anslow	European Federation of Nursery Products	Completed
Berend Kamerling	PROSAFE	Completed
Michael Cassar	PROSAFE/ Maltese Competition and Consumer Authority	Completed

Case study 3: ANEC's contribution to the accessibility standards for ICT procurement (EN 301 549)

Interviewee	Organisation	Status
Chiara Giovanni	ANEC	Completed
Fernando Machicado	AENOR	Completed
Axel Leblois	G3ICT	Completed

10 ANNEX 4: Interview guide

Introduction

ANEC has commissioned VVA Europe to carry out a preliminary study on the economic impact of consumer participation in the standardisation process. In the framework of this study, we are carrying out a series of case studies in order to conduct an in-depth analysis of the impact of consumer participation in specific areas of standardisation. .

This interview constitutes an important input into this study. We will use the information from the interview in our final report to ANEC. However, we will not quote you directly, nor attribute any statements to you as an individual. If you agree, the name of your organisation may be included in the report as part of a list of stakeholders consulted during the study.

Do you have any questions?

Case study interview guide	Responses
Background information	
Could you briefly describe the role of your organisation? What are the objectives of the Standard? What prompted the need to develop the Standard? (<i>prompt anecdotal evidence, data or studies</i>) How was your organisation involved in the standardisation process?	
Impact of Standardisation	
Who were the different stakeholders involved in the standardisation process? What were the main obstacles in the standardisation process? How did consumer participation in the standardisation process impact on the outcome of the process? To what extent could this outcome be achieved without consumer participation? What resources did your organisation commit to participating in this standardisation process? Are there evidence that the Standard achieved its objectives?	
Industry impacts	
What has been the impact on industry? What have been the costs for industry in adopting the Standard? (<i>prompt: re-design, manufacturing, information</i>) What are your estimates of total costs? What have been the main benefits for industry? (<i>prompt: marketing strategies, pricing strategies</i>) Has there been any impact on sales figures? What data is available about the impact of the Standard?	
Closing remarks	

<p>Which other data sources do you suggest we consult? What other stakeholders should be consulted? Do you have any other comments or remarks?</p>	
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