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Study on the socio-economic impact of new measures to improve accessibility of goods and services for people with disabilities

Final Report

Executive Summary

Context and Approach

This is the Final Report of the "**Study on the socio-economic impact of new measures to improve accessibility of goods and services for people with disabilities**", commissioned by the European Commission, Directorate-General for Justice. The study provided the European Commission with analysis and data as a foundation for its **Impact Assessment for a European Accessibility Act**, which was announced by the European Disability Strategy 2010-2020[1] and in the 2012 Commission Work Programme concerning the legislative initiative on "European Accessibility Act: improving accessibility of goods and services in the Internal Market".[2]

The overall objective of the assignment was to assess the *"potential socio-economic impacts of possible new measures by the EU to improve accessibility of goods and services for people with disabilities"*. More specifically, the assignment aimed at "*exploring the merits of adopting EU regulatory measures to substantially improve the proper functioning of the Internal Market for accessible goods and services, including measures to step up the use of public procurement"*. To inform this assessment, the study sought to identify barriers to the smooth functioning of the Internal Market for accessible goods and services, such as diverging regulatory obligations and requirements in the area of accessibility across the Member States, which may eventually lead to difficulties of the market in meeting the demand for accessible goods and services.

This **focus on the Internal Market** implies an approach different from most existing research in the area of disability. Generally, the literature is more focused on a 'rights-based' approach to accessibility, starting from the premise that people with a disability have the right to *"full and effective participation in society on an equal basis with others"*.[3] While this is most certainly true and clearly spelled out in the United Nations Convention on the Rights of People with Disabilities (UNCRPD), the objective of this study was not to identify limitations to achieving this right, but to assess the barriers and impacts for market players, both industry and consumers with disabilities including elderly people to provide accessible goods and services that support the achievement of such a full and effective participation in society.

[1] European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe, COM (2010) 636
[2] Commission Work Programme 2012 (COM(2011) 777 final). Item 99, p. 19, http://ec.europa.eu/atwork/pdf/cwp2012_annex_en.pdf
[3] United Nations Convention on the Rights of Persons with Disabilities, Article 1.

The following **main hypotheses** shaped the study's overall scope and focus:

- There are not enough accessible goods and services in the EU Internal Market.
- The potential of persons with disabilities as a relevant segment of consumers is mostly overlooked.
- This introduces barriers for disabled people's economic, social and political participation in society.
- The underlying reasons for the insufficient market response to provide accessible goods and services include: the fragmentation of the relevant markets, caused in part by differences in legislation and relevant policy measures between the Member States (as well as at regional level), lack of awareness of the market potential, caused in part by its fragmentation, and other barriers such as specific additional costs. Some of these barriers, such as costs of development and marketing, could be reduced by economies of scale, but this is hindered by the market fragmentation.
- Particularly the areas of the built environment, transport, as well as information and communication, including technologies, are key enablers to achieve accessibility and participation of disabled people. However, problems also occur in other areas, partly due to the lack of accessibility in relation to the key enablers.
- New measures at the EU level to improve accessibility through common accessibility requirements at the EU level will reduce the burden for industry to comply with multiple national regulations and thus improve the supply of accessible goods and services.

These hypotheses were assessed in detail for the **15 priority goods and services** as well as the **horizontal case of public procurement** of accessible goods and services (see table below). These priority goods and services have been selected among the 87 relevant goods and services based on an in-depth analysis of the UNCRPD, national and EU accessibility legislation, the responses to the European Commission's public consultation with a view to a European Accessibility Act as well as expert and stakeholder input.

Table 1: Priority goods and services

Priority goods and services			
Information and communication, including ICT	**Built (physical) environment**	**Transport**	**Other areas**
• Television and related services • Computers and operating systems • Websites • eBooks • Self-Service Terminals • Mobile telecommunication equipment • Telecommunication services (emergency and relay services)	• Architectural services	• Bus transport services • Rail transport services • Maritime transport services • Air transport services	• Banking services • eCommerce • Hospitality services
Public procurement of accessible goods and services			

Each of the priority goods and services and the horizontal case of public procurement were examined with regard to current problems as well as the development of the identified problems in the baseline scenario for 2020, i.e. in a scenario with no additional EU policy intervention to what is already ongoing or planned (cf. section “problem assessment”). Based on this assessment, different options for EU policy intervention were defined (cf. section “policy objectives and options for policy intervention”) and assessed with regard to their impacts and ability to overcome the existing and potential future problems in the Internal Market for accessible goods and services (cf. section “assessment of impacts”). The main findings are presented below.

Problem Assessment

The problem assessment for the current situation as well as the baseline scenario for 2020 focused on the legislative situation in the EU Member States, the markets for the priority goods and services, costs faced by businesses with regard to the provision of accessible goods and services, as well as the problems faced by disabled consumers in the Internal Market.

The research carried out as part of the study show that the **legislative situation** in the EU Member States varies between the priority goods and services. However, for all goods and services covered, discrepancies and even contradictions between the accessibility requirements in place have been identified. The differences are expected to increase until 2020 due to e.g. the Member States’ obligations under the UNCRPD. The priority goods and services with a high degree of ***regulatory coverage and fragmentation of technical accessibility requirements include architect services, broadcasting accessibility services as well as digital terrestrial television (DTT) equipment.*** An intermediate degree of regulatory ***coverage and fragmentation was evidenced for automated teller machines (ATMs), self-service terminals in the transport sector as well as telecommunication services (relay and emergency services), while eBooks, private websites (e.g. of transport companies, banks, eCommerce companies, hospitality service providers), mobile telecommunication terminals, computers and operating systems as well as the area of public procurement are characterised by a*** lower degree of coverage by mandatory technical accessibility requirements.

The varying accessibility requirements in place and the new regulations that are expected to be introduced by 2020 in the EU Member States lead to **barriers and costs for businesses related to cross-border trade**. More specifically, in case of contradictory accessibility requirements, businesses will need to adapt their goods and services and will not be able to fully exploit the advantages of economies of scale and the benefits of the EU Internal Market. As part of this assignment, three types of costs have been estimated for each priority good and service, i.e. the total **costs of accessibility**, **costs to ensure accessibility across borders**, and **costs to understand legislative requirements in other EU Member States**. These costs are particularly high in the cases of websites, television and related services, eCommerce, hospitality services, telecommunication services, and bus transport services. The remaining priority goods and

services have lower costs. By means of summary, the following costs have been estimated[4] as a result of differences on the Internal Market:

- Based on one set of legislative accessibility requirements across the EU, businesses active in the priority goods and services markets are expected to incur total accessibility costs between 15.3 EURb and 27.3 EURb; These costs would derive from national commitments related to accessibility legislations for example following the implementation of the UN Convention on the Rights of Persons with disabilities.
- Costs to ensure the accessibility of goods and services across borders are estimated to range from 12.9 EURb to 21.6 EURb; and
- Incurred costs of understanding different accessibility requirements in the EU Member vary from 284.1 EURm to 1.4 EURb. These last costs are mainly the result of fragmented legislation across Member States.

The markets for the priority goods and services are generally characterised by a **lack of accessibility**. This is evidenced by **low take-up rates by persons with disabilities** and leads to businesses not being able to realise turnover related to persons with disabilities. This forgone market potential is expected to increase until 2020.

Disabled consumers and elderly incur **opportunity costs[5] due to the lack of accessibility of goods and services**. An estimate of these costs was, however, only possible to calculate in the cases of eBooks, websites, ticketing machines, ATMs, as well as for computers and operating systems but would also exist for other goods and services. The potential annual opportunity costs for consumers related to the (cross-border) provision of accessible goods and services have been estimated to range from 2.3 EURm in the case of eBooks to as much as 8.9 EURb in the case of computers and operating systems.

To conclude, the varying national technical accessibility requirements are likely to have a **negative impact on cross-border trade**, resulting in that the full potential of the Internal Market is not achieved. Furthermore, the lack of accessibility has a **negative impact on competition among industry players** in the Internal Market as the variations between national technical accessibility requirements make it difficult for in particular new market entrants and SMEs to engage in cross-border trade. The problems that have been evidenced for business bring about **negative consequences for different societal groups**, in particular **persons with disabilities and elderly**. Choice, quality and price are three areas where problems have been evidenced.

[4] These estimates are based on estimations of both one-off capital expenditures (CAPEX) and ongoing operational expenses (OPEX).

[5] Opportunity costs incurred by disabled and elderly are costs that could be saved through increased accessibility of priority goods and services. For instance, transport tickets are expected to be more expensive when bought at the counter than online. Increased website accessibility could therefore provide financial benefits to disabled citizens and elderly.

Policy Objectives and Options for Policy Intervention

In view of the problems identified above, various options for EU policy intervention were developed and assessed with regard to their impacts and ability to overcome the existing and potential future problems in the Internal Market for accessible goods and services.

All options for EU policy intervention were defined based on a set of policy objectives. The two **general policy objectives** of potential EU intervention in this field are:

- To contribute to the achievement of Europe 2020 Strategy with the aim of turning Europe into a "smart, sustainable and inclusive economy delivering high levels of employment, productivity and cohesion" as well as to the implementation of the European Disability Strategy 2020.
- To improve the functioning of the Internal Market of specific accessible goods and services and in the area of public procurement.

These general policy objectives are complemented by two **specific policy objectives**, which intend:

- To improve cross-border trade in the area of selected goods and services and in the area of public procurement;
- To increase competition among industry in the area of selected goods and services and in the area of public procurement.

The following four different **policy options** for EU policy intervention have been defined:

- **Policy Option 1:** Baseline scenario or “status quo”, i.e. no additional EU policy intervention;
- **Policy Option 2:** An EU recommendation on common (non-binding) accessibility requirements for selected goods and services;
- **Policy Option 3:** Common accessibility requirements at EU level for selected goods and services through a legally binding instrument (Directive) applicable to those Member States that already have legislation in place or when they adopt new national accessibility requirements in the selected areas; and
- **Policy Option 4:** Common accessibility requirements at EU level for selected goods and services through a legally binding instrument (Directive) applicable to all Member States.

Other options were also considered but not pursued given their unsuitability to tackle the identified problems.

As concerns the content of policy options 2 to 4, the same accessibility requirements concerning the selected goods and services would be established as part of all three options. The working assumption is that the following two broad **types of accessibility requirements** would be established:

- **Requirements to make the specific good or service accessible:** Depending on the particular good or service being considered, this may include making accessible the user

interface, related functionality and, in the case of services, the related built-environment, online related applications, or functions in the operation of the service.

- **Requirements to provide accessible information:** This requirement refers to the provision of accessible information concerning the accessibility "features" of the relevant goods or services, including e.g. on use, installation, maintenance, storage and/or disposal. Depending on the particular good or service, this may also include the provision of accessible information concerning the packaging or accessibility characteristics of the service.

Policy options 3 and 4 respect the principle of **mutual recognition**.

Assessment of Impacts

The four policy options defined above were assessed both quantitatively and qualitatively with regard to their impacts and ability to achieve the general and specific policy objectives. The results of this analysis are intended to inform the European Commission in its Impact Assessment for a European Accessibility Act as announced by the European Disability Strategy 2010-2020.

The **cost impacts for business** under the four policy options were estimated individually for each of the priority goods and services and the horizontal case of public procurement. In the following, the aggregated cost impacts of the different policy options are outlined:

- In the baseline scenario (**policy option 1**), businesses are expected to incur costs between 28.5 EURb and 50.2 EURb mainly due to diverging legislation;
- The EU Recommendation (**policy option 2**) has been estimated to save businesses costs of 4.5 EURb to 7.3 EURb compared to the baseline scenario.
- The impact of **policy option 3**, a Directive that covers the EU Member States that already have legislative accessibility requirements in place for the selected priority goods and services, is estimated to save businesses 13.1 EURb to 22.9 EURb vis-à-vis the baseline scenario.
- **Policy option 4**, a Directive with full EU coverage, is estimated to save businesses costs ranging from 11 EURb to 19.2 EURb vis-à-vis the baseline scenario for 2020.

To put these costs into perspective, the following table displays the share of the total cost impact of each Policy Option of the combined market sizes of all priority goods and services in 2020.[6] It can be seen that, although the absolute cost impacts range from 4.5 EURb (under Policy Option 2) to 50.2 EURb (under policy Options 1), the share does not exceed 0.59% of the EU27 market size in 2020. On average, the cost impact of the Policy Options is 0.23%.

[6] The market sizes per priority good and service are referenced in Table 6.

Table 2: Shares of the Policy Options of the total EU27 market size in 2020

Policy Option		Cost Estimate	Share of total market size in 2020 (in EU27)
PO 1	Lower estimate	28.5 EURb	0.33%
	Upper estimate	50.2 EURb	0.59%
PO 2	Lower estimate	4.5 EURb	0.05%
	Upper estimate	7.3 EURb	0.09%
PO 3	Lower estimate	13.1 EURb	0.15%
	Upper estimate	22.9 EURb	0.27%
PO 4	Lower estimate	11.0 EURb	0.13%
	Upper estimate	19.2 EURb	0.23%
Average			0.23%

The highest share of cost impact of the total market volume is expected to be incurred in relation to telecommunication services, while the smallest share of cost impact is related to eBooks with 6.8% and 0.0004% of the total market volume.

Regarding the **quantitative assessment of the policy options**, the following points should be considered:

- The quantitative cost estimates under policy option 1 generally refer to future costs imposed on businesses as no EU action is to be taken in this scenario that could reduce businesses' financial burden related to diverging legislation and its impact on the cross-border provision of accessible goods and services.
- The cost estimates calculated for policy options 2 and 3 can generally be associated with cost savings for businesses, i.e. cost reductions related to the cross-border provision of accessible goods and services given the reduction of diverging legislation.
- The cost estimates under policy option 4 are of mixed nature. Under policy option 4 the potential costs savings (related to the removal of barriers on the Internal Market, in line with policy option 3) are balanced with potential costs stemming from the EU-wide coverage this policy option entails, which in most cases is a wider coverage in terms of the number of countries that have accessibility requirements in the baseline scenario. For some priority goods and services, a Directive with full EU27 coverage is associated with additional costs for businesses, e.g. in the case of computer and operating systems and mobile telecommunication terminals, given that fewer Member States have legislated in these areas compared to the other ones, while in other cases businesses save costs through such a Directive in comparison to the baseline scenario, e.g. in the case of self-service terminals and television.
- A brief initial comparison of the cost estimates under policy options 2 and 3 shows that the estimated cost savings per good and service for EU businesses in the respective markets are higher under policy option 3. Thus, a Directive with partial EU Member State coverage is to be favoured over an EU Recommendation which is expected to be followed only by some of the Member States with legislation in place.

- The comparison of the cost estimates under policy options 3 and 4 reveals that businesses' cost savings through a Directive with partial EU Member State coverage are higher for all priority goods and services with the notable exception of architect services because this is already regulated in all Member States under the baseline scenario. In fact, it is expected that in the cases of computers and operating systems and mobile telecommunication terminals, a Directive covering all EU Member States would generate additional costs for businesses related to the introduction of accessibility legislation for the first time, but if more Member States would legislate in these areas by 2020, the date of the baseline scenario, the figures could also turn to savings. In any case, cost savings are expected for businesses active in all other areas of the selected goods and services. Overall, the balance of cost savings and additional costs due to the introduction of accessibility requirements in countries where this is not in place under the baseline scenario is expected to be lower than under policy option 3.

As a consequence, the comparison of costs and cost savings for businesses under the policy options reveals that policy option 3, i.e. **a Directive with partial EU Member State coverage, may be considered as the option that generates the most savings with EU policy intervention** to tackle the issues of the cross-border provision of accessible goods and services in the Internal Market. **However, policy option 3 is expected to be inferior compared to policy option 4 in relation to impacts on cross-border trade and competition** since it is likely that these will be further enhanced through the introduction of accessibility requirements across all EU Member States.

As regards the **qualitative assessment of the policy options**, the results of the impact analysis suggest the following:

- **Improved cross-border trade**: policy option 4 is expected to be most effective in improving the cross-border provision of accessible goods and services, while additional costs of making goods and services accessible in countries where no accessibility requirements are in place under the baseline scenario are incurred under this policy option the balance between cost savings as a result of removing barriers on the Internal Market outweigh these costs for most goods and services.
- **Increased competition among industry**: The same argumentation holds true for the objective of increasing competition among businesses. Policy option 4 provides effective results, although additional costs are incurred, it is expected to result in an overall positive impact.
- **Social Impacts**: With regard to different societal groups policy option 4 is expected to achieve the *best* results, as consumers with and without disabilities are expected to benefit from an increased cross-border provision of accessible goods and services and increased competition among industry players. A full coverage of the Internal Market under policy option 4 implies that businesses can trade their accessible goods and services across borders without barriers, this is likely to also increase competition

(depending on the level of concentration in the market). Therefore, this could result in benefits for consumers linked to increased freedom of choice, higher quality and reduced prices when purchasing accessible goods and services.

- **Environmental impacts**: As is the case for the social impacts, policy option 4 provides the best results with regard to environmental concerns. It has to be noted, however, that environmental impacts overall are very limited and in most industry sectors no direct environmental impacts could be identified.

To sum up, **both policy options 3 and 4 have reasonable advantages**, but are also linked with disadvantages that need to be considered with regard to potential EU action to be taken. In the case of policy option 3, the main benefit is that largely effective results are provided only in those Member States that have already legislated on accessibility at a reasonable cost for businesses, while policy option 4 is more effective and delivers more positive social and environmental impacts but imposes higher costs on businesses that operate in markets where no accessibility requirements are in place in the baseline scenario having a wider EU coverage.

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1 Introduction

This is the Final Report of the *Study on the socio-economic impact of new measures to improve accessibility of goods and services for people with disabilities* that has been carried out by Deloitte with support from a team of external experts: Ann Frye (international specialist on the transport needs of disabled and older people), Donal Rice (international expert on ICT accessibility), Gareth Davies (legal expert on EU Internal Market), Ivo Cre (expert on social and economic aspects of transport and transport accessibility), Monika Klenovec (expert on Design for All and the built environment) and Soren Ginnerup (expert on built environment and accessibility) and with support of Technosite. In addition, the European Disability Forum (EDF) and AGE Platform have provided inputs to this study.

1.1 Objectives and scope of the assignment

This chapter presents the objectives and scope of the assignment.

1.1.1 The objectives of the assignment

The overall objective of the assignment was to carry out a "study on the potential socio-economic impacts of possible new measures by the EU to improve accessibility of goods and services for people with disabilities", serving "as a basis for exploring the merits of adopting EU regulatory measures to substantially improve the proper functioning of the Internal Market for accessible goods and services, including measures to step up the use of public procurement".

More specifically, the objective of the study was to provide the Commission with an analysis and data as a foundation for its Impact Assessment for the possible measures under the forthcoming European Accessibility Act.

The European Disability Strategy 2010-2020 makes note of the intention of the European Commission to propose a European Accessibility Act in 2012-2013.[7] As clearly pointed out in the European Disability Strategy one major focus of this European Accessibility Act is to "substantially improve the proper functioning of the Internal Market for accessible goods and services". The study therefore takes an Internal Market perspective, in view of the fact that the rationale for EU action in the field is based on Internal Market considerations. The aim was to identify barriers to the smooth functioning of the Internal Market. These barriers may derive from existing legislation containing different obligations and requirements in the area of accessibility

[7] European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe, COM (2010) 636

that vary between the Member States and may lead to regulatory failure. These and potentially other barriers can limit the functioning of the Internal Market and lead to the failure of the market supply to meet demand (i.e. market failure).

This focus on the Internal Market implies an approach different from most research in the area of disability. Generally, the literature is more focused on a 'rights-based' approach to accessibility starting from the premise that people with a disability have the right to "full and effective participation in society on an equal basis with others".[8] While this is most certainly true and clearly spelled out in the United Nations Convention on the Rights of Persons with Disabilities[9] (UNCRPD) the objective of this study was not to identify limitations to achieving this right, rather, the objective was to assess what the barriers are for market players to provide accessible goods and services that support achieving such full and active participation in society.

The focus was therefore on problems from an Internal Market perspective for the industry and arguments and data demonstrating the impacts of addressing Internal Market barriers on industry and problems that consumers with disabilities face. Of course, the most important barriers for persons with disabilities and older persons with functional dependency problems as consumers of goods and services are taken into consideration, e.g. in order to identify the most important markets to examine as well as the impact on the freedom of movement within the EU.

1.1.2 The scope of the assignment

As noted in the previous section the study focuses on **Internal Market barriers in the cross-border provision of goods and services that are accessible for people with disabilities and elderly** and action that may be taken to address these problems, including in the field of public procurement. Therefore study focuses on regulatory issues and market barriers, difficulties and failures, e.g. fragmentation in relation to accessibility of all relevant goods and services and in particular in the fields of information and communication (including ICT), transport and the built environment (i.e. those areas that are specifically highlighted by the UNCRPD), and the reasons for these and the associated effects.

The scope of the study is restricted in the sense that focus is placed on **goods and services provided on the Internal Market in general, the so-called mainstream goods and services** (i.e. not goods and services that are developed specifically for disabled persons or elderly) and the extent to which these are sufficiently accessible for people with different abilities and needs. The focus is therefore *not* on assistive technologies or specific adaptations.

With regard to the **specific goods and services covered in this study**, a total of 87 goods and services were identified as 'relevant' based on an analysis of the UNCRPD and with input of the

[8] *Convention on the Rights of Persons with Disabilities*, adopted by the United Nations General Assembly on 13 December 2006. Article 1.

[9] http://www.un.org/disabilities/convention/conventionfull.shtml

public consultation. Following an evidence-based four-step approach, which is described in the methodological section below, this list of 'relevant' goods and services has been narrowed down to 15 priority goods and services, which have subsequently been subject to a more detailed analysis of the market situation, the legal background, the existing problems related to providing/obtaining the accessible good or service, as well as the costs and benefits of providing the accessible good or service.

The **geographical scope** of this study is the **27 EU Member States**.[10] While an in-depth legislative mapping and analysis has been conducted for 9 EU Member States, that represent a large part of the EU GDP, (France, Germany, Italy, Ireland, the Netherlands, Poland, Portugal, Spain and the United Kingdom) and Norway, the remaining countries have been covered based on evidence from existing secondary analysis as well as extrapolations.

In the literature and legislation concerning the accessibility of goods and services for people with a **disability** (on an equal basis with others in society) different concepts appear. In particular, reference, in addition to "**accessibility**", is made to the "**Universal Design**" approach (also referred to as "**Design for All**") and "**reasonable accommodation**". These concepts and how these interrelate are presented in the following sub-sections. This allows conceptualising the focus of this study and provides a framework for the further approach of the study.

Accessibility in the United Nations Convention on the Rights of People with Disabilities

The UN Convention on the Rights of People with Disabilities[11] (UNCRPD) holds a central place within this study as the Convention, which establishes a need to ensure accessibility for disabled people in a number of areas, has been ratified by almost all the Member States and the European Union. It thereby sets out the overall framework for legislative action (to be) taken. Below, a brief description of the UNCRPD is provided.

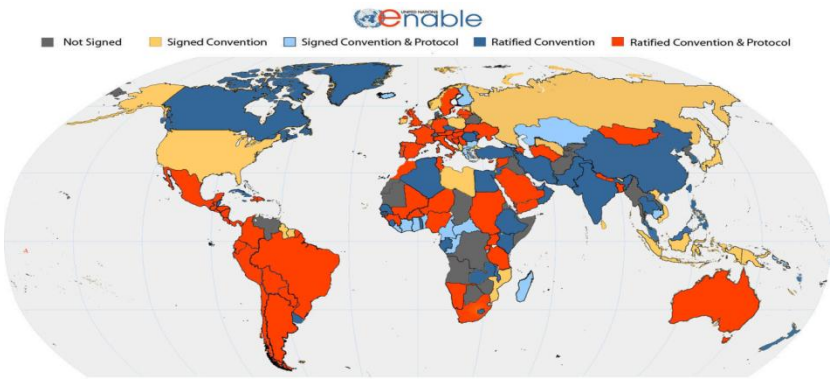
Internationally, the UN Convention on the Rights of Persons with Disabilities and its optional Protocol constitutes an important commitment of the 153 countries[12] that have signed the Convention (out of which 119 have also ratified it) and the 90 countries that have also signed the optional Protocol (out of which 72 have ratified the Protocol to date). The European Union (EU) ratified the Convention in December 2010 and it entered into force on 22 January 2011.

[10] The study started before the latest accession of Croatia and therefore covers only 27 Member States in general and some of these further in more detail.

[11] http://www.un.org/disabilities/convention/conventionfull.shtml

[12] At the time of writing the report.

Figure 1: Map of signatories and ratifications[13]



All EU Member States[14] have at least signed the Convention (25 have also ratified it), 23 Member States have also signed the protocol (20 have also ratified it). As stated by the UN "the Convention marks a "paradigm shift" in attitudes and approaches to persons with disabilities. It takes to a new height the movement from viewing persons with disabilities as 'objects' of charity, medical treatment and social protection towards viewing persons with disabilities as 'subjects' with rights, who are capable of claiming those rights and making decisions for their lives based on their free and informed consent as well as being active members of society."

The UNCRPD includes some considerations on the concept of disability and also illuminates the paradigm shift from the traditional 'medical' model of disability focusing on a person's impairments, to the 'social' model of disability concerning the interaction between persons with impairments and attitudinal and environmental barriers. This is highlighted best in Article 1 stating:

> *"Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others"*[15].

Article 2 further defines the concepts of 'discrimination on the basis of disability', 'reasonable accommodation' and 'universal design', which are topics of great interest to achieve the full enjoyment of rights of persons with disabilities as explained in the following sections of this report.

Accessibility is one of eight guiding principles contained in the Convention (set out in Article 3) and is dealt with specifically in Article 9 as essential to enable persons with a disability to live independently and participate fully in life it should be seen in relation to all rights in the Convention. It specifies the need to identify and eliminate barriers to accessibility in many different areas. Article 9 specifies that "States Parties shall also take appropriate measures" to:

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[13] Source: United Nations

[14] For the purpose of this enumeration, please note that Croatia has been included.

[15] *Convention on the Rights of Persons with Disabilities*, adopted by the United Nations General Assembly on 13 December 2006. Article 1.

- Develop, promulgate and monitor the implementation of minimum standards and guidelines for the accessibility of facilities and services open or provided to the public;
- Ensure that private entities that offer facilities and services which are open or provided to the public take into account all aspects of accessibility for persons with disabilities;
- Provide training for stakeholders on accessibility issues facing persons with disabilities;
- Provide in buildings and other facilities open to the public signage in Braille and in easy to read and understand forms;
- Provide forms of live assistance and intermediaries, including guides, readers and professional sign language interpreters, to facilitate accessibility to buildings and other facilities open to the public;
- Promote other appropriate forms of assistance and support to persons with disabilities to ensure their access to information;
- Promote access for persons with disabilities to new information and communications technologies and systems, including the Internet;
- Promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies and systems become accessible at minimum cost.

Article 4 of the UNCRPD provides the general obligations for States Parties to ensure and promote the full realisation of human rights and fundamental freedoms for all persons with disabilities. It stresses in particular the obligation to promote research and development, availability and use of universally designed goods, services, equipment and facilities requiring a minimal possible adaptation and least cost to meet specific needs of a person with disabilities, including the need to promote universal design in the development of standards and guidelines.

Clearly, the Convention is a human rights instrument that focuses on the rights and fundamental freedoms of persons with a disability. The Convention covers many areas in this respect including such topics as: definitions (e.g. communication, reasonable accommodation, universal design), awareness-raising, accessibility, rehabilitation, education, living independently, health, work and employment, participation, statistics and data collection, etc.

The breadth of the Convention shows that indeed many different policy areas are involved. For instance, to enable persons with disabilities to live independently and participate fully in all aspects of life, signatories commit to take appropriate measures to “ensure to persons with disabilities access, on an equal basis with others, to the **physical environment**, to **transport**, to **information and communications, including information and communications technologies and systems**, and to other facilities and services open or provided to the public, both in urban and in rural areas”. The focus of the UNCRPD on the physical (or built) environment, transport and information and communications (including ICT) is important; these three areas in particular function as key enablers for an accessible environment, by making these accessible many barriers to accessibility of existing goods and services can be addressed. This

shows the important role of accessibility towards participation in society which is relevant in a wide variety of different policy areas.

In the field of education the signatories have committed themselves to, among other things, not exclude persons with disabilities from the general education system and receive required support within the general education system, access to inclusive, quality and free primary and secondary education, provide reasonable accommodation.

Similarly, in the field of work and employment the commitment to: promote employment of persons with disabilities in the private sector through appropriate policies and measures, effective access to technical and vocational guidance programmes, services and training, ensure reasonable accommodation, promote vocational and professional rehabilitation, job retention and return-to-work programmes for persons with disabilities.

Living independently should also be ensured by allowing persons with a disability to choose their place of residence, have access to a range of in-home, residential and other community support services, including personal assistance necessary to support living and inclusion in the community, and to prevent isolation or segregation from the community. The trend towards deinstitutionalisation in many European countries and the resulting increase in the numbers of people with disabilities living in the community has widespread implications for the accessibility of buildings, housing, urban environments and transport systems.

Another very important aspect of the Convention is statistics and collection of data where the signatories commit to collect appropriate information, including statistical and research data, and make this available to and accessible to persons with a disability and others.

The Council Decision 2010/48/EC, of 26 November 2009[16], concerning the conclusion by the European Community of the UN Convention on the Rights of Persons with Disabilities, approves the UNCRPD on behalf of the Community. The Council Decision recognises the importance of accessibility and (under Article 9) encourages States Parties to take appropriate measures to ensure to people with disabilities access on equal basis with others to the physical environment, transport and communications, including ICT.

While the European Union has been active in the field of disability for many years, with this Decision the EU has reaffirmed its intent on promoting, protecting and ensuring full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities. The Decision illustrates EU competences under the Convention including on accessibility and hence recognises obligations for its implementation.

Below, the importance of accessible goods and services is briefly considered, before the concepts of universal design and reasonable accommodation are examined.

[16] Council Decision, 2010/48/EC, 2009. Concerning the conclusion, by the European Community, of the United Nations Convention on the Rights of Persons with Disabilities http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:023:0035:0061:EN:PDF

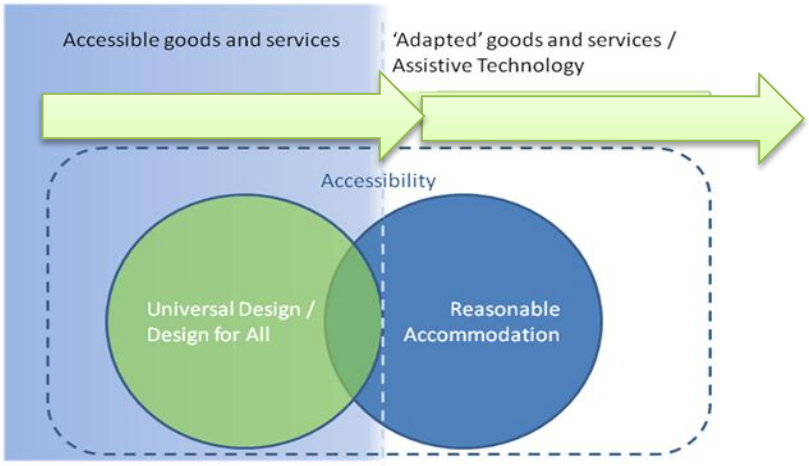
As stated in the European Disability Strategy 2010-2020 'A Renewed Commitment to a Barrier-Free Europe'[17], the number of people in Europe that are often prevented from fully participating in society and the economy due to barriers is considerable. Around 80 million people are affected and since a third of people aged over 75 have some disability the number is set to increase given the ageing European society.

The strategy focusses on eliminating barriers across eight main areas of action, including participation and accessibility as well as important areas such as employment, education and health. As stated in the strategy, "*accessibility is a precondition for participation in society and in the economy, but the EU still has a long way to go in achieving this*".

The Commission is committed to ensure accessibility of goods and services following a 'design for all' or 'universal design' approach. The forthcoming European Accessibility Act, as described in the Strategy and further outlined in the relevant Roadmap[18], focuses on "developing specific standards for particular sectors to substantially improve the proper functioning of the Internal Market for accessible goods and services". The latter is the particular focus of this study. In other words this study focusses on accessible goods and services and the functioning of the Internal Market.

The figure below provides an overview of the link between mainstream goods and services (left side), which is the focus of this study, and assistive technologies (right side).

Figure 2: Accessible goods and services



The concepts of Universal Design and Reasonable Accommodation play an important role in this context, where in particular Universal Design is closely linked with making available accessible goods and services from the outset for the largest amount possible of users, regardless their abilities and in general, as opposed to adapting or providing assistive technologies, to achieving

[17] European Disability Strategy 2010-2020: A Renewed Commitment to a Barrier-Free Europe. COM(2010) 63 Final

[18] http://ec.europa.eu/governance/impact/planned_ia/docs/2012_just_025_european_accessibiliy_act_en.pdf

accessibility for specific goods or services. Reasonable accommodation can be used as a solution when accessibility following universal design approaches is not ensured or does not (sufficiently) ensure the equal access of certain (groups of) disabled persons.

The following sections provide further insights into the concepts of universal design and reasonable accommodation.

Universal Design

Universal Design holds a prominent place within the UNCRPD. Article 2 of the UNCRPD defines Universal Design as follows:

> *"[…] the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design. 'Universal design' shall not exclude assistive devices for particular groups of persons with disabilities where this is needed."*

The concept of universal design is also invoked within Article 4(f) of the UNCRPD as a general obligation in which State Parties are required:

> *"To undertake or promote research and development of universally designed goods, services, equipment and facilities, as defined in article 2 of the present Convention, which should require the minimum possible adaptation and the least cost to meet the specific needs of a person with disabilities, to promote their availability and use, and to promote universal design in the development of standards and guidelines."*

This said, universal design does not only benefits people with a disability, but it encompasses a wide number of people; universal design can bring benefits to all. It is complemented by helping certain people by means of assistive technologies.

However, as a 'general obligation' universal design is intrinsically linked to the realisation of accessibility. More specifically, it is indicated by the Convention as the process of design that results in goods, services, equipment and facilities being accessible to persons with disabilities. The Convention emphasises two main outcomes of universal design in Article 4(f); it results in designs that "require the minimum possible adaptation", and which are achievable at the "least cost".

This theme of achieving accessibility in a cost effective way is particularly emphasised in relation to ICTs in the UNCRPD. Article 9(h) requires the "design, development, production and distribution" of accessible ICTs. This obligation emphasises the need for accessibility requirements to be incorporated at an "early stage" during the development lifecycle, which it suggests will result in the technologies and systems becoming accessible at minimum cost. The inclusive nature of this strategy mirrors other obligations within the Convention to place persons with disabilities at the centre of the decision making process. For example, Article 4.3 requires States to actively involve persons with disabilities in relevant decision-making processes.

Although Article 9(h) explicitly relates to ICTs, the literature on universal design widely reports potential cost-savings that result from incorporating user requirements as at an early stage also in other areas. For example, studies in the US suggest that the costs for accessibility to the built environment are on average less than 1% of the total project costs if considered from the design phase. The literature also reports that the lack of this approach can lead to more expensive retrofitting and/or legal action in the case where non-compliance with accessibility regulations results in punitive damages being sought.[19]

The following explanations and interpretations of universal design found in the literature are also useful for 'unpacking' this definition and explaining what universal design is, and is not:

- Universal design is a **design process** that requires attention to the incremental improvement of the usability of goods and services, environments etc. for all people. As a process, the focus of universal design is on "seeking ever-better solutions".[20]
- Universal design is intrinsically linked with the broader concept of **design**.[21]
- The Convention does not purport that any single good, service or environment can be "**universally designed**". This point has received particular attention within the literature. For example, a study **from 1996 pointed o**ut that there is no such thing as a "universal design" that is fully accessible to and usable by every single person in every context of use.[22] There will always be limitations relating to "current knowledge, technological development, access to goods and solutions and practical and formal circumstances" that inhibit the development of truly 'universally designed' solutions.[23] That it is why reasonable accommodation complements Universal Design to achieve equal access for all.
- While many designs cannot, for the reasons provided above, meet the needs of every user, it is required by the definition of the universal design in the Convention that the design is **compatible** with assistive technologies that might be used by those who cannot efficiently access and use the goods and services directly.

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[19] World Bank, 2005. "Education for All: The Cost of Accessibility". http://siteresources.worldbank.org/DISABILITY/Resources/280658-1172610312075/EFACostAccessibility.pdf

[20] Norwegian Ministry of the Environment, 2007. "Universal Design – Clarification of the Concept". Available at http://www.universal-design.environment.no/news/1047-clarification-of-the-universal-design-concept-thematic-report-from-the-ministry-of-the-environment

[21] Ireland, 2011. Centre for Excellence in Universal Design. http://www.universaldesign.ie/newsandevents/newsarchive/submissionuniversaldesignthinkingasanapproachforeconomicrecovery

[22] Vanderheiden, Gregg, 1996. "Universal Design. What It Is and What It Isn't". Available at http://trace.wisc.edu/docs/whats_ud/whats_ud.htm

[23] Norway, 2007

- Universal design is not about the setting of and compliance with **minimum standards** such that public authorities can establish if a law or regulation has been met.[24]
- Finally, **universal design may not only benefit people with disability and elderly**, but have wider positive impacts also for non-disabled persons. An example that is often quoted refers to a parent with a buggy that benefits from ramps to buildings or buses. Other passengers and indeed also operators may also benefit from these persons being able to access the bus faster.

Thus, when looking at the concept of universal design, a distinction can be made between *what* universal design is (i.e. the design of goods and services, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design) and *when* universal design should take place, namely at an "early stage" during the development lifecycle, in order for technologies and systems becoming accessible at minimum cost. However, the incremental improvement of the usability of goods and services, environments etc. for all people is also emphasised.

To sum up, within the Convention universal design is framed as a practical strategy for the **progressive realisation** of greater accessibility of "goods, service, equipment and facilities" for persons with disabilities in **a cost-effective and economically viable way** by incorporating the requirements of persons with disabilities at the **earliest stage possible.** Therefore, two key concepts related to Universal Design are: 1) incorporating user requirements at an early stage of development; and 2) the development of cost effective solutions. While setting the design and development of 'universally designed' buildings, transport systems, ICTs, systems and facilities as a goal for State Parties that are usable by all people, it also qualifies this by stating that this is to be achieved "**to the greatest extent**" possible. It fundamentally requires the promotion of a **design process,** which has as its primary aim the **incremental improvement** of accessibility.

However, while some indications from the literature on the cost-benefits are positive, care should be taken when interpreting these so as not to lead inflated claims of benefits. That said, in **some instances** it has been shown that accessibility features result in **benefits to all users** resulting in a positive return on investment. In most cases a lack of universal design, whereby users' needs are not incorporated at the beginning, result in retrofitting which would appear to always be cost ineffective.

Relevant lessons for national implementation of universal design include the needs to set clear standards and goals, its usefulness in **framing national implementation plans** to progressively realise better levels of accessibility and aligning it with wide goals of innovation and competitiveness through design. Many of the fundamental tenets of universal design are still considered **innovative** within the **wider design community**. Conditions would appear to be favourable for industry to consider implementing accessibility following universal design if the

[24] Ireland, 2008. Centre for Excellence in Universal Design.

http://www.universaldesign.ie/exploreampdiscover/10thingstoknowaboutud Norway, 2007

correct mix of legislative requirements and support measure are put in place. Measures in support of this could include further standards development, clear communication of the concept and capacity building.

Reasonable accommodation

Many official documents (e.g. anti-discrimination legislation) consider and provide definitions of reasonable accommodation. For example, according to Article 2 of the UNCRPD, reasonable accommodation refers to:

> *"necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms*".

Other official documents formulate corresponding definitions and apply them to specific issue areas. For example, regarding the issue of employment, the Framework Employment Directive defines reasonable accommodation in the following way: "*Employers shall take appropriate measures, where needed in a particular case, to enable a person with a disability to have access to, participate in, or advance in employment, or to undergo training, unless such measures would impose a disproportionate burden on the employer*".[25]

The obligation to provide reasonable accommodation that derives from the UNCRPD is limited by the principle of 'disproportionate or undue burden'. Pursuant to Article 2 and Articles 5.2 and 5.3 of the UNCRPD, denial of reasonable accommodation may qualify as discrimination and State Parties are required to prohibit such discrimination. Incorporating reasonable accommodation into standard practices without imposing a disproportionate or undue burden on the accommodating party can avoid discriminatory status and engage the population of persons with disabilities into the market and see them more as market participants.

Importantly, as concerns the relationship between reasonable accommodation and accessibility, it must be emphasised that accessibility does not exclude reasonable accommodation and vice-versa. Rather, reasonable accommodation is one of the ways through which in practice equal access can be achieved. The focus of reasonable accommodation on 'necessary and appropriate modification and adjustments' is based on the premise that certain environments and related goods and services are not accessible or not sufficiently accessible for an individual the way they are constructed in general. Hence, there is a need for modifications to accommodate the needs of that particular person. In general, accessibility concerns designing and constructing environments, goods and services in such a way that they are accessible from the start preventing barriers or removing existing ones. As explained in the previous section, accessibility

[25] See Council Directive (2000/78/EC), Article 5.

can be achieved following Universal Design approaches. Such accessible environments, goods and services reduce to a certain extent the need for reasonable accommodation.

The focus of this study is particularly on mainstream goods and services, goods and services that are 'assistive' or are additional to mainstream goods and services in order to ensure equal access (assistive technologies) are not the focus of this study but are taken into account as an important factor in achieving equal access for people with a disability.

1.1.3 Main hypotheses

As noted, this study focusses on the '*proper functioning of the Internal Market for accessible goods and services*' and builds on the following main hypotheses:

- There are not enough accessible goods and services on the EU market.
- The potential of persons with disabilities as a relevant segment of consumers is mostly overlooked.
- This introduces barriers for disabled people's economic, social and political participation in society.
- Underlying reasons for insufficient market response to provide accessible goods and services include the fragmentation of the relevant markets, caused in part by differences between legislation, standards and policy practices between Member States (as well as regional level), lack of awareness of the potential of the market, caused in part by its fragmentation, and other barriers such as costs. Some of these, such as costs of development and marketing, could be reduced by economies of scale, but this is hindered by market fragmentation.
- Particularly the areas of the built environment, transport and information and communication including ICT are key enablers to achieve accessibility of goods and services and hence equal participation of persons with disabilities. However, problems also occur in relation to other areas, goods or services, partly due to the lack of accessibility in relation to the key enablers.
- New measures at the EU level to improve accessibility by common accessibility requirements at the EU level will reduce the burden for industry to comply with multiple national regulations, standards and policy practices and will improve the offer of accessible goods and services.

These hypotheses form the basis of this study and shape the overall scope and focus. The hypotheses were used throughout the study to guide the research and analysis as well as the gathering of evidence.

1.2 Structure of the report

The remained of the report is structured into four separate chapters: Method of approach; Problem Assessment; Policy Objectives, Options and Impacts; and Conclusions.

In the first chapter, the approach applied throughout the course of the assignment is outlined from a conceptual and procedural stand point, as well as the methodology that has been used to estimate the priority goods and services, their markets, the related accessibility costs, and the impacts of the policy options.

The second chapter provides an overview of the legislative situation in the Member States per priority good and service, as well as the estimates and an analysis of the relevant goods and services. Furthermore, accessibility related costs incurred by businesses are estimated for the current situation and forecasted for the year 2020. The chapter also provides insights on opportunity costs incurred by consumers for various priority goods and services. Finally, the chapter provides preliminary conclusions based on the findings of the problem assessment.

The objectives of the policy options are outlined in the third chapter, followed by the quantitative and qualitative analysis of the impacts of each policy option per priority good and service. While the quantitative analysis refers to potential costs and cost savings for businesses in 2020 with and without EU action taken, the qualitative assessment puts the effectiveness and efficiency of each policy option in fostering cross-border trade and competition in the Internal Market into perspective. Furthermore, the impact of each policy option on different societal groups and on the environment is assessed in qualitative terms per priority good and service.

A balanced conclusion on EU action to be taken is drawn in the last section of this report.

2 Method of Approach

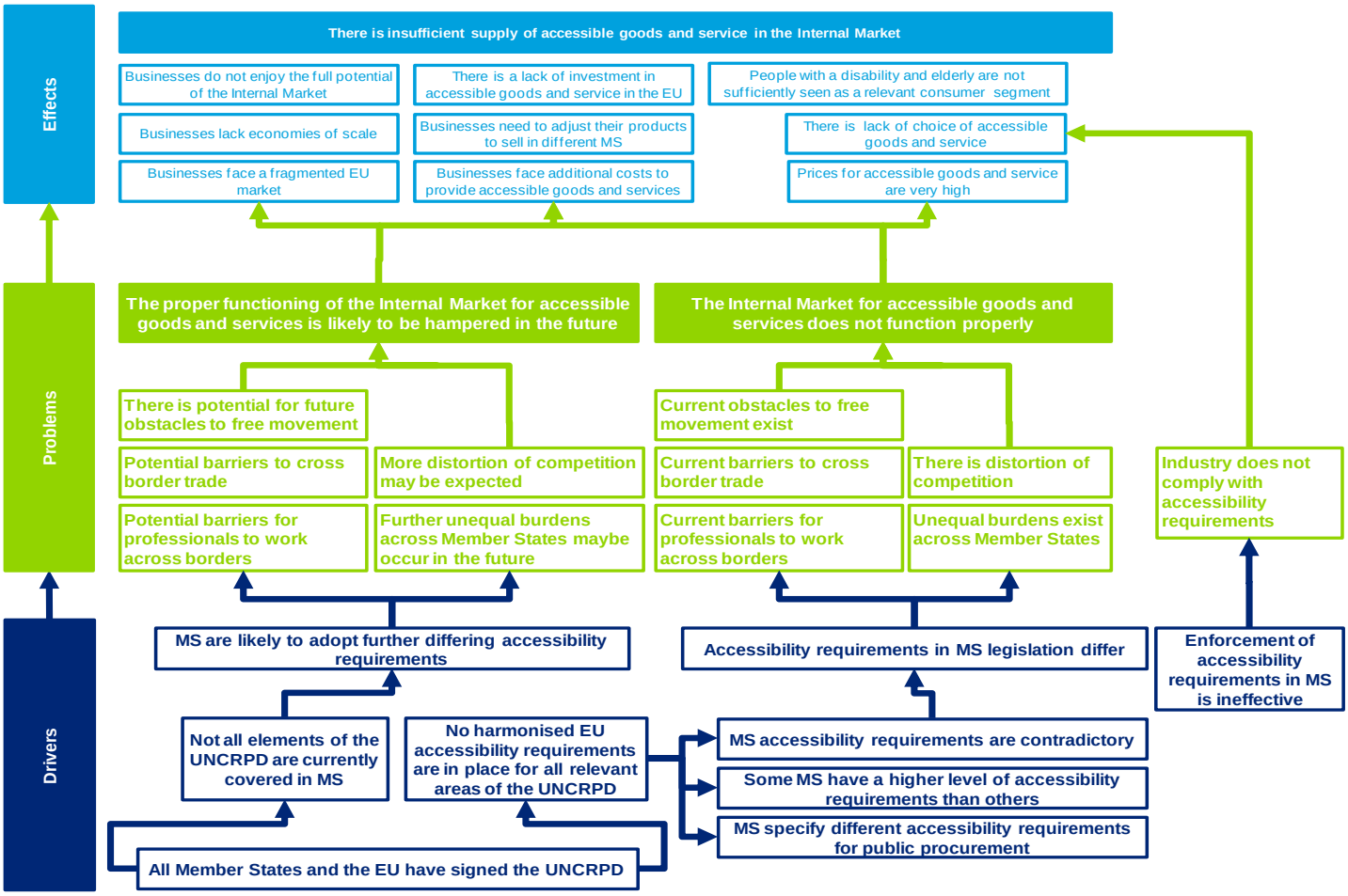
2.1 Introduction

This chapter outlines the conceptual approach taken during the course of the assignment, as well as procedural steps and necessary limitations with regard to the selection of the priority goods and services. Furthermore, the methodological approach which was applied to estimate relevant market data, the types of costs related to accessibility and the impacts of the policy options on EU businesses are described in detail.

2.2 Conceptual approach

Our broad logical framework for identifying barriers in the Internal Market for accessible goods and services is presented in the figure below in.

Figure 3: Conceptual framework, hypothetical problem tree



The figure departs from the assumption that current Internal Market barriers result from regulatory problems (drivers), which leads to market failure in terms of distortion of competition and / or obstacles to the free movement of goods and services for the industry (problems), which in turn has negative impacts on both businesses and consumers (effects). In line with the above analysis of the EU's competence to act, problems may already exist or potentially develop over time.

Starting from the premise that all Member States have signed the UNCRPD and most have ratified it and limited harmonised accessibility requirements are in place at EU level for some of the relevant goods and services, it is clear that there is scope for Member States to have put in place accessibility requirements that differ, can be more encompassing or detailed (higher level of requirements) and may even be contradictory. This situation would lead to distortions or 'problems' in the Internal Market, where obstacles to free movement may be identified in terms of barriers to cross-border trade, barriers for professional to work across borders, and unequal burdens for industry players across Member States leading to distortions of competition. Such 'problems' or barriers lead to effects for industry facing additional costs derived from different accessibility requirements due to necessary adjustments to goods/services (in order to comply with requirements) as well as fragmented markets, lacking economies of scale and not enjoying the full potential of the Internal Market. Also consumers of accessible goods and services are likely affected for example through high prices, lack of choice or insufficient supply or even non-availability of accessible goods and services on the market.

Considering that Member States may not yet have covered all aspects considered under the UNCRPD they are likely to introduce legislation and accessibility requirements in the future in order to fulfil their obligations to which they have committed themselves by ratifying the UNCRPD. This may lead to further 'problems' and their respective 'effects' to occur in the future. An additional consideration is the enforcement of legislation and compliance with accessibility requirements already in place. If such enforcement is inadequate this results in industry not complying and therefore affects consumers.

Evidence of regulatory failures can be found in the current state of legislation (in terms of incompatible technical requirements in the Member States' legislation). However, in addition, the impact of the current state of play in legislation has to be investigated in order to identify actual problems for industry players as well as consumers.

In this respect, it can be noted that while barriers to trade may arise as a result of technical specifications or other legislative requirements, they may also arise because of a lack of information concerning the goods and services which are potentially available, or the accessibility requirements to which goods or services must conform. If consumers are not aware of what they are able to purchase, or how they can purchase it, or if they are not aware that they have a right to accessible goods and services, then they will avoid certain types of goods and services, making it harder for providers of the relevant goods and services to enter the market in question. This typically results in national markets remaining national, and established national suppliers of

goods and services being protected from new entry by competitors from other States. Consumer information is therefore a necessary part of opening markets and removing barriers to trade resulting from consumers' reluctance or inability to purchase new or cross-border goods or services. The need for consumer confidence in the entire market has been the basis of consumer legislation of other types, and could also serve to justify accessibility-information legislation, where the absence of such information is creating market access barriers.

2.3 Selection of priority countries

As mentioned above, the **geographical scope** of this study was the **27 EU Member States**. The republic of Croatia joined the European Union after the study had started. While an in-depth legislative mapping and analysis has been conducted for 9 EU Member States (France, Germany, Italy, Ireland, the Netherlands, Poland, Portugal, Spain, and the United Kingdom) and Norway, the remaining countries have been covered based on evidence from existing secondary analysis as well as extrapolations.

For the selection of the ten priority countries to be investigated for this more in-depth legislative mapping at the national level, three key elements have been taken into account: (1) the geographical distribution of countries (to ensure that countries are included from the different areas in Europe, i.e. Southern Europe, Northern Europe, Central- and Eastern Europe), (2) the share of the population (77%) and GDP (82%) they represent, and (3) the coverage of the different high-level clusters of regulatory intensity with regard to accessibility requirements (as identified based on secondary literature, including the M420 Final Report, PT Access, EuroAccess, MEAC, and the Disability High level Group reports on the implementation of the UNCRPD).

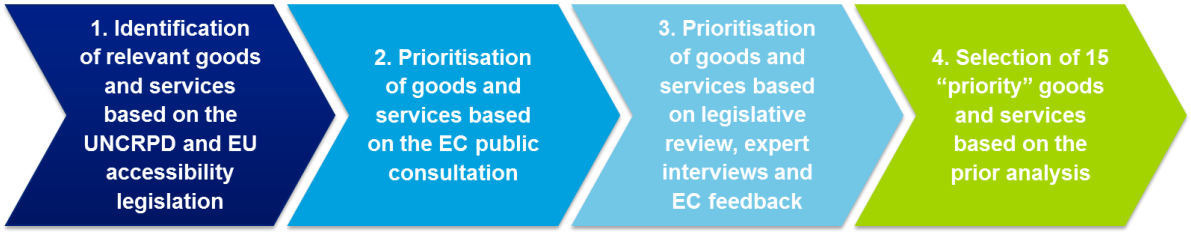
The situation in certain non-EU countries has also been considered, in particular the US.

2.4 Selection of the priority goods and services

The establishment of a list of ’priority’ goods and services, which are subject to (or are likely to be subject to) diverging and contradictory accessibility requirements in the EU/EEA Member States, is one of the key aims of the present study. After their selection, these ’priority‘ goods and services have been subject to more detailed analyses examining the market situation, the legal background supporting it, the existing problems related to providing/obtaining the accessible good or service, as well as the costs and benefits of providing the accessible good or service. The methodological process of identifying relevant goods and services and prioritising these is presented here.

The **process of identifying and prioritising goods and services** follows a four step approach as depicted in the following figure.

Figure 4: Process of identifying and prioritising goods and services



Each of these steps is described below.

2.4.1 Identification of relevant goods and services based on the UNCRPD and EU accessibility legislation

As a starting point, 'relevant' goods and services were identified based on an analysis of the Articles of the UNCRPD. The Convention can be considered as providing the basis for accessibility policy in the EU due to the fact that the EU as well as most Member States have signed and ratified it. This was complemented by a review of existing EU accessibility-related legislation.

The analysis of the UNCRPD and EU accessibility-related legislation resulted in a list of 87 goods and services, which can be attributed to four areas (as identified in the UNCRPD) in relation to which State Parties committed to take action to ensure equal access for all persons:

- Information and communications, including information and communications technologies and systems (31 goods and services);
- Built (physical) environment (24 goods and services);
- Transport (14 goods and services); and
- Other areas (18 goods and services).

It is important to note that the State parties to the UNCRPD have engaged to ensure accessibility of all these 'relevant' goods and services with the ratification of the Convention. In the following, this study proceeds to a prioritisation of these 'relevant' goods and services in view of focusing EU policy-making efforts on the most pressing and important accessibility issues in the EU Internal Market. 'Relevant' goods and services that have not been prioritised in the present analysis are not excluded from further EU policy action (in the future). On the contrary, UNCRPD parties have engaged to address accessibility issues for all of the 'relevant' goods and services.

2.4.2 Prioritisation of goods and services based on the EC public consultation

As a second step, the relevant goods and services were prioritised based on the results of the European Commission's public consultation with a view to a European Accessibility Act.

Due to the high number of responses[26] to the open questions posed in the survey, the analysis of public consultations was conducted, besides a qualitative analysis, by automatised word counts within the relevant response fields. More specifically, for each of the 87 relevant goods and services, a number of keywords were defined. The responses to the public consultation were then screened for these keywords. The total number of times the keywords relating to a specific good or service were mentioned served as an indication of the relative importance of this good and service to the stakeholder community.

Of course, this quantitative analysis of the public consultation can only give an approximate indication of the goods and services that should be prioritised according to the stakeholder community. In order to complement this analysis, additional analysis of the responses was conducted and other qualitative sources were consulted as part of Step 3 of the selection process.

2.4.3 Prioritisation of goods and services based on legislative review, expert interviews and EC feedback

As part of this step, qualitative information was gathered with a view to selecting priority goods and services, which included a review of existing national and in some cases regional level accessibility legislation, interviews with accessibility experts and stakeholders as well as feedback from the European Commission. This was aimed at complementing the information gathered from the quantitative analysis of the responses to the public consultation.

The review of existing national level accessibility legislation identified obligations and requirements related to accessible goods and services in different Member States (and third countries such as the Australia, Canada and the USA as a benchmark) with a specific focus on differences in terms of scope, level of detail, legal force (mandatory vs. voluntary), timeline and enforceability. This conveyed an overview of the different approaches that Member States have taken so far in implementing the requirements of the UNCRPD[27] (or of their national strategies, including for the Member States that have not yet ratified it). It further provided insights on the goods and services which require a specific attention from a legislator's point of view and indicated potential future developments in view of policy convergence in Europe.

With regard to the latter point, the extent to which the EU should and can take action to support the Internal Market has been identified in various areas where accessibility challenges had been identified. The analysis showed that certain areas (such as information and communication, transport) allow EU intervention concerning cross-border elements, while for others (such as the built environment) the current focus of such intervention is on certain aspects only (e.g. the

[26] In total 821 responses were collected, including 648 responses by individual citizens and 173 responses on behalf of organisations.

[27] Some of the Member States have pointed out that (some) legislation was already in place prior to the UNCRPD or has been adopted independently of the UNCRPD. See Disability High Level Group (HLG) reports.

recognition and comparability of architect/designer qualifications across the EU would enable such professionals to provide services easier across Member States).

In addition, interviews with different Directorate's General of the European Commission (including DG ENTR, DG INFSO (now DG CNECT), DG MARKT, DG MOVE, and DG SANCO as well as DG JUST) and important stakeholders (e.g. European Disability Forum, the AGE Platform, Inclusion Europe, the European Blind Union and ANEC) provided the valuable feedback and input with regard to the prioritisation of relevant goods and services, inter alia indicating existing and future European policies that focus on the accessibility of specific goods and services.

Finally, it can be noted that several 'relevant' goods and services which had been identified as being of relatively high priority for stakeholders within the European Commission's public consultation with a view to a European Accessibility Act have been discarded in this analysis for the following reasons:

- **A similar good or service has been prioritised and the discarded good or service is therefore at least partly covered elsewhere or no legislation was found that leads to identified market barriers**. This notably applies to the following goods and services:
  - "Buildings open to the public providing public services", "Buildings open to the public: restaurants, playgrounds, conference centres, etc." and "Construction products" are all partly covered by the prioritised services and assessed from the perspective of "architect services".
  - "News and newspaper services" are partly covered by the prioritised "websites" and eBooks.
  - "Application software" is partly covered by the prioritised "computers and operating systems" and "websites".
  - "Parking metres and urban furniture" are partly covered by the prioritised "self-service terminals".
  - "Domestic appliances" no national legislation was found, however users reported clear accessibility problems.
  - "Voting machines and online voting" are partly covered by the prioritised "self-service terminals" and "websites".

- **Within the field of transport, goods and services for *long distance (cross-border)* as well as *public* transport (for public use whether from private or public companies) have been prioritised** because these goods and services have the potential to cover a larger share of the population, especially vulnerable groups, and are within the (shared) competence of the EU. As a result, the following goods and services have been discarded by this analysis:
    - "Some local transport services like trolleys, metro, trams, etc.";
    - "Taxis";
    - "Parkings for private cars";
    - "Rentals and leasing services (including car rental)"; and
    - "In-car information devices".
- **Very complex goods and services which are (partly) provided by semi-public operators have been discarded because of the important additional research that would be required** – going beyond the resources reserved for this study. This concerns the following goods and services:
    - "Health services, nursing services and medical equipment";
    - "Medical devices"; and
    - "Cultural, sport and leisure services other than hospitality services".

As mentioned above, it is important to note that 'relevant' goods and services that have not been prioritised in the present analysis are not excluded from further EU policy action (in the future). On the contrary, UNCRPD parties have engaged to address accessibility issues for all of the 'relevant' goods and services. In addition, based on a preliminary qualitative review, the problems identified for priority goods and services could also apply to other relevant goods and services and the possibility that common EU accessibility requirements would provide a better cost benefit balance than the application by industry of 27 different national rules, seem plausible.

2.4.4 Selection of priority goods and services

As a final step, "priority" goods and services were selected from the initial list of 87 relevant goods and services building on all quantitative and qualitative evidence collected under Steps 2 and 3.

The evidence-based process to identify prioritised goods and services yielded a list of 15 priority goods and services, which are distributed over the four clusters of core policy areas identified in the UNCRPD:

Table 3: Priority goods and services

Priority goods and services			
Information and communication, including ICT	**Built (physical) environment**	**Transport**	**Other areas**
• **Mobile telecommunication equipment** • **Telecommunication services** (including accessible emergency services and relay services) • **Television and related services** • **Computers and Operating Systems** • **Websites** • **eBooks** • **Self-service terminals**	• Architectural services	• Bus transport services • Rail transport services • Maritime transport services • Air transport services	• Banking services • eCommerce • Hospitality services

These priority goods and services have been subject to more in-depth research, through desk research and interviews with accessibility experts and stakeholders (industry and consumers), to complement the above mentioned information gathering activities concerning goods and services which require specific attention with regard to accessibility. This next step in the research activities involved an examination of accessibility aspects of prioritised goods and services, more detailed legislative analysis, the level of use/take-up by people with disabilities and elderly, the market size, key market players as well as market trends and related costs and benefits of making these goods and service accessible.

In addition to these 15 priority goods and services, **public procurement of accessible goods and services** has been considered as an additional horizontal case. Public procurement represents a large volume of public spending each year, corresponding to approximately 17% of the EU GDP[28]. Given its economic significance, and its legislative framework, public procurement has the potential to influence the market in terms of production and consumption trends in favour of socially responsible goods and services – including accessible goods and services – on a large scale. The desire to integrate such social policy objectives into public procurement is already widespread throughout Europe[29], and the European Commission also attributes considerable importance to this issue as an important measure for the implementation of the EU

[28] EC (2010): *Europe 2020 Flagship Initiative - Innovation Union*, COM(2010) 546 final, p. 16. http://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication_en.pdf

[29] Adelphi (2010): *Strategic Use of Public Procurement in Europe*, Final Report to the European Commission MARKT/2010/02/C, http://ec.europa.eu/internal_market/publicprocurement/docs/modernising_rules/strategic-use-public-procurement-europe_en.pdf

2020 Strategy, as well as the European Sustainability Strategy[30]. More over the proposals for the revised Public Procurement Directives make accessibility compulsory "except in duly justified cases". [31]

2.5 Quantitative estimates and impacts

Subsequently, a methodological approach for the calculation of the costs of (diverging) accessibility requirements and the quantitative assessment of the policy options for the priority goods and services (also referred to as "cases"), including public procurement, was performed. An overall broad approach was taken to estimate, extrapolate and assess the potential impacts that can be observed going from the current situation to a baseline scenario and the expected impact of the different policy options. On a case-by-case basis a number of assumptions, data and calculations have been made for the purpose of carrying out the estimates.

In broad terms, for each good and service, the following was provided:

Table *4*: Overview of data, assumptions and estimates provided

Type of assessments	Assessments / Estimates
Data and basic assumptions	• Market size / values • Costs associated with accessibility and accessibility requirements • Countries with accessibility requirements and their share of GDP
Problem Assessment estimates	• Total cost of accessibility[32] based on one set of requirements (for EU 27 and for the relevant share of the EU market[33]) • Cost to ensure accessibility of good/service sold across borders • Costs of understanding different accessibility requirements across borders
Baseline Scenario estimates	Compliance costs in 2020
Impacts of the Policy Options: estimates	• Situation in 2020: Assessment of Policy Options (costs savings) • Situation until 2020: Assessment of Policy Options (cumulative costs savings)
The impact of the Policy Options in relation to the total market size	• Situation in 2020

[30] http://register.consilium.europa.eu/pdf/en/06/st10/st10917.en06.pdf

[31] Respectively Article 40 (1) Proposal for a Directive on public procurement; Article 54 (1) Proposal for a Directive on procurement by entities operating in the water, energy, transport and postal services sectors.

[32] These estimates are based on estimations of both one-off capital expenditures (CAPEX) and ongoing operational expenses (OPEX).

[33] Determined based on the countries that have or are expected to have accessibility requirements in place for the relevant market.

Type of assessments	Assessments / Estimates
(expressed as a proportion)	• Situation until 2020
Assessments of the impacts of the policy options towards the assessment criteria	• Policy Option 1: Baseline Scenario – Impact Assessment • Policy Options 2, 3 and 4 – Impact Assessment

3 Problem Assessment: Overview

3.1 Introduction

This chapter presents the main quantitative and qualitative findings of the problem assessment. The chapter consists of the following four main sections:

- The legislative situation in the EU Member States;
- The relevant markets (including take-up rates, market size, and forgone market potential related to the (cross-border) provision of accessible goods and services);
- The problem assessment for business; and
- The problem assessment for consumers.

First, the findings of the **legislative analysis** in the EU Member States are provided for each priority good and service[34]. The analysis focuses on the availability of technical accessibility requirements in the EU Member States. Divergences and contradictions between the various requirements in place are highlighted.

Next, estimates of the **markets for the priority goods and services** are provided, including take-up rates by consumers with and without disabilities, the current share of accessible goods and services within the priority markets, as well as the annual industry turnover. This data has been compiled in order to estimate the current and "potential"[35] market size for each priority good and service. More specifically, the "potential market size" refers to businesses' forgone annual turnover (opportunity costs) that is due to an insufficient provision of accessible goods and services. Estimates are provided both for the current situation and for 2020 (see section 3.3).

In the section on the **problem assessment for business**, two main types of analyses are provided. As a starting point, *the annual costs for businesses related to the (cross-border) provision of accessible goods and services* are estimated, including the following calculations (estimates are provided for the current situation as well as for 2020):

[34] This analysis was based on a country sample of nine EU Member States and Norway. The findings for the nine Member States have been extrapolated to the EU27.

[35] If goods and services and services were accessible.

- Total cost of accessibility[36] based on one set of requirements (EU 27)[37];
- Cost to ensure accessibility of the good/service sold across borders; and
- Cost of understanding different accessibility requirements across borders.

Since legislation, however, varies between the Member States (as identified in the first step of the problem assessment analysis), the estimated cost has been adjusted for the following:

- The relevant share of GDP of the concerned Member States;
- The share of turnover stemming from cross-border trade; and
- A correction factor that takes account of overlapping legislative accessibility requirements between EU Member States.

Finally, **problems faced by disabled consumers** have been assessed in terms of opportunity costs. Indeed, there is evidence that accessible goods and services are at least in some cases more costly than non-accessible goods and services, and disabled consumers also face a smaller choice than people without disabilities. Due to a lack of data it has, however, not been possible to assess the problem for consumers in quantitative terms for all goods and services but has been done in qualitative terms.

3.2 The legislative situation

This section provides a broad overview of the legislative situation of the 15 priority goods and services as well as concerning the horizontal issue of public procurement. A detailed legislative analysis based on primary and secondary sources has been conducted for each of the cases as part of the present study. This section summarises the results of this analysis: For each of the cases the current degree of regulatory coverage, i.e. the existence of mandatory technical accessibility requirements, and fragmentation is discussed. Because the in-depth legal analysis has been limited to 10 priority countries, some of the results for the EU27 have been determined through extrapolations and are therefore expressed as ranges. The analysis has also looked at the expected regulatory fragmentation in 2020, which forms the basis for the development of the baseline scenario as well as the different policy options. In most of the cases, different future scenarios of regulatory fragmentation have been developed.

An overview table is provided below, which gives a synthetic overview of the current and expected future regulatory fragmentation of technical accessibility requirements for the priority goods and services.

[36] These estimates are based on estimations of both one-off capital expenditures (CAPEX) and ongoing operational expenses (OPEX).

[37] The total cost of accessibility is an estimate of the annual one-off and ongoing costs that businesses are expected to incur if a common set of accessibility requirements would be in place for each of the priority goods and services across all EU Member States.

One may notice the varying degrees of regulatory coverage and fragmentation across the different priority goods and services. While some goods and services are covered by mandatory technical accessibility requirements in a majority of Member States, others are less regulated with regard to accessibility:

- The priority goods and service with a **high degree of regulatory coverage and fragmentation of technical accessibility requirements** include architect services, broadcasting accessibility services as well as DTT equipment.
- The priority goods and service with an **intermediate degree of regulatory coverage and fragmentation of technical accessibility requirements** include ATMs, self-service terminals in the transport sector as well as telecommunication services (relay and emergency services).
- The priority goods and service with a **lower degree of regulatory coverage and fragmentation of technical accessibility requirements** include eBooks, private websites (e.g. of transport companies, banks, eCommerce companies, hospitality service providers), mobile telecommunication terminals, computers and operating systems as well as the area of public procurement.

Nevertheless, for all goods and services at least sufficient indications of divergences were found to allow for estimates of increased fragmentation by 2020. Indeed, the Member States are continuing to take action to fulfil their obligations stemming from the UN Convention on the Rights of Persons with Disabilities, in particular in the areas of ICT, built environment and transportation, potentially creating further problems within the Internal Market. In the following we provide examples of developments in the Member States. In addition, in the area of Public Procurement the changes in the revised Directives will impact the obligations on accessibility in all Member States.

Examples of planned actions by Member States to fulfil their commitments under the UNCRPD

There are signs in the Member States that actions are ongoing or will be introduced to address the commitments under the UNCRPD. For example, the following ongoing or upcoming developments have been identified in the Member States:

- ***Austria**: the National Action Plan 2012-2020 to promote and to implement the aims of the UNCRPD;*
- ***Belgium**: the Flemish strategic framework on disability 2012-2014 was published and strategic and operational goals will be implemented in 2012, Wallonia is preparing its strategic framework for 2012-2017;*
- ***Bulgaria**: a biannual plan will be established in 2012 for the implementation of the UNCRPD;*
- ***Cyprus**: the current Governance Programme 2008-2013 and Strategic Development Plan 2007-2013 are coming to an end soon;*
- ***Finland**: Policy actions for the next few years to implement the UNCRPD are set out in the Disability Policy Programme 2010-2015;*
- ***Germany**: the National Action Plan provides the long-term overall strategy to implement the UNCRPD, supplemented by other action plans in federal states, municipalities, etc.*
- ***The Netherlands**: no comprehensive implementation plan for the Convention has yet been put in place (please note that the Netherlands have signed but not yet ratified the UNCRPD);*
- ***Portugal**: the current 2011-2013 National Strategy for Disability will be renewed to further implement the UNCRPD;*

- ***Spain**: the Spanish Disability Strategy 2012-2020 was recently approved, the current Action Plan covers 2009-2012;*
- ***Sweden**: a new disability strategy was adopted during 2011, setting out a number of strategic objectives for disability policy in nine priority areas for the coming five-year period including accessibility.;*
- ***United Kingdom**: developed an overarching Disability Strategy published in 2012.*[38]

Depending on the focus of these developments concerning strategies, action plans and legislative initiatives in the Member States, the Internal Market could face further fragmentation.

*In the **Czech Republic**, the National Plan for Promoting Equal Opportunities for Persons with Disabilities 2010–2014*[39] *foresees that:*

- *Public authorities shall take appropriate measures (including the identification and elimination of obstacles and barriers) to ensure that*
  - *Persons with disability have equal access to emergency services, which is likely to include accessible emergency service terminals;*
  - *Persons with disability have equal access to information services, which most likely includes websites as well. Along these lines the Ministry of the Interior has been promoting a significant expansion in the accessibility of public institutions' websites for people with visual, hearing, mental and multiple disabilities (including blind friendly websites).*
  - *Persons with disability have equal access to transportation. Along these lines, Ministry for Regional Development together with the Ministry of Transport and the Ministry of Industry and Trade committed to propose a change to the financing of the National Development Programme of Mobility for All (by 31 December 2012), to make it simpler, less burdensome and more transparent for the promoters of wheelchair accessible route plans. Currently the Ministry of Transportation is preparing (together with representatives defending the interests of the disabled) the documentation for international negotiations in which a legally binding set of technical requirements are set for the public transport of disabled people.*
- *Public authorities shall promote the design, development, production and distribution of accessible information and communications technologies and systems at an early stage, so that these technologies and systems become accessible at minimum cost.*

*In **Finland**, the 2010-2015 Disability Policy Programme*[40] *contains concrete proposals and measures to tackle the drawbacks when implementing the UN Convention in different sectors, including transport.*

*In **Ireland**, among the goals set forth by the Disability Act (2005) to be fulfilled by 2015 there are:*

- *Making all urban buses accessible to people with mobility, sensory and cognitive impairments;*
- *Bringing all bus stops up to accessibility standard.*
- *Replacing inaccessible busses with busses that are accessible to people with mobility, sensory and cognitive impairments*
- *Making all bus stations accessible to people with mobility, sensory and cognitive impairment*
- *Making all suburban trains accessible to people with mobility, sensory and cognitive impairments.*
- *Making all Inter-City passenger trains accessible to people with mobility, sensory and cognitive impairments.*

[38] A Strategy to improve the lives of people with disabilities 2012 – 2015, see: http://www.ofmdfmni.gov.uk/disability-strategy-2012-2015-revised-010313.pdf

[39] National Plan for Promoting Equal Opportunities for Persons with Disabilities 2010–2014. Available at http://icv.vlada.cz/assets/vydavatelstvi/vydane-publikace/National-plan-for-the-creation-of-equal-opportunities-for-persons-with-disabilities-2010-2014.pdf

[40] Finland's Disability Policy Programme 2010–2015. Available at http://www.sosiaaliportti.fi/en-GB/the-handbook-on-disability-services/finlands-disability-policy/

- *Making all railway stations accessible to people with mobility, sensory and cognitive impairments.*

*In **France**, at the National Conference on Disabilities (June 2011), the Government presented a plan for making the websites of public institutions accessible. The Conference gathered representatives of organisations of persons with disabilities, social/medical institutions or services working with persons with disabilities, social insurance institutions, trade unions and employer organisations and other bodies relevant in disability policy.*

*In the **Netherlands**, a detailed regulation will enter into force in 2012 providing for accessible public transport system. Most buses are already accessible and around 50% of the bus stops will be accessible in 2015.*

*In **Poland**, in 2011 the technical conditions are to be met by buildings and facilities of underground and by trams and trolley buses and their necessary equipment were defined in two regulations of the Minister of Infrastructure.*

*In **Portugal**, the National Strategy for the Disability (2011-2013) aims at improving accessibility of public transports. In addition, the National Plan for the Promotion of Accessibility (PNPA) 2007-2015[41] aims to ensure that the ATM interfaces, information kiosks, or systems of selling transportation tickets, as well as the public internet spaces, can be accessed by people with disabilities (namely, with vision and hearing impairments, as well as by persons in wheel-chairs). According to the PNPA, this measure will be executed by the Ministry of Sciences, Technology and Higher Education/Unit for Innovation and Knowledge (UMIC), the Institute of Informatics and the SIBS.*

*In **Sweden**, the Government decided on a strategy for the future disability policy during 2011. In the strategy the Government presented a number of strategic objectives for the coming five-year for disability policy in nine priority areas, among which IT and media policy. It also presented a number of objectives for disability policy in the area of transport. "People who have problems taking public transport because of their functional impairment are entitled to use the transportation service designed for people with disabilities. Travel under this system, which is subsidised, is provided by taxis or larger, specially modified vehicles. The right to such transportation is regulated by the Special Transport Act. Municipalities are responsible for and make decisions about the special transportation service. In Stockholm alone, almost three million trips are made annually using this service[42]."*

The following table provides the overview of current and expected legislation in the Member States.

[41] http://www.inr.pt/uploads/docs/acessibilidade/PNPA.rtf

[42] Swedish disability policy: Dignity and democracy. Available at http://www.sweden.se/eng/Home/Society/Accessibility/Facts/Swedish-disability-policy/

Table 5: Overview of the current and expected future regulatory fragmentation of technical accessibility requirements for the priority goods and services

Priority good or service	Current regulatory fragmentation: No. of MS with relevant technical accessibility requirements	Expected regulatory fragmentation in 2020: No. of EU27 MS with relevant technical accessibility requirements
Self-Service Terminals (SSTs)		
(A) ATMs	**Lower range limit estimate:** 5 EU Member States **Upper range limit estimate:** 15 EU Member States	**Lower range limit estimate:** 5 EU Member States **Lower middle range limit estimate:** 10 EU Member States **Upper middle range limit estimate:** 15 EU Member States **Upper range limit estimate:** 27 EU Member States
(B) SSTs in the transport sector	**Lower range limit estimate:** 6 EU Member States **Upper range limit estimate:** 18 EU Member States	**Lower range limit estimate:** 6 EU Member States **Lower middle range limit estimate:** 9 EU Member States **Upper middle range limit estimate:** 18 EU Member States **Upper range limit estimate:** 27 EU Member States
Hospitality Services		
(A) Websites	1 EU Member State	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States
(B) Architect services	**Lower range limit estimate:** 16 EU Member States **Upper range limit estimate:** 23 EU Member States	**Estimate:** 27 EU Member States
eBooks	Largely unregulated.	**Lower range limit estimate: 3 EU Member States** **Lower middle range limit estimate: 7 EU Member States** **Upper middle range limit estimate: 21 EU Member States** **Upper range limit estimate: 27 EU Member States**
Computers and Operating Systems	**Lower range limit estimate:** 2 EU Member States **Upper range limit estimate:** 6 EU Member States	**Lower range limit estimate:** 2 EU Member States **Middle range limit estimate:** 6 EU Member States **Upper range limit estimate:** 27 EU Member States

Priority good or service	Current regulatory fragmentation: No. of MS with relevant technical accessibility requirements	Expected regulatory fragmentation in 2020: No. of EU27 MS with relevant technical accessibility requirements
Television		
(A) Linear TV broadcasting accessibility services	**Lower range limit estimate:** 8 EU Member States **Upper range limit estimate:** 24 EU Member States	**Estimate:** 24 EU Member States
(B) Digital Terrestrial Television (DTT) equipment	**Lower range limit estimate:** 8 EU Member States **Upper range limit estimate:** 24 EU Member States	**Estimate:** 24 EU Member States
Websites	1 Member State	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States
eCommerce	1 EU Member State	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States
Telecommunication Services (relay and emergency services)	17 EU Member States	**Estimate**: 20 EU Member States[43]
Mobile Telecommunication Terminals	Largely unregulated.	**Low range limit estimate:** 3 EU Member States **Middle range limit estimate:** 6 EU Member States **Upper range limit estimate:** 27 EU Member States

[43] This case should be taken with particular caution. It is assumed that **20 EU Member States** have implemented rules on accessible emergency services and relay services, which mean that they are, however technically not fully interoperable. The case looks at the costs of achieving interoperability of accessible emergency services and relay services across the EU – based on a centralised European regulatory approach (policy options 2-4) or on an ad hoc basis without EU-level intervention (baseline).

Priority good or service	Current regulatory fragmentation: No. of MS with relevant technical accessibility requirements	Expected regulatory fragmentation in 2020: No. of EU27 MS with relevant technical accessibility requirements
Rail transport services		
(A) Websites	≥ 1 EU Member State	≥ **Lower range limit estimate:** 1 EU Member State ≥ **Lower middle range limit estimate:** 3 EU Member States ≥ **Upper middle range limit estimate:** 12 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States
(B) Ticketing machines	≥ **Lower range limit estimate:** 6 EU Member States ≥ **Upper range limit estimate:** 18 EU Member States	≥ **Lower range limit estimate:** 6 EU Member States ≥ **Lower middle range limit estimate:** 9 EU Member States ≥ **Upper middle range limit estimate:** 18 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States
Bus transport services		
(A) Websites	≥ 1 EU Member State	≥ **Lower range limit estimate:** 1 EU Member State ≥ **Lower middle range limit estimate:** 3 EU Member States ≥ **Upper middle range limit estimate:** 12 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States
(B) Architect services	≥ 27 EU Member States	≥ 27 EU Member States
(C) Ticketing machines	≥ **Lower range limit estimate:** 6 EU Member States ≥ **Upper range limit estimate:** 18 EU Member States	≥ **Lower range limit estimate:** 6 EU Member States ≥ **Lower middle range limit estimate:** 9 EU Member States ≥ **Upper middle range limit estimate:** 18 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States

Priority good or service	Current regulatory fragmentation: No. of MS with relevant technical accessibility requirements	Expected regulatory fragmentation in 2020: No. of EU27 MS with relevant technical accessibility requirements
Air transport services		
(A) Websites	1 EU Member State	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States
(B) Architect services	27 EU Member States	27 EU Member States
(C) Check-in machines	**Lower range limit estimate:** 6 EU Member States **Upper range limit estimate:** 18 EU Member States	**Lower range limit estimate:** 6 EU Member States **Lower middle range limit estimate:** 9 EU Member States **Upper middle range limit estimate:** 18 EU Member States **Upper range limit estimate:** 27 EU Member States
Maritime transport services		
(A) Websites	1 Member State	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States
(B) Architect services	27 EU Member States	27 EU Member States
(C) Ticketing machines	**Lower range limit estimate:** 6 EU Member States **Upper range limit estimate:** 18 EU Member States	**Lower range limit estimate:** 6 EU Member States **Lower middle range limit estimate:** 9 EU Member States **Upper middle range limit estimate:** 18 EU Member States **Upper range limit estimate:** 27 EU Member States
Architect Services	27 EU Member States	27 EU Member States
Public Procurement	**Lower range limit estimate:** 1 EU Member State **Upper range limit estimate:** 3 EU Member States	**Estimate:** 27 EU Member States

Priority good or service	Current regulatory fragmentation: No. of MS with relevant technical accessibility requirements	Expected regulatory fragmentation in 2020: No. of EU27 MS with relevant technical accessibility requirements
Banking Services		
(A) Websites	1 EU Member State	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States
(B) Architect services	**Lower range limit estimate:** 11 EU Member States **Upper range limit estimate:** 20 EU Member States	**Estimate:** 27 EU Member States
(C) ATMs	**Lower range limit estimate:** 5 EU Member States **Upper range limit estimate:** 15 EU Member States	**Lower range limit estimate:** 5 EU Member States **Lower middle range limit estimate:** 10 EU Member States **Upper middle range limit estimate:** 15 EU Member States **Upper range limit estimate:** 27 EU Member States

3.3 The relevant markets

This section provides estimates of the markets for the priority goods and services. The market estimates have informed the assessment of the current problems.

More specifically, the section contains the following data and estimates:

- **Take-up rates for people with and without disabilities**, including the gap (where relevant): The take-up rates have been used to calculate the number of consumers with and without disabilities in order to be able to attribute which share of the total annual industry turnover is linked to consumers in need for accessible goods and services.
- **The current market share of accessible goods and services**: This has been estimated in order to assess to what degree the priority goods and services are accessible and to attribute the share of annual turnover that stems from the provision of accessible goods and services.
- **The accessibility "target rate"**: Based on the current market share of accessible goods and services, the "target rate" measures to what extent goods and services should be accessible in order to maximise the companies' annual market potential;
- **The total annual market size** (current situation and forecast 2020): This refers to the annual industry turnover. Estimates of the share that can be attributed to consumers with and without disabilities have been made.
- **The annual overall market potential and annual forgone market potential** (current situation and forecast 2020) have been estimated based on the gap between the take up rates of people with and without disabilities: These measurements display the estimated opportunity costs for EU businesses in terms of unrealised turnover due to a lack of accessible goods and services provided in the market. In other words, if businesses would provide more accessible goods and services they could increase their turnover by the market potential currently forgone.

As indicated before, the availability of data is generally limited. Therefore, it has in many cases been necessary to base the calculations on assumptions and extrapolations. Extensive efforts were undertaken to acquire estimates from industry stakeholders to gather as much data as possible.

The following table provides an overview of the estimates that have been made.

Table 6: Overview of Market and Consumer Estimates

Overview of Market and Consumer Estimates	Basic data			Current Situation			Forecast 2020		
	Take-up rate (kept constant for the forecast)	Market share of accessible goods and services (in %)	Accessibility target rate (in %)	Total annual market size (in EU27)	Annual market potential if accessibility would be realized to a larger extent (in EU27)	Annual forgone market potential due to a lack of accessibility of goods and services (in EU27)	Total market size in 2020 (in EU27)	Total market potential in 2020 if accessibility would be realized to a larger extent (in EU27)	Forgone market potential in 2020 if the lack of accessibility of goods and services is not closed (in EU27)
eBooks	Gap: 2,85%			798,0 EURm	838,4 EURm		13,2 EURb	13,9 EURb	
People without disabilities	12.9%			655,4 EURm	655,4 EURm		10,9 EURb	10,9 EURb	
People with disabilities	10.1%	32,50%	100,00%	142,6 EURm	183,0 EURm	40,4 EURm	2,4 EURb	3,0 EURb	668,4 EURm
Bus transport services	Gap: 3.0%			109,9 EURb	111,2 EURb		109,9 EURb	111,2 EURb	
People without disabilities	58.0%			86,9 EURb	86,9 EURb		86,9 EURb	86,9 EURb	
People with disabilities	55.0%	68,50%	100,00%	23,0 EURb	24,3 EURb	1,3 EURb	23,0 EURb	24,3 EURb	1,3 EURb
Broadcasting services	Gap: 10.0%			78,1 EURb	80,0 EURb		115,2 EURb	118,1 EURb	
People without disabilities	90.0%			62,6 EURb	62,6 EURb		92,3 EURb	92,3 EURb	
People with disabilities	80.0%	28,00%	100,00%	15,5 EURb	17,5 EURb	1,9 EURb	22,9 EURb	25,8 EURb	2,9 EURb
Telecommunication services	Gap: 5.0%			274,9 EURb	278,2 EURb		282,1 EURb	285,6 EURb	
People without disabilities	91.0%			217,5 EURb	217,5 EURb		223,2 EURb	223,2 EURb	
People with disabilities	86.0%	44,00%	100,00%	57,4 EURb	60,7 EURb	3,3 EURb	58,9 EURb	62,3 EURb	3,4 EURb
Air transport services	Gap: 4.7%			117,3 EURb	120,7 EURb		214,4 EURb	220,5 EURb	
People without disabilities	37.0%			94,3 EURb	94,3 EURb		172,4 EURb	172,4 EURb	
People with disabilities	32.3%	0,60%	30,00%	23,0 EURb	26,3 EURb	3,3 EURb	42,0 EURb	48,1 EURb	6,1 EURb

Overview of Market and Consumer Estimates	Basic data			Current Situation			Forecast 2020		
	Take-up rate (kept constant for the forecast)	Market share of accessible goods and services (in %)	Accessibility target rate (in %)	Total annual market size (in EU27)	Annual market potential if accessibility would be realized to a larger extent (in EU27)	Annual forgone market potential due to a lack of accessibility of goods and services (in EU27)	Total market size in 2020 (in EU27)	Total market potential in 2020 if accessibility would be realized to a larger extent (in EU27)	Forgone market potential in 2020 if the lack of accessibility of goods and services is not closed (in EU27)
Mobile terminals	Gap: 2.1%			31,7 EURb	32,0 EURb		729,2 EURb	738,1 EURb	
People without disabilities	39.0%			25.0 EURb	25.0 EURb		577.0 EURb	577.0 EURb	
People with disabilities	36.9%	34,00%	100,00%	6.6 EURb	7.0 EURb	383,7 EURm	152.2 EURb	161.1 EURb	8,8 EURb
Computers & OS	Gap: 47.7%			165.0 EURb	185.2 EURb		251.6 EURb	282.4 EURb	
People without disabilities	95.3%			144.8 EURb	144.8 EURb		220.8 EURb	220.8 EURb	
People with disabilities	47.7%	40.0%	100.0%	20.2 EURb	40.4 EURb	20.2 EURb	30.8 EURb	61.6 EURb	30.8 EURb
Hospitality Services	Gap: 24.4%			135.0 EURb	164.1 EURb		232.8 EURb	283.0 EURb	
People without disabilities	30.0%			128.3 EURb	128.3 EURb		221.3 EURb	221.3 EURb	
People with disabilities	5.6%	6.0%	30.0%	6.7 EURb	35.8 EURb	29.1 EURb	11.5 EURb	61.8 EURb	50.2 EURb
eCommerce	Gap: 15.0%			361.9 EURb	380.2 EURb		1,027.7 EURb	1,079.6 EURb	
People without disabilities	68.0%			297.2 EURb	297.2 EURb		844.0 EURb	844.0 EURb	
People with disabilities	53.0%	60.2%	100.0%	64.7 EURb	83.0 EURb	18.3 EURb	183.7 EURb	235.6 EURb	52.0 EURb
DTT Equipment	Gap: 10.0%			2.2 EURb	2.3 EURb		2.6 EURb	2.7 EURb	
People without disabilities	90.0%			1.8 EURb	1.8 EURb		2.1 EURb	2.1 EURb	
People with disabilities	80.0%	38.0%	100.0%	437.4 EURb	492.1 EURb	54.7 EURb	524.4 EURb	589.9 EURb	65.5 EURb
Private websites	Gap: 15.0%			1,203.4 EURb	1,264.3 EURb		2,319.6 EURb	2,436.9 EURb	
People without disabilities	68.0%			988.4 EURb	988.4 EURb		1,905.1 EURb	1,905.1 EURb	
People with disabilities	53.0%	28.8%	100.0%	215.1 EURb	275.9 EURb	60.9 EURb	414.5 EURb	531.9 EURb	117.3 EURb

Overview of Market and Consumer Estimates	Basic data			Current Situation			Forecast 2020		
	Take-up rate (kept constant for the forecast)	Market share of accessible goods and services (in %)	Accessibility target rate (in %)	Total annual market size (in EU27)	Annual market potential if accessibility would be realized to a larger extent (in EU27)	Annual forgone market potential due to a lack of accessibility of goods and services (in EU27)	Total market size in 2020 (in EU27)	Total market potential in 2020 if accessibility would be realized to a larger extent (in EU27)	Forgone market potential in 2020 if the lack of accessibility of goods and services is not closed (in EU27)
Rail transport services	Gap: 52.0%			450.0 EURb	530.2 EURb		705.6 EURb	831.4 EURb	
People without disabilities	75.0%			414.5 EURb	414.5 EURb		649.9 EURb	649.9 EURb	
People with disabilities	23.0%	10.0%	30.0%	35.5 EURb	115.7 EURb	80.2 EURb	55.6 EURb	181.4 EURb	125.8 EURb
Maritime transport services	Gap: 6.2%			29.3 EURb	20.9 EURb	*Cannot be estimated because the take-up for PwD is higher than for Non-PwD*	29.3 EURb	20.9 EURb	*Cannot be estimated because the take-up for PwD is higher than for Non-PwD*
People without disabilities	3.4%			16.4 EURb	16.4 EURb		16.4 EURb	16.4 EURb	
People with disabilities	9.6%	2.7%	30.0%	12.9 EURb	4.6 EURb		12.9 EURb	4.6 EURb	
SSTs	N/A	45.0%	80.0%	258.6 EURb	N/A	N/A	258.6 EURb	N/A	N/A
Architects	N/A	100.0%	100.0%	14.5 EURb	N/A	N/A	14.5 EURb	N/A	N/A
Public Procurement	N/A	N/A	N/A	2,407.0 EURb	N/A	N/A	2,407.0 EURb	N/A	N/A
Banking services	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

As concerns those priority goods and services for which **take-up rates** have been identified or estimated based on proxies[44], the take-up rates by persons with disabilities range from 5.6% in the case of hospitality services to 86% in the case of telecommunication services. For persons without disabilities, take-up rates range from 3.4% (maritime transport services) to 95.3% (computers and operating systems). Thus, the take-up rate for people with disabilities is generally lower than for people without disabilities with the exception of maritime transport services; the available data on take-up rates suggests that persons with disabilities take-up maritime transport services to a slightly larger extent than persons without disabilities.

The gap between the take-up rates of persons with and without disabilities varies between the priority goods and services with ranges from a gap of 2.1% in the case of mobile telecommunication terminals to a 52% gap in the case of rail transport services. The gap in take-up rates between persons with and without disabilities is below 10% in half of the cases, namely: eBooks, bus transport services, telecommunication services, air transport services, mobile telecommunication terminals and maritime transport services. In the cases of computers and operating systems, hospitality services, eCommerce, DTT equipment, websites, and broadcasting services, the gap in take-up rates is equal to or above 10%.

The current **total annual market size** ranges between 798 EURm for eBooks and 2,407 EURb for public procurement, while the average is at 227 EURb. The market size is less than 100 EURb for each of six priority goods and services, namely: eBooks, broadcasting services, mobile telecommunication terminals, DTT equipment, maritime transport and architect services. Of the other ten priority goods and services, four are estimated to have a turnover of more than 300 EURb, namely: eCommerce, rail transport services, websites, and public procurement. In 2020, the lowest turnover within the priority goods and services is estimated to be generated by businesses active in the DTT equipment industry (2.6 EURb), while the highest turnover is expected to be generated with public procurement (2,407 EURb). Businesses in four priority goods and services markets are estimated to generate less than 100 EURb of annual turnover in 2020, namely: DTT equipment, eBooks, architect services, and maritime transport services while the number of priority goods and services for which the annual turnover is above 300 EURb remains at four. Markets are, however, in flux with turnover increasing for all priority goods and services until 2020 except for maritime transport services, self-service terminals, architect services, public procurement, and banking services.[45] The highest growth in market size from the current situation to 2020 is estimated for mobile telecommunication terminals (2,203%).

The **foregone market potential** for companies has been calculated based on the gap between the take up rates of disabled and non-disabled people in the current situation and as a forecast for

[44] Take-up rates could not be identified for: SSTs, architect services, public procurement and banking services.

[45] In the case of public procurement, no relevant data could be identified while available data on the declining number of banking branches suggests a shrinking banking services market. This development is, however, levelled by the rise of online banking.

2020. At the lower end, the annual foregone market potential for companies has, in the case of eBooks, been estimated to be between 40.4 EURm (at present) and 668.4 EURm in 2020. At the higher end, the annual forgone market potential is estimated to currently be 80.2 EURb in the case of rail transport service. The forgone market turnover is estimated to be 125.8 EURb in 2020 if services are not provided with increased accessibility.[46]

The **relative share of the foregone market potential compared to the estimated total market size** varies between the priority goods and services. The lowest forgone market potential has been identified for bus transport services (1.1 % of the current market turnover), while the highest additional share of 21.6 % of the current turnover has been identified for hospitality services. This can be interpreted as businesses in the bus transport services sector are already catering to a large extent to persons with disabilities, while hospitality services businesses are still able to generate large margins with the provision of accessible services. The difference between the priority goods and services depends on the gap in take-up rates between people with and without disabilities. To illustrate this, in the area of bus transport services, 58% of non-disabled people travel by bus, while 3% less (55%) of people with disabilities take up this service. In the case of hospitality services, the difference is 24.4% (5.6% of people with disabilities make use of this service compared to 30% of non-disabled people).

The take-up rates for all goods and services have been kept constant up until 2020 as no reliable quantitative estimates of future developments has been identified. The average foregone market potential is thus estimated to be 6.5% in the current situation as well as in 2020.

Also in **absolute terms, the foregone market potential** differs significantly between the priority goods and services. This depends not only on the gap in take-up rates of goods and services, but also – and indeed largely – on the market size of a specific good or service. To illustrate this, the lowest total foregone market potential has been estimated for the case of eBooks (40.4 EURm in the current situation), which reflects the fact that the annual market turnover for eBooks is estimated at 798 EURm; this is comparatively low. In contrast, the highest total annual foregone market potential (80.2 EURb) has been identified for rail transport services. This largely depends on the comparatively high current market turnover of 450 EURb.

While the relative share of the foregone market potential due to the take up rates has been kept constant (as explained above), the total potential is assumed to change over time in order to reflect the estimated Compound Annual Growth Rate (CAGR) for each good and service. The highest growth in total foregone market potential has been estimated for mobile terminals: with an estimated increase in market turnover from 383 EURm to 8.8 EURb (based on a CAGR of 33%), the foregone market potential is assumed to increase by 2,203% until 2020. In contrast, the bus

[46] The foregone market potential could not be estimated for: Maritime transport services, SSTs, architect services, public procurement, and banking services. In the case of maritime transport services the estimate was not possible since the take-up rate for persons with disabilities is higher than for people without disabilities, while in the other cases the estimate was not possible due to a lack of data regarding the take-up rates.

transport services sector is not expected to grow over the next years and thus the total foregone market potential for bus transport services is not assumed to change. The foregone market potential for all priority goods and services is estimated to more than triple (average increase of 372%) by 2020.

The forgone market potential has only been calculated for B2C (business-to-consumer) goods and services, as these markets are directly affected by the take up rate of people with disabilities.[47] Estimates for banking services have, however, not been made due to insufficient data availability.

3.4 The problem assessment

This chapter provides an analysis of the estimated costs associated with the cross-border provision of accessible goods and services. Examples of specific problems faced by the industry are highlighted in text boxes in order to illustrate the types of challenges that occur in the Internal Market.

3.4.1 Problems for companies in the current situation

Businesses face different types of costs when providing accessible goods and services. As indicated above, three broad types of costs have been calculated for each priority good and service:

- The total costs of accessibility (CAPEX + OPEX) based on one set of requirements in the EU27;
- Costs to ensure the accessibility of goods and services sold across borders; and
- Costs of understanding different accessibility requirements in the EU27 Member States.

The *total cost of accessibility* is a quantitative measure that has been devised to account for the *product-related* costs of providing a good or service with accessibility features related for example to their physical appearance or user interface, or design or accessibility features. As the nature and regulation of the goods and services under analysis differ from one good and service to another, the costs of providing accessible goods and services also vary. Taking the lowest and highest estimates as examples, it is expected that providing accessible self-service terminals (ATMs, ticketing machines and check-in machines) may cost less than 100,000 EUR per year (or 73,371 EUR per year for all EU27 businesses active in these markets), the provision of accessible television[48] may at least cost close to 1 EURb per year (estimated at 849.2 EURm per year).[49] In comparison to the size of the markets, however, these costs are regarded as negligible.

[47] Following this logic, this type of estimates has not been made for the B2B cases, namely: SSTs, Architect Services and Public Procurement.

[48] More specifically, this concerns accessible digital terrestrial television equipment such as, for example, set-top boxes, and accessible broadcasting including subtitling, dubbing, and audio description.

The estimate of the *costs to ensure accessibility across borders* serves as a measurement to account for the proportion of the *total cost of accessibility* that is linked to cross-border trade. This is done by adjusting the *total cost of accessibility* for the percentage of goods and services being provided across borders, the number of EU27 Member States for which differing legislative requirements were identified, the share of GDP of the relevant countries, as well as for a correction factor[50]. Also here the quantitative estimates vary between the goods and services in line with the expected share of cross border trade. In the case of eBooks, for example, the share of cross-border trade has been fixed at 10% since eBooks in one language are expected to be largely sold in the country where the language is actually used, while the cross-border share for SSTs has been fixed at 50% since these machines can be provided in different countries without much further physical adaptation.[51] Furthermore, a correction factor has been introduced in order to account for the fact that divergent legislative requirements in the EU Member States may only vary to some extent and are not expected to impose the *total costs of accessibility* on businesses multiple times. As a consequence, the annual cost to ensure the accessibility of goods and services sold across borders ranges from roughly 8,000 EUR in the case of air transport services to approximately 4.8 EURm in the case of computers and operating systems. This difference is explained on the hand due to the different nature of the good or service and related elements of accessibility as well as the relevant market size per good or service.

Finally, the *costs of understanding different accessibility requirements across borders* have been estimated. This refers to the costs that result from companies having to dedicate time to interpret the meaning of the legislative requirements in the relevant EU Member States and understand the (potentially) necessary adaptations that need to be made to the goods and services. Due to a lack of data, this estimate has been fixed at between 1% and 5% of the *costs to ensure accessibility* per good and service based on a "best estimate".

The following table displays an overview of the relevant estimates by priority good and service, expressed as annual estimates. A summary of the main conclusions is provided after the table.

[49] Upper range estimates may exceed these cost estimates by far, as, for example, evidenced for the public procurement market.

[50] While legislative accessibility requirements in EU Member States may differ, they might nevertheless overlap to some extent. The correction factor takes account of this by introducing a multiplicative share as a measure for legislative overlap. If, for example, the legislative requirements are expected to overlap to a degree of 80%, costs to provide accessible goods and services across borders imposed on businesses are not fully incurred for each relevant country, but only 20% of the costs.

[51] Please note however, that the applied figures are only broad estimates and based on the evidence available.

Table 7: Problem assessment – current costs

Types of costs calculated in the Problem Assessment	Total cost of accessibility (CAPEX + OPEX) based on one set of requirements (EU 27)		Cost to ensure accessibility of good/service sold across borders		Costs of understanding different accessibility requirements across borders	
	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate
Self-Service Terminals	73,371 EUR	440,224 EUR	113,145 EUR	678,870 EUR	1,131 EUR	33,943 EUR
Hospitality services	111.2 EURm	215.7 EURm	243,083 EUR	500,825 EUR	12,154 EUR	50,082 EUR
eBooks	40.2 EURm	120.6 EURm	6.5 EURm	19.5 EURm	65,002 EUR	975,023 EUR
Computers & OS	90.8 EURm	181.5 EURm	4.8 EURm	9.5 EURm	47,598 EUR	95,197 EUR
Television	849.2 EURm	2,545.4 EURm	217.8 EURm	652.5 EURm	2.2 EURm	32.6 EURm
Websites	437.6 EURm	901.6 EURm	1.1 EURm	2.3 EURm	55,665 EUR	229,373 EUR
eCommerce	339.9 EURm	339.9 EURm	864,670 EUR	864,670 EUR	43,233 EUR	86,467 EUR
Telecom. services	95.3 EURm	95.3 EURm	N/A	N/A	N/A	N/A
Telecom. Terminals	54.7 EURm	109.4 EURm	4.8 EURm	9.6 EURm	48,218 EUR	96,436 EUR
Rail transp. serv.	249,966 EUR	635,986 EUR	19,272 EUR	113,433 EUR	217 EUR	5,745 EUR
Bus transp. serv.	4.7 EURm	22.4 EURm	18,719 EUR	154,664 EUR	190 EUR	9,868 EUR
Air transp. serv.	595,601 EUR	1.4 EURm	8,349 EUR	44,893 EUR	141 EUR	2,416 EUR
Maritime transp. serv.	43,994 EUR	1.2 EURm	4,205 EUR	27,937 EUR	44 EUR	1,550 EUR
Architect services	N/A	N/A	N/A	N/A	32.4 EURm	38.9 EURm
Public procurement	960.9 EURm	1.4 EURb	11.2 EURm	16.8 EURm	112,052 EUR	168,078 EUR
Banking services	12.5 EURm	16.0 EURm	65,896 EUR	391,668 EUR	704 EUR	19,738 EUR
Overall cost in the Problem Assessment	3.0 EURb	6.0 EURb	247.6 EURm	713.1 EURm	2.6 EURm	34.4 EURm
Average cost in the Problem Assessment	189.4 EURm	377.0 EURm	17.7 EURm	50.9 EURm	183,199 EUR	2.5 EURm

In the cases of telecommunications[52] and architect services[53], certain cost components could not be estimate.

As shown in the above table, the current overall cost of accessibility for all goods and services considered in the study ranges between 3.0 EURb and 6.0 EURb per year. Cross-border related accessibility costs are estimated to range between 247.6 EURm and 713.1 EURm. Costs related to understanding different accessibility requirements range from 2.6 EURm to 34.4 EURm.

With regard to the specific priority goods and services and the various cost types, the main findings are as follows:

- Total cost of accessibility (CAPEX + OPEX) based on one set of requirements (EU27):
  - Lowest costs: maritime transport services (43,994 EUR to 1.2 EURm).
  - Highest costs: public procurement (960.9 EURm to 1.4 EURb).
- Cost to ensure accessibility of good/service sold across borders:
  - Lowest costs: maritime transport services (4,205 EUR to 27,937 EUR).
  - Highest costs: television (217.8 EURm to 652.5 EURm).
- Costs of understanding different accessibility requirements across borders:
  - Lowest costs: maritime transport services (44 EUR to 1,550 EUR).
  - Highest costs: architect services (32.4 EURm to 38.9 EURm)

The high volatility in the estimates is due to that the markets and the legislative situation in the EU Member States, as well as the total costs of accessibility vary strongly between the priority goods and services. The costs for cross-border provision of accessible goods and services follow a similar pattern in terms of high/low costs as the total cost of accessibility for the priority goods and services (as provided above). However, with regard to the costs of understanding different accessibility requirements across borders, the absolute estimates per priority good and service do not change considerably. This can be explained by the fact that this type of cost is dependent on the number of days dedicated to interpreting the legislation in place, which is not expected to vary much between the goods and services.

To illustrate the types of problems that are faced by business, examples are provided below, structured around the following three clusters, based on evidence gathered from the industry:

- Fragmentation of accessibility requirements in the areas of:
  - Self-service terminals;
  - Linear broadcasting services; and
  - Built environment.
- Cross-border trade in the areas of:
  - Ticketing machines;
  - Digital terrestrial television equipment;

[52] It was not possible to calculate the *costs to ensure accessibility across borders* and the *costs of understanding different accessibility requirements across borders* as no cross border element has been identified in relation to the provision of the relevant services; national telecommunication providers serve national markets only. Issues concerning interoperability of these services across borders and roaming are relevant to consider, but were not quantifiable.

[53] No figures could be calculated for the *total cost of accessibility* and the *costs to ensure accessibility across borders* due to the availability of data and the methodological approach subsequently taken.

- Web-accessibility;
- Built environment;

- Lack of economies of scale in the areas of:
  - Ticketing machines;
  - ATMs.

A brief problem statement is provided, as well as a more in-depth description of the problems businesses in the respective industries may face.

The set of examples provided below is given for illustrative purposes only; the list is thus not comprehensive (i.e. businesses may also face additional or other problems as those evidenced below).

Example: Fragmentation of accessibility requirements

Problem statement:

National accessibility requirements, e.g. in the form of legislative requirements, standards, recommendations, codes etc., may be different between Member States. According to the industry, this divergence imposes obstacles in the Internal Market and additional costs for accessibility, in particular in relation to understanding the different requirements and the adaptation of the goods and services in order to comply with the different rules. This may subsequently lead to a distortion of equal competition between market players in the Internal Market.

Problem description in the area of SSTs:

There are significant differences in the accessibility requirements for SSTs, namely in the area of transport specified by legislation, standards and technical guidance documents across Europe. These relate inter alia to issues of the built environment such as the height of operation, the knee space or the access area in front of the SSTs. The regulatory coverage with regard to ICT-related accessibility requirements is more limited. The table below provides examples of differences in accessibility requirements for SSTs.[54]

The illustrative comparison of selected technical accessibility requirements for SSTs in the transport sector in Europe shows that differences exist across countries. For instance, an SST with a height of operation of 1250 mm would be considered as accessible in France and Ireland, while it would be considered as inaccessible in Austria, Germany, Denmark, Spain, Norway and the UK. Similarly, an SST with a height of operation of 750 mm would be considered as accessible in the UK, while it would be assessed as inaccessible in Austria, Germany, Denmark, France, Ireland and Spain. With regard to knee space provided below the SST in order to make the operating devices reachable (i.e. accessible) for wheelchair users, (diverging) technical requirements exist in Germany, France and the UK, while no requirements have been defined in the other countries within the scope of the analysis. Similar problems can be observed with regard to the minimum requirements for the access area in front of the SSTs as well as the degree of coverage of ICT-related accessibility issues.

Leading SST manufacturers have reported that such regulatory differences in technical requirements lead to obstacles in the Internal Market and additional costs for accessibility because they have to familiarise with the diverging national accessibility requirements and adapt their goods and services in order to be able to sell them in the different sub-markets within the Internal Market.

[54] The requirements have been identified in the following legislation and documentation: EU: Commission Decision 2008/164/EC TSI PRM; AT: ÖNORM B 1600; DE: DIN 18040-1; DK: Danish Building Regulations 2010; DK: SBI Guide for building accessible SSTs; FR: Circular n° 2007-53 DGUHC of 30 November 2007; IE: Guidelines for Public Access Terminals Accessibility; ES: Royal decree 1544/2007, annex IV; NO: Guide "Self-service for all! Accessible self-service-machines"; UK Department for Transport: "Accessible Train Station – Design for Disabled People: A Code of Practice"; BS 8300:2009 Code of Practice.

Jurisdiction	EU	AT	DE	DK	DK[55]	FR	IE	ES	NO	UK	UK
Piece of regulation or guidance	Commission Decision 2008/164/EC TSI PRM	ÖNORM B 1600	DIN 18040-1	Danish Building Regulations 2010	SBI Guide for building accessible SSTs	Circular n° 2007-53 DGUHC of 30 November 2007	Guidelines for Public Access Terminals Accessibility	Royal decree 1544/2007, annex IV	Guide "Self-service for all! Accessible self-service-machines"	UK Department for Transport: "Accessible Train Station – Design for Disabled People: A Code of Practice"	BS 8300:2009 Code of Practice
Scope	Ticketing machines	SSTs	SSTs	SSTs	SSTs	SSTs	SSTs	Ticketing machines	SSTs	Ticketing machines	SSTs
Height of operation	700 - 1200 mm	850 - 1000 mm	850 - 1050 mm	-	900 - 1200 mm (in some cases: 380 - 1170 mm	900 - 1300 mm	900 - 1400 mm	950 - 1200 mm	800 - 1200 mm	700 - 1200 mm	-
Knee space	-	-	min. 150 mm deep	-	-	min. 300 mm deep, height up to 800 mm, min. 600 mm wide	-	-	-	-	min 500 mm deep, height of min. 700 mm
Access area in front of SST	-	-	1500 x 1500 mm (in some cases: 1200 x 1500 mm)	1300 x 1300 mm	1300 x 1300 mm	1500 x 1500 mm (in some cases: 800 x 1300 mm	1500 x 1500 mm (in some cases: 900 x 1500 mm)	-	2000 x 2000 mm	-	-
ICT-related requirements	Non-technical	None	None	None	Technical	None					

Problem description in the area of linear broadcasting services:

The provision of broadcasting accessibility services such as subtitles, audio description or sign language interpretation lead to substantial additional costs to broadcasters in a range of 1% up to 30% of the programme production costs.[56] The legal minimum requirements for the provision of accessibility requirements vary significantly across countries leading to varying costs for broadcasters across the Internal Market.

In all Member States within the scope of this analysis, with the exception of Norway and Portugal, technical accessibility requirements for broadcasting services have been defined. These requirements typically take the form of target percentages of the broadcasting programme which need to be covered by broadcasting accessibility services such as subtitling, audio description and sign language interpretation. While Portugal is currently in the process of defining such technical accessibility requirements, no such initiative could be identified in Norway. While most countries have set legal target accessibility rates for both public and private broadcasters, Italy and Germany have only established contractual target agreements with public broadcasters.

Target levels of broadcasting accessibility services vary between countries in both the quantities and types of broadcasting accessibility services to be provided. While required levels for subtitling are strong for most

[55] Two different sets of legislative requirements are in place in Denmark. Both are, however, not contradictory. The difference between both sets of requirements is that the 2010 „Building Regulations" are concerned with the accessibility of the built environment while the „SBI Guide for building accessible SSTs" is specifically related to the accessibility of self-service terminals. While the former does not contain standards for the height of operation of accessible SSTs, the latter does. Both sets of requirements may not be regarded as mutually exclusive but as complementary.

[56] http://www.itu.int/ITU-D/sis/PwDs/Documents/ITU-G3ict%20Making_TV_Accessible_Report_November_2011.pdf

public broadcasters (from 80% upwards in most cases) these fall significantly for commercial broadcasters. Levels for the provision of audio Description tend to be much lower.

Coupled with this, the mechanisms for calculating a broadcaster's achievement of these targets vary, with some broadcasters counting e.g. shows that have been imported from other networks and shows that are repeated after midnight with subtitles towards their targets. Other broadcasters such as the BBC in the UK have made significant efforts to subtitle most of their live broadcasting.

In view of different levels of accessibility requirements, the broadcasters in the Internal Market do not face the same costs for ensuring the legally required level of accessibility. Those broadcasters that send programmes from a Member State with low accessibility requirements to another Member State with high accessibility requirements have a cost advantage (as under the revised "TV without Frontiers Directive" the home country principle applies). This may lead to potentially unfair competition.

Problem description in the area of built environment:

The numerous differences identified in legislation and detailed technical accessibility requirements for the built environment lead to barriers for architectural design companies proving services across borders within the Internal Market.

Businesses face extra costs every time they work on projects in other countries because they have to understand and comply with differing local regulations on accessibility and other technical areas. Accessibility requirements concerning issues such as entrances, corridors, stairways, toilets and manoeuvring areas roughly affect 25% or more of the net space of buildings. Compliance with local requirements may require the hiring of local designers in order to operate swiftly enough during the design process, and to minimise the likelihood of expensive mistakes.

In some cases, software toolkits can play a role in supplying a better overview of national/regional (accessibility) requirements, where these may be difficult or time-consuming to understand by professionals. BIM and CAD systems used for modelling increasingly act as on the fly toolkits making adaptations of different local requirements easier, typically offering ranges of standard building elements and solutions to choose from. For designers not employing this kind of tools the task is of course more laborious, but a few toolkits that present all accessibility requirements in easy to access formats do exist for this group.

Example: Cross-border trade

Problem statement:

Economic operators who trade or envisage cross-border trading of goods and services fulfilling the accessibility requirements of one Member State face problems selling or providing services in other Member States.

The integration of the accessibility features in goods and services does not automatically open up the Internal Market for such goods and services. Instead, it would often result in a limitation of the goods and services to a particular national market, which requires specific accessibility features.

Problem description in the area of ticketing machines:

A Spanish accessible ticket vending machine was rejected in a general acquisition process by the Danish State Railways as it did not meet Danish Accessibility Standard DS 3028 on the height of operation, and could only be adapted with great difficulty.

The same machine will not be able to comply with German regulations, but has been accepted in Sweden.

The majority of self-service terminals marketable in the EU are not complying with Danish Building Regulations and ICT guidelines, and can be blocked from installation by municipal building controllers if complaints are filed by a third party. This is a general problem with accessible goods as enforceable requirements in some respects are higher in Denmark.

UK, Danish, German and EU TSI-PRM compatible ticket vending machines require intervals for height of

operation for self-service terminals that are so different that they demand more than realistic flexibility of a standard good or service. Card, coin insert and retrieval, ticket retrieval and tactile input areas vary:

- *DIN 18040, referred to by German building regulations: 850-1050 mm*
- *British BS 8300 Code of Practice: 750-1000 mm*
- *Danish Code of Practice: 900-1200 mm, in some cases 380 - 1170 mm*
- *TSI PRM, EU, TEN railway stations: 700-1200 mm*

Problem description in the area of digital terrestrial television equipment:

The situation for manufactures of Digital Terrestrial Television set-top boxes and tuners in Europe is an extremely complex one. National specifications for DTT tuners exist for most Member States, although some countries use similar or identical specifications to others. In terms of accessibility, the support within these specification appear to vary greatly and detailed technical analysis of the various specification is required to identify if requirements for accessible services such as subtitling, Audio Description, sign language interpretation provision within programming and audio output for EPGs differ or conflict.

Problem description in the area of web accessibility:

The different legislations about web accessibility requirements in force in each EU Member State have created a barrier for the Internal Market. In the "Study on Economic Assessment for Improving eAccessibility Services and Products"[57] various accessibility experts were consulted in order to estimate the extra costs faced when different web accessibility standards apply.

Half of the respondents doing business in other Member States considered that the lack of standards for Web Accessibility can be a problem, as different accessibility requirements may apply.

Concerning practical barriers to act cross border due to different web accessibility requirements in place, 22% of organisations doing intra-communitary business faced problems.

Additional feedback was requested from those who declared having problems when their websites are targeted not only to their own country

One interviewee stated, for example: "One of our clients (a multinational company with a global website and also local ones) requested us to make the Spanish local site accessible according to three different specifications: WCAG 2.0; UNE 139803 "Web content accessibility requirements": it is referenced in the Spanish law 1494/2007 on basic conditions for the access of person with disabilities to the technologies, ICT goods and services and social communication media; and also an internal document, written by the global site manager, in order to ensure that all local websites would be aligned with the global one".

Problem description in the area of built environment:

In addition, one worldwide leading architectural design firm indicated that the costs of researching the diverse requirements in the EU Member States concerning accessible built environment are paid by the company in case the project is awarded in the framework of a competition for a public tender. This means that costs incurred due to the diverse legislative landscape concerning accessible built environment cannot be forwarded to the client. In case no competition takes place, e.g. the project is commissioned by a private the client, the costs for research are embedded in the agreement on accessibility standards prior to the signing of the contract. That is, however, only case for smaller architect projects in which the company usually is less involved. Therefore, according to the architect firm, projects that are awarded in the framework of a competition are not as efficient and effective as they could be because accessibility legislation in Europe is constantly changing and fragmented. Furthermore, significant costs are connected to the research of accessibility requirements, since it takes several working days for a staffed team to obtain information about the relevant issues.

[57] Technosite. "Study on Economic Assessment for Improving eAccessibility Services and Products" (2010). http://www.eaccessibility-impacts.eu

Example: Lack of economies of scale

Problem statement:

Due to a lack of economies of scale, operators and manufacturers have little incentives to invest in (the development of) accessible goods and services.

Problem description in the area of ticketing machines:

In Denmark the state railway company has introduced hand-grips on ticket machines. In other countries this is deliberately not introduced. Every Member State has its own regulations; there is no common standard that regulates GUI (such as the TSI). This leads to problems, as it is far too expensive to develop country-specific software when the number of machines that have to be delivered is unknown. If regulations are too complex and too few machines are purchased it is not profitable. Furthermore, because of national regulations local competitors have a competitive edge and can comply with regulations even in small projects.

Problem description in the area of ATMs:

As regards additional costs for providing accessible goods and services, one of the interviewees who represented a company producing ATMs stated that it is not profitable to produce only a small proportion of accessible machines. Either all machines are made accessible or none are. If less than 1,000 machines are produced, it is not worth it for the manufacturer. One machine costs around 10,000 EUR. When looking at costs in somewhat more detail, a distinction can be made between hardware and software:

- *Unattended machines – hardware: No significant additional costs; only machines are produced that are ready for serial production. As a concrete example of additional costs, providing Braille costs 68 EUR for 15 characters in one row when producing 1,000 machines. However, costs for the development are significant. For example, one company consulted considered developing a ticket machine with a second coin slot for wheelchair users. However, this idea was abandoned since the costs would have been too high, the amount of produced machines would have been too low and the price of the machine would have been prohibitive. The wishes of the customers normally depend on the existent hardware.*
- *Unattended machines – software: Providing accessible software leads to some additional costs. Software is, however, different to hardware as no production costs arise.*

Feedback gathered through the Public Consultation[58] (launched by the European Commission (DG JUSTICE) which ran from the 12th of December 2011 to the 29th of February 2012, "To what extent is your business organisation confronted with different accessibility rules in different EU Member States?") also reflects that the costs incurred to make ATMs accessible can be high and vary according to the requirements of particular accessibility standards or the accessibility policy of the ATM operator.

3.4.2 Problems for companies in the baseline situation in 2020

This chapter outlines how the current problems are expected to develop by 2020 without any further EU action than what is already planned or ongoing, i.e. what the "baseline" scenario will be. The quantitative estimates of the problems for companies in the baseline scenario follow the same logic as for the problem assessment above. All estimated costs relate to the situation in the year 2020.

The *total cost of accessibility (CAPEX + OPEX)* based on one set of requirements (in the relevant market) for all priority goods and services is expected to range between 15.3 EURb and 27.3 EURb in 2020 if no EU action is taken. This corresponds to an increase of costs in 2020 of between 12.9 and 21.6 EURb. The annual costs related to the *cross-border provision of accessible goods and*

[58] This Public Consultation was aimed to obtain inputs from stakeholders concerning possible measures to improve the accessibility of goods and services in the Internal Market. The scope of this consultation was EU Member States, EFTA/EEA countries as well as candidate countries to enter the Union. It was available at the following link http://ec.europa.eu/justice/opinion/survey_accessibility_en.htm but closed after the deadline.

services are expected to range between 12.9 EURb and 21.6 EURb, corresponding to an increase of annual costs of 12.6 EURb to 20.8 EURb compared to the current situation. Costs related to *understanding different accessibility requirements* in the EU Member States are expected to vary between 284.1 EURm and 1.4 EURb, which is an increase of 281.6 EURm to 1.38 EURb compared to the current cost estimates.

The high level of relative cost increases for all three types of costs from the current to the baseline situation in 2020 both reflects the growing market sizes (based on the applied CAGR), as well as the expanded number of Member States that are expected to have legislation in place by then.

The following table displays the three types of cost estimates per priority good and service in 2020.

Table 8: Baseline Scenario – costs in 2020 (in the relevant market)

Types of costs calculated in the Problem Assessment	Total cost of accessibility (CAPEX + OPEX) based on one set of requirements (relevant market)		Cost to ensure accessibility of good/service sold across borders		Costs of understanding different accessibility requirements across borders	
	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate
Self-Service Terminals	52,500 EUR	315,003 EUR	462,832 EUR	2.8 EURm	4,628 EUR	138,850 EUR
Hospitality services	1.6 EURb	3.3 EURb	581.6 EURm	1.2 EURb	29.1 EURm	119.8 EURm
eBooks	79.2 EURm	214.0 EURm	16.6 EURm	44.9 EURm	166,276 EUR	2.2 EURm
Computers & OS	46.5 EURm	93.0 EURm	34.9 EURm	69.8 EURm	348,978 EUR	697,957 EUR
Television	1.2 EURb	3.5 EURb	1.1 EURb	3.4 EURb	11.3 EURm	168.6 EURm
Websites	5.4 EURb	11.1 EURb	1.9 EURb	4.0 EURb	97.2 EURm	400.6 EURm
eCommerce	3.3 EURb	3.3 EURb	1.2 EURb	1.2 EURb	59.7 EURm	119.3 EURm
Telecom. services	145.6 EURm	145.6 EURm	873.2 EURm	873.2 EURm	8.7 EURm	43.7 EURm
Telecom. Terminals	34.4 EURm	68.8 EURm	25.8 EURm	51.6 EURm	258,141 EUR	516,283 EUR
Rail transp. serv.	3.3 EURm	6.9 EURm	1.3 EURm	2.9 EURm	60,704 EUR	269,529 EUR
Bus transp. serv.	408.5 EURm	837.6 EURm	145.5 EURm	300.0 EURm	7.3 EURm	30.0 EURm
Air transp. serv.	5.4 EURm	11.2 EURm	2.0 EURm	4.2 EURm	97,816 EUR	410,242 EUR
Maritime transp. serv.	15.5 EURm	32.0 EURm	5.6 EURm	11.6 EURm	279,582 EUR	1.2 EURm
Architect services	N/A	N/A	N/A	N/A	32.4 EURm	38.9 EURm
Public procurement	3.0 EURb	4.5 EURb	6.9 EURb	10.3 EURb	68.5 EURm	513.8 EURm
Banking services	54.5 EURm	102.0 EURm	15.5 EURm	33.1 EURm	766,101 EUR	3.2 EURm
Overall cost in the Problem Assessment	15.3 EURb	27.3 EURb	12.9 EURb	21.6 EURb	284.1 EURm	1.4 EURb
Average cost in the Problem Assessment	951.8 EURm	1.7 EURb	857.3 EURm	1.4 EURb	18.9 EURm	94.0 EURm

With regard to the priority goods and services and the various cost types, the main findings are as follows:

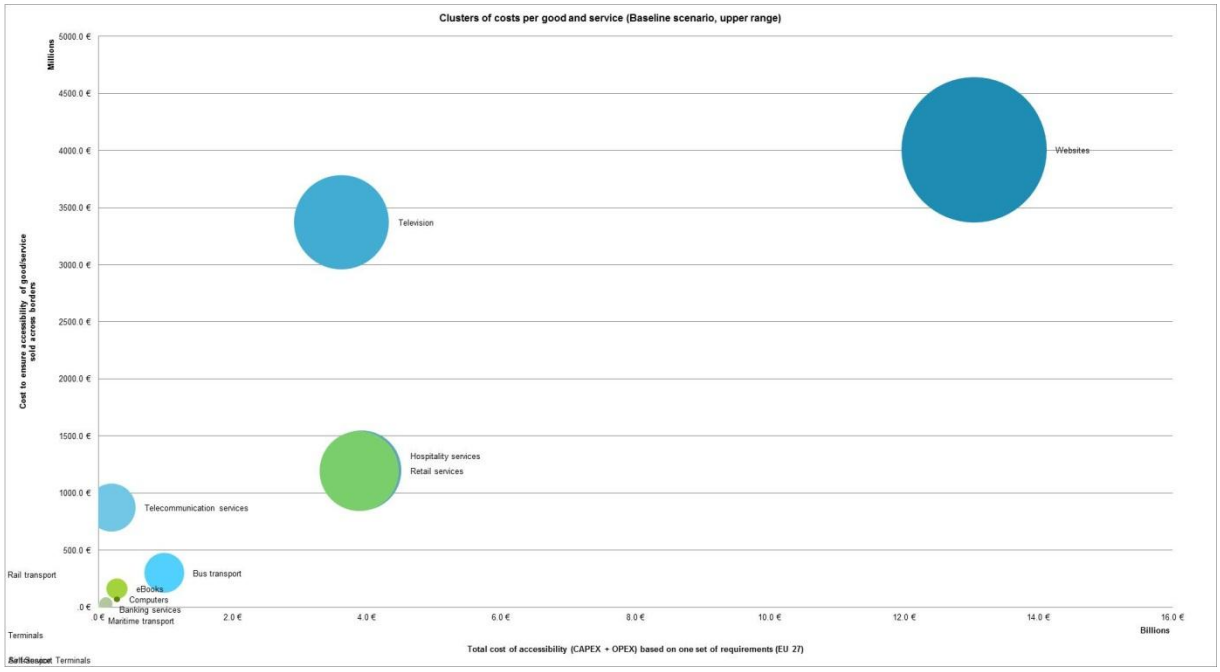
- Total cost of accessibility (CAPEX + OPEX) in 2020 based on one set of requirements (EU27):
  - Lowest costs: self-service terminals (52,500 EUR to 315,003 EUR).
  - Highest costs: websites (5.4 EURb to 11.1 EURb).
- Cost to ensure accessibility of good/service sold across borders in 2020:
  - Lowest costs: self-service terminals (462,832 EUR to 2.8 EURm);
  - Highest costs: public procurement (6.9 EURb to 10.3 EURb).
- Costs of understanding different accessibility requirements across borders in 2020:
  - Lowest costs: self-service terminals (4,628 EUR to 138,850 EUR).
  - Highest costs: websites (97.2 EURm to 400.6 EURm).

The following figure displays the priority goods and services according to the relative overall size of the three types of costs estimated. On the x-axis, the total costs of accessibility (CAPEX + OPEX) are displayed, while the costs related to the cross-border provision of accessible goods and services are shown on the y-axis. The total costs of understanding accessibility requirements in the EU Member States for each priority good and service is illustrated by differently sized bubbles.

The lower range estimates have been applied.

The figure shows the results for all priority goods and services except for public procurement; this case is of a different nature as it includes all kinds of goods and services and has not been included in the figure since the estimates of the total costs of accessibility significantly exceed the values of the other priority goods and services.

Figure 5: Costs per priority good and service in 2020 (baseline scenario, lower range



As illustrated in the figure, the estimated costs are significantly higher for a group of six cases than for the others. As elaborated below, the reason for this is in particular their respective significant market sizes and differences in the legislative situation in the EU Member States:

- **Websites:** This case is characterised by a high total cost of accessibility with relatively high values for cross-border costs and costs for understanding legislative requirements. This is due to a high number of inaccessible websites in the market (869,041[59] according to the research), which drives the total costs up. Although a relatively small share (10%) of professional web development services are assumed to be provided across borders, the number of websites covered is the reason for a comparatively high cost to ensure accessibility across borders. This, in turn, has implications for the costs of understanding different legislative requirements which have been assumed to vary from 5% to 10% of the cross-border costs.
- **Television and related services:** In this case, the total cost of accessibility is lower than for websites and occupies a medium level compared to the other cases. What, however, separates this case from the others, is the high costs associated with cross-border trade that approximately are at 1.1 EURb as a lower bound estimate. In fact, 99.7% of these costs can be attributed to accessible broadcasting services for which accessibility features such as, for example, signal encoding, subtitling, and captioning need to be implemented individually for each TV production that is aired in an individual Member State.
- **eCommerce:** In this case, the same argumentation as for the general websites case applies. The number of eCommerce websites covered is 533,310.
- **Hospitality services:** In this case, the same argumentation as for the general websites case and eCommerce applies. The number of hospitality websites covered is 260,000. In addition, the costs of understanding different legislative requirements in EU Member States include costs associated with hospitality related architect services that contribute approximately two thirds of the cost value.
- **Telecommunication services:** The high level of costs to ensure accessibility of telecommunication services across borders is due to the differences in EU Member States' accessibility requirements and the high level of turnover that is generally associated with telecommunication services.
- **Bus transport services:** In this case, the same argumentation as for hospitality services applies. The number of bus transport covered is 65,000 with architect services contributing more than two thirds to the total volume of the costs of understanding different legislative requirements in the EU Member States.

[59] Estimate based on research in relation to the available number of companies in the relevant sectors.

A second group of priority goods and services can also be identified, namely those that are located in the lower left corner of the figure[60]:

- Self-service terminals;
- eBooks;
- Computers and operating systems;
- Mobile telecommunication terminals;
- Rail transport services;
- Air transport services;
- Maritime transport services;
- Architect services; and
- Banking services.

Overall, relatively low costs have been estimated for this second group.

The second cluster of priority goods and services can be separated into two distinct sub-groups:

- One group of services which each consists of multiple sub-services. For instance, the transport services consist of estimates for websites, architect services, and self-service terminals.
- The other group comprises “individual goods“, namely self-service terminals, eBooks, computers and operating systems and mobile terminals.

The estimates of the total cost of accessibility and the costs related to the cross-border provision of accessible goods and services for the former group made up of multiple sub-services are generally lower than for other priority goods and services with the notable exception of self-service terminals. In the case of the transport and banking services, this is due to a relatively low number of websites covered and associated costs for architect services being comparatively low due to the limited number of relevant buildings.

With regard to the latter group, costs can be expected to be lower than for other priority goods and services outside this cluster since it is estimated to be less costly to provide these goods with accessibility features. Furthermore, the costs of understanding different legislative requirements in the Member States related to these goods are generally expected to be lower than for services related to architect services since this is considered as a major cost driver within the priority goods and services.

In general, costs for priority goods and services that are part of this cluster have been estimated to range as follows:

- Total costs of accessibility (CAPEX + OPEX):
  - Lowest estimate: 52,500 EUR in the case of self-service terminals;
  - Highest estimate: 11.1 EURb in the case of websites;
- Costs related to the cross-border provision of accessible goods and services:

[60] This cluster has been labelled “all other except public procurement”.

- Lowest estimate: 462,832 EUR in the case of self-service terminals;
- Highest estimate: 4.0 EURb in the case of websites;

- Costs of understanding different accessibility requirements in the EU Member States:
  - Lowest estimate: 4,628 EUR in the case of self-service terminals; and
  - Highest estimate: 400.6 EURm in the case of websites.

The following section examines the estimated opportunity costs for consumers in the current situation.

3.4.3 Problems for consumers

The problems currently faced by companies have an impact on consumers. This includes insufficient provision of accessible goods and services. Problems for consumers include a reduced choice and quality as well as higher prices, which can be assumed to e.g. be due to missed opportunities of economies of scale for companies.

Example: Fragmentation of accessibility requirements for hospitability facilities

Large differences across countries can be observed concerning the requirements that establish the minimum number of accessible rooms in hospitality facilities across the EU (and the USA as a benchmark). While legal obligations exist in some countries (e.g. Austria, France, the German Federal State of Berlin, Ireland, United Kingdom, USA), the 'requirements' are defined in national standards and have a purely voluntary character in other countries (e.g. German Federal State of North Rhine Westphalia). In a number of countries no requirements could be identified (Italy, Netherlands, Norway, Poland, Portugal and Spain).

The technical accessibility minimum requirements for "accessible" rooms in hospitality facilities generally include minimum moving areas, accessible sanitary facilities, furniture adapted for wheelchair users, accessible electronic equipment (incl. TV), accessible emergency systems, accessible signposting as well as accessible routes (incl. lifts) to the rooms and service facilities. The detailed technical requirements vary across countries and regions. In some jurisdictions, the accessibility requirements also cover the service provision, e.g. at the reception counter, to disabled persons.

Taking a more detailed look at the number of rooms that need to be accessible according to these requirements and standards, large variations across Europe can be observed. For example, a hospitality facility with a total capacity of 50 guest rooms would need to have five accessible guest rooms in the German Federal State of Berlin, three accessible guest rooms in Ireland and the UK, two accessible guest rooms in France (and the USA), one accessible guest room in Austria and no accessible rooms in the German Federal State of North Rhine Westphalia, Italy, the Netherlands, Norway, Poland, Portugal and Spain. A hospitality facility with a total capacity of 120 guest rooms would need to have twelve accessible guest rooms in the German Federal State of Berlin, six accessible guest rooms in Ireland and the UK, (five accessible guest rooms in the USA), two accessible guest rooms in Austria and France and no accessible rooms in the German Federal State of North Rhine Westphalia, Italy, the Netherlands, Norway, Poland, Portugal and Spain.

As a result of these diverging requirements and standards, it may be difficult for consumers that travel cross-border to predict the available capacities of accessible guest rooms in hospitality facilities. For providers that are established in several countries, the cost of accessibility may be higher because standardised building designs for hospitality facilities may not be re-usable across countries due to diverging accessibility requirements.

The assessment of problems for consumers consisted of estimates of the level of costs that consumers are expected to overpay due to a lack of accessibility. In the case of transport services, for example, the price of tickets purchased at accessible ticketing machines or online is

expected to be lower than the price paid at customer service centres. This is, for example, due to staff costs, rents and other overhead costs for the designated customer service areas etc. Therefore, insufficient provision of accessible ticketing machines and possibilities to purchase tickets online means that disabled consumers may have to pay higher prices than non-disabled consumers.

The argumentation related to accessible ticketing machines and online booking opportunities also holds true for the cases of SSTs and hospitality services.

Due to the variance between the nature of the priority goods and services, it has not been possible to apply the same method for calculating the opportunity costs for consumers across the different goods and services; it has been necessary to device a specific method for each priority good and service. This said, due to a lack of data, it has only been possible to assess the problems for consumers in quantitative terms for eight different goods and services.[61] For these goods and services, the following approaches have been used:

- eBooks: [Number of eBooks bought by people with disabilities] * [Estimate of price difference between accessible eBooks and assistive printed books[62]] * [Current degree of accessibility];
- Websites (transport and hospitality services): [Annual amount spent on transport services, i.e. transport service companies' annual turnover on an EU27 level] * [Share of online booking] * [Share of accessible websites] * [Assumed percentage of potential cost savings of total price];
- Transport services ticketing machines: [Annual amount spent on railway transport services by PwD] * [Share of ticketing machine use in transport services] * [Share of accessible ticketing machines] * [Assumed percentage of potential cost savings of total price];
- ATMs: [Assumed cross-border use of ATMs] * [Assumed number of transactions per year per consumer] * [Number of relevant consumers] * [Cost difference between non-ATM use transactions and ATM use transactions] * [Current degree of accessibility] * [percentage of relevant countries]; and
- Computers & Operating systems: [Total number of persons with disabilities in EU] * [Take-up rate for computers] * [Percentage of persons with disabilities in need for an accessibility kit].

[61] In the case of mobile telecommunication terminals, opportunity costs may, for example, be associated with lower prices of smart phones and, in the end, also goods and services that could be purchased via such devices, e.g. transport tickets. However, relevant data is missing. Other priority goods and services as public procurement and architect services are not directed at the end-consumer but at businesses. Hence, end-consumers do not face direct opportunity costs.

[62] Due to a lack of data it has not been possible to compare the prices of accessible and non-accessible eBooks.

The figure for self-service terminals has been calculated as the sum of the separate opportunity costs estimates in the transport and banking services cases related to ticketing machines and ATMs.

As can be seen in the following table, the potential annual opportunity costs for consumers related to the (cross-border) provision of accessible goods and services have been estimated to range from 2.3 EURm in the case of eBooks to as much as 8.9 EURb in the case of computers and operating systems. In the case of SSTs, the combined potential opportunity costs for consumers of accessible ticketing machines and ATMs range between approx. 10.8 EURm in the current situation and 141.2 EURm in the baseline scenario. Hence, the accessibility of ticketing machines and ATMs is expected to save disabled consumers and elderly up to 141.2 EURm in 2020.

Table 9: Annual opportunity costs for consumers

Overview of opportunity costs	Opportunity costs - Current Situation		Opportunity costs - Baseline Scenario 2020	
	Lower bound estimate	Upper bound estimate	Lower bound estimate	Upper bound estimate
eBooks	2.3 EURm	10.1 EURm	1.8 EURm	8 EURm
Air transp. serv.: Websites	29.0 EURm	290.6 EURm	322.57 EURm	3.2 EURb
Bus trans. serv.:	713.2 EURm	2.3 EURb	749.7 EURm	3.2 EURb
Websites	5.7 EURm	152.2 EURm	42.2 EURm	1.1 EURb
Ticketing Machines	707.5 EURm	2.1 EURb	707.5 EURm	2.1 EURb
Rail transp. serv.:	235.6 EURm	781.4 EURm	586.1 EURm	2.8 EURb
Websites	7.2 EURm	96.1 EURm	106.82 EURm	1.4 EURb
Ticketing Machines	228.4 EURm	685.30 EURm	479.31 EURm	1.4 EURb
Hospitality: Websites	26.8 EURm	505.7 EURm	29.3 EURm	553.8 EURm
Banking Services. ATMs	10.6 EURm	42.4 EURm	32.1 EURm	128.4 EURm
Computers & OS	6.7 EURb	8.9 EURb	N/A	N/A
SSTs	10.8 EURm	46.5 EURm	32.8 EURm	141.2 EURm
ATMs	10.6 EURm	42.4 EURm	32.1 EURm	128.4 EURm
Ticketing Machines	235,580 EUR	4.1 EURm	736,413 EUR	12.8 EURm

The assessment of problems for business suggests that consumers currently face the highest costs relating to accessibility in the transport sector related to websites and ticketing machines. For these cases taken together, consumers are expected to incur annual opportunity costs of approximately 9.2 EURb in 2020.[63] The total opportunity cost for the cases above could amount up to 9.9 EURb. With potential EU action taken, consumers would be able to realise their opportunity costs.

[63] This has been calculated as the sum of the upper bound estimate of air transport services, bus transport services and rail transport websites.

3.5 Conclusions

The main conclusions that can be drawn in relation to the problem assessment are as follows:

- The legislative situation in the EU Member States varies between the priority goods and services, however, for all goods and services covered, discrepancies and indeed contradictions between the accessibility requirements in place have been evidenced. Differences are expected to increase until 2020 due to e.g. the Member States' implementation of their accessibility obligations under the UNCRPD in an uncoordinated manner.
- The varying accessibility requirements in place and the new regulations that are expected to be introduced by 2020 in the EU Member States lead to barriers and costs for businesses related to cross-border trade. More specifically, in case of contradictory accessibility requirements, the businesses will need to adapt their goods and services and will not be able to fully exploit the advantages of economies of scale. As part of this assignment, three types of costs have been estimated for each priority good and service, i.e. total costs of accessibility, costs to ensure accessibility across-borders, and costs to understand legislative requirements in EU member States. These costs, in the current situation, are particularly high in the cases of websites, television, eCommerce, hospitality services, telecommunication services, and bus transport services. The remaining priority goods and services have lower costs. By means of summary, the following costs have been estimated:
  - Based on one set of legislative accessibility requirements across the EU, businesses active in the priority goods and services markets are expected to incur total accessibility (CAPEX + OPEX) between 15.3 EURb and 27.3 EURb;
  - Costs to ensure the accessibility of goods and services across borders are estimated to range from 12.9 EURb to 21.6 EURb; and
  - Incurred costs of understanding different accessibility requirements in the EU Member vary from 284.1 EURm to 1.4 EURb.
- The markets for the priority goods and services are generally characterised by a limited accessibility. This is evidenced by low take-up rates by persons with disabilities and leads to businesses not being able to realise turnover related to persons with disabilities. This forgone market potential is expected to increase until 2020.
- The gap between the take-up rates of persons with and without disabilities varies between the priority goods and services with ranges from a gap of 2.1% in the case of mobile telecommunication terminals to a gap of 52% in the case of rail transport services. The gap in take-up rates between persons with and without disabilities is below 10% in half of the cases, namely: eBooks, bus transport services, telecommunication services, air transport services, mobile telecommunication terminals, and maritime transport services.

- Disabled consumers and elderly incur opportunity costs due to the lack of accessibility of goods and services. An estimate of these costs was, however, only possible in the cases of eBooks, websites, ticketing machines, ATMs, as well as for computers and operating systems. The potential annual opportunity costs for consumers related to the (cross-border) provision of accessible goods and services have been estimated to range from 2.3 EURm in the case of eBooks to as much as 8.9 EURb in the case of computers and operating systems.

To conclude, the varying national technical accessibility requirements are likely to have a negative impact on cross-border trade, resulting in that the full potential of the Internal Market is not achieved. Furthermore, the lack of accessibility has a negative impact on competition among industry players in the Internal Market as the variations between national technical accessibility requirements make it difficult for in particular new market entrants and SMEs to engage in cross-border trade. The problems that have been evidenced for business bring about negative consequences for different societal groups, in particular persons with disabilities and elderly. Choice and price are two areas where problems have been evidenced.

4 Policy Objectives, Options and Impacts: Overview

4.1 Introduction

Based on the problem assessment, this chapter identifies the policy objectives and policy options. An overview of the assessment of the impacts of the policy options is also provided.

4.2 Policy objectives

Below we set out the policy objectives that have been identified based on the problem assessment. The general and specific objectives are defined as follows:

General objectives

- To contribute to the achievement of Europe 2020 Strategy with the aim of turning Europe into a "smart, sustainable and inclusive economy delivering high levels of employment, productivity and cohesion" as well as to the implementation of the European Disability Strategy 2020.
- To improve the functioning of the Internal Market of specific accessible goods and services and in the area of public procurement.

Specific objectives

- To improve cross-border trade in the area of selected goods and services and in the area of public procurement;
- To increase competition among industry in the area of selected goods and services and in the area of public procurement.

The specific policy objectives form part of the assessment criteria for the policy options (as outlined in section 4.4).

4.3 Policy options

The following four different policy options have been identified in the course of the study:

- Policy Option 1: The baseline scenario;
- Policy Option 2: An EU recommendation on using common (non-binding) accessibility requirements for the selected goods and services;
- Policy Option 3: A definition of common accessibility requirements at EU level for the selected goods and services through a legally binding instrument (Directive) applicable to Member States that have already adopted or when they adopt new national accessibility requirements in the selected areas; and
- Policy Option 4: A definition of common accessibility requirements at EU level for the selected goods and services through a legally binding instrument (Directive) applicable to all Member States.

As concerns the content of policy options 2 to 4, one common set of accessibility requirements would be established as part of all three options for each good and service individually. The working assumption is that the following two broad types of accessibility requirements would be established:

- *Requirements to make the specific good or service accessible*. Depending on the particular good/service being considered, this may include making accessible the user interface, related functionality and, in the case of services, the related architect services, online related applications, or functions in the operation of the service.
- *Requirements to provide accessible information* (administrative burden). This requirement concerns the provision of accessible information concerning the accessibility "features" of the relevant goods or services, including e.g. on use, installation, maintenance, storage and/or disposal. Depending on the particular good/service, this may also include the provision of accessible information concerning the packaging or accessibility characteristics of the service.

Policy options 3 and 4 include a provision concerning mutual recognition.

The table below provides a synthetic overview of the expected number of EU Member States adopting mandatory technical accessibility requirements for the priority goods and services under each of the four policy options.

Table 10: Overview of the expected no. of EU Member States adopting mandatory technical accessibility requirements (by option and good &service)

Priority good or service	Policy Option 1: Baseline Scenarios for 2020	Policy Option 2: Recommendation	Policy Option 3: Directive applicable to Member States that have requirements in place	Policy Option 4: Directive applicable to all Member States
Self-Service Terminals (SSTs)				
(A) ATMs	≥ **Lower range limit estimate:** 5 EU Member States ≥ **Lower middle range limit estimate:** 10 EU Member States ≥ **Upper middle range limit estimate:** 15 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 10 EU Member States ≥ **Upper range limit estimate:** 15 EU Member States	≥ **Estimate:** 15 EU Member States	≥ 27 EU Member States
(B) SSTs in the transport sector	≥ **Lower range limit estimate:** 6 EU Member States ≥ **Lower middle range limit estimate:** 9 EU Member States ≥ **Upper middle range limit estimate:** 18 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 9 EU Member States ≥ **Upper range limit estimate:** 18 EU Member States	≥ **Estimate:** 18 EU Member States	≥ 27 EU Member States
Hospitality services				
(A) Websites	≥ **Lower range limit estimate:** 1 EU Member State ≥ **Lower middle range limit estimate:** 3 EU Member States ≥ **Upper middle range limit estimate:** 12 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 3 EU Member States ≥ **Upper range limit estimate:** 12 EU Member States	≥ **Estimate:** 12 EU Member States	≥ 27 EU Member States
(B) Architect services	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ 27 EU Member States

Priority good or service	Policy Option 1: Baseline Scenarios for 2020	Policy Option 2: Recommendation	Policy Option 3: Directive applicable to Member States that have requirements in place	Policy Option 4: Directive applicable to all Member States
eBooks	**Lower range limit estimate:** 3 EU Member States **Lower middle range limit estimate:** 7 EU Member States **Upper middle range limit estimate:** 21 EU Member States **Upper range limit estimate:** 27 EU Member States	**Low range limit estimate:** 3 EU Member States **Upper range limit estimate:** 7 EU Member States	**Estimate:** 7 EU Member States	27 EU Member States
Computers and Operating Systems	**Lower range limit estimate:** 2 EU Member States **Middle range limit estimate:** 6 EU Member States **Upper range limit estimate:** 27 EU Member States	**Low range limit estimate:** 2 EU Member States **Upper range limit estimate:** 6 EU Member States	6 EU Member States	27 EU Member States
Television				
(A) Linear TV broadcasting accessibility services	**Estimate:** 24 EU Member States	**Low range limit estimate:** 8 EU Member States **Upper range limit estimate:** 24 EU Member States	**Estimate:** 24 EU Member States	27 EU Member States
(B) Digital Terrestrial Television (DTT) equipment	**Estimate:** 24 EU Member States	**Low range limit estimate:** 8 EU Member States **Upper range limit estimate:** 24 EU Member States	**Estimate:** 24 EU Member States	27 EU Member States
Websites	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States	**Low range limit estimate:** 3 EU Member States **Upper range limit estimate:** 12 EU Member States	**Estimate:** 12 EU Member States	27 EU Member States

Priority good or service	Policy Option 1: Baseline Scenarios for 2020	Policy Option 2: Recommendation	Policy Option 3: Directive applicable to Member States that have requirements in place	Policy Option 4: Directive applicable to all Member States
eCommerce	▪ **Lower range limit estimate:** 1 EU Member State ▪ **Lower middle range limit estimate:** 3 EU Member States ▪ **Upper middle range limit estimate:** 12 EU Member States ▪ **Upper range limit estimate:** 27 EU Member States	▪ **Low range limit estimate:** 3 EU Member States ▪ **Upper range limit estimate:** 12 EU Member States	▪ **Estimate:** 12 EU Member States	▪ 27 EU Member States
Telecommunication Services	▪ **Hypothetical case:** 20 EU Member States	▪ **Hypothetical case:** 15 EU Member States	▪ **Hypothetical case:** 20 EU Member States	▪ 27 EU Member States
Mobile Telecommunication Terminals	▪ **Low range limit estimate:** 3 EU Member States ▪ **Middle range limit estimate:** 6 EU Member States ▪ **Upper range limit estimate:** 27 EU Member States	▪ **Low range limit estimate:** 3 EU Member States ▪ **Upper range limit estimate:** 6 EU Member States	▪ **Estimate:** 6 EU Member States	▪ 27 EU Member States
Rail transport services				
(A) Websites	▪ **Lower range limit estimate:** 1 EU Member State ▪ **Lower middle range limit estimate:** 3 EU Member States ▪ **Upper middle range limit estimate:** 12 EU Member States ▪ **Upper range limit estimate:** 27 EU Member States	▪ **Low range limit estimate:** 3 EU Member States ▪ **Upper range limit estimate:** 12 EU Member States	▪ **Estimate:** 12 EU Member States	▪ 27 EU Member States
(B) Ticketing machines	▪ **Lower range limit estimate:** 6 EU Member States ▪ **Lower middle range limit estimate:** 9 EU Member States ▪ **Upper middle range limit estimate:** 18 EU Member States ▪ **Upper range limit estimate:** 27 EU Member States	▪ **Low range limit estimate:** 9 EU Member States ▪ **Upper range limit estimate:** 18 EU Member States	▪ **Estimate:** 18 EU Member States	▪ 27 EU Member States

Priority good or service	Policy Option 1: Baseline Scenarios for 2020	Policy Option 2: Recommendation	Policy Option 3: Directive applicable to Member States that have requirements in place	Policy Option 4: Directive applicable to all Member States
Bus transport services				
(A) Websites	≥ **Lower range limit estimate:** 1 EU Member State ≥ **Lower middle range limit estimate:** 3 EU Member States ≥ **Upper middle range limit estimate:** 12 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 3 EU Member States ≥ **Upper range limit estimate:** 12 EU Member States	≥ **Estimate:** 12 EU Member States	≥ 27 EU Member States
(B) Architect services	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ 27 EU Member States
(C) Ticketing machines	≥ **Lower range limit estimate:** 6 EU Member States ≥ **Lower middle range limit estimate:** 9 EU Member States ≥ **Upper middle range limit estimate:** 18 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 9 EU Member States ≥ **Upper range limit estimate:** 18 EU Member States	≥ **Estimate:** 18 EU Member States	≥ 27 EU Member States
Air transport services				
(A) Websites	≥ **Lower range limit estimate:** 1 EU Member State ≥ **Lower middle range limit estimate:** 3 EU Member States ≥ **Upper middle range limit estimate:** 12 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 3 EU Member States ≥ **Upper range limit estimate:** 12 EU Member States	≥ **Estimate:** 12 EU Member States	≥ 27 EU Member States

Priority good or service	Policy Option 1: Baseline Scenarios for 2020	Policy Option 2: Recommendation	Policy Option 3: Directive applicable to Member States that have requirements in place	Policy Option 4: Directive applicable to all Member States
(B) Architect services	**Estimate:** 27 EU Member States	**Estimate:** 27 EU Member States	**Estimate:** 27 EU Member States	27 EU Member States
(C) Check-in machines	**Lower range limit estimate:** 6 EU Member States **Lower middle range limit estimate:** 9 EU Member States **Upper middle range limit estimate:** 18 EU Member States **Upper range limit estimate:** 27 EU Member States	**Low range limit estimate:** 9 EU Member States **Upper range limit estimate:** 18 EU Member States	**Estimate:** 18 EU Member States	27 EU Member States
Maritime transport services				
(A) Websites	**Lower range limit estimate:** 1 EU Member State **Lower middle range limit estimate:** 3 EU Member States **Upper middle range limit estimate:** 12 EU Member States **Upper range limit estimate:** 27 EU Member States	**Low range limit estimate:** 3 EU Member States **Upper range limit estimate:** 12 EU Member States	12 EU Member States	27 EU Member States
(B) Architect services	**Estimate:** 27 EU Member States	**Estimate:** 27 EU Member States	**Estimate:** 27 EU Member States	27 EU Member States
(C) Ticketing machines	**Lower range limit estimate:** 6 EU Member States **Lower middle range limit estimate:** 9 EU Member States **Upper middle range limit estimate:** 18 EU Member States **Upper range limit estimate:** 27 EU Member States	**Low range limit estimate:** 9 EU Member States **Upper range limit estimate:** 18 EU Member States	**Estimate:** 18 EU Member States	27 EU Member States

Priority good or service	Policy Option 1: Baseline Scenarios for 2020	Policy Option 2: Recommendation	Policy Option 3: Directive applicable to Member States that have requirements in place	Policy Option 4: Directive applicable to all Member States
Architect Services	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ 27 EU Member States
Banking Services				
(A) Websites	≥ **Lower range limit estimate:** 1 EU Member State ≥ **Lower middle range limit estimate:** 3 EU Member States ≥ **Upper middle range limit estimate:** 12 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 3 EU Member States ≥ **Upper range limit estimate:** 12 EU Member States	≥ **Estimate:** 12 EU Member States	≥ 27 EU Member States
(B) Architect services	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ 27 EU Member States
(C) ATMs	≥ **Lower range limit estimate:** 5 EU Member States ≥ **Lower middle range limit estimate:** 10 EU Member States ≥ **Upper middle range limit estimate:** 15 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Low range limit estimate:** 10 EU Member States ≥ **Upper range limit estimate:** 15 EU Member States	≥ **Estimate:** 15 EU Member States	≥ 27 EU Member States
Public Procurement	≥ **Estimate:** 27 EU Member States	≥ **Low range limit estimate:** 14 EU Member States ≥ **Upper range limit estimate:** 27 EU Member States	≥ **Estimate:** 27 EU Member States	≥ 27 EU Member States

4.4 Assessment criteria

The impacts of the policy options have, in line with the Impact Assessment Guidelines, been assessed and rated in relation to the same criteria:

- **Economic and financial impacts**: i.e. the extent to which different policy options are likely to reduce the negative effects identified as part of the problem assessment;
- **Effectiveness**: the degree to which the policy options are capable of achieving the specific policy objectives;
- **Efficiency**: the input or effort required to achieve a given output, where the latter is determined by the specific policy objectives;
- **Impacts on different societal groups**: groups potentially affected by the policy options (e.g. individuals, businesses and households); and
- **Environmental impacts**.

Quantitative estimates of the financial and economic impacts are presented in separate tables. Expected impacts on Small and Medium sized Enterprises (SMEs) and micro-enterprises are presented separately.

The assessment of the **effectiveness and efficiency** of the policy options has been made with reference to the specific policy objectives. To do so, we have assessed how effective each policy option is achieving the policy objectives and the “value for money”.

Impacts on different **social groups** are particularly concerned with effects on disabled and elderly consumers. The expected impacts are explained in qualitative terms and a rating is provided in the overview assessment tables.

Environmental impacts are rated and described in the overview assessment tables.
Impacts on **fundamental rights** are, in line with the Impact Assessment Guidelines on fundamental rights, an integral part of all steps of the assignment and thus assessed as part of all assessment criteria.

For the above effects, the impacts of the policy options have been rated on a scale from 0 to 5 in terms of the expected changes compared to the Status Quo. To reflect this, Policy option 1 – Status Quo (no further EU action) has been rated with 0, since the other policy options are compared against the status quo situation. A rating of 0 implies that the other options would not result in any major change compared to the status quo. The ratings are relative and therefore serve to compare the policy options rather than serve as an absolute assessment. Hence, a rating of 5 would not necessarily imply that the problem would be solved and the objective be achieved.

4.5 Impacts on businesses– quantitative estimates

This section outlines the quantitative impact the policy options are expected to have on businesses in the priority goods and services markets. The following table displays, for each good and service, the expected overall costs or cost savings by policy option. For each policy option a lower and an upper range estimate is provided:

- Negative figures indicate a negative impact of a policy option on EU businesses, i.e. additional costs to be incurred; and
- Positive figures relate to a positive impact of the policy options, i.e. the cost savings that businesses potentially may benefit from.

The figures provided under the baseline scenario are the costs that business are expected to incur in 2020 without further EU action. The figures provided under policy options 2 to 4 refer to cost savings or increases compared to the status quo after the introduction of an EU Recommendation or Directive.

The figures have been estimated based on the three types of costs per priority good and service as displayed in section 3.4.2.

Important to note:

The estimated costs and benefits all relate to the expected situation in the year 2020. The baseline scenario concerns the development of the situation at national level in the absence of new EU rules (other than what already exists and planned initiatives).

Table 11: The impacts of the policy options on the costs for ensuring accessibility

Types of costs calculated for the assessment of the **Policy Options**	Total cost of accessibility (CAPEX + OPEX) based on one set of requirements (in the relevant market)		PO 1: Baseline Scenario (Costs in EUR, cross-border costs in brackets)		PO 2: Recommendation (Cost savings in EUR)		PO 3: Directive: partial coverage (Cost savings in EUR)		PO 4: Directive (full coverage) (Cost/Cost saving in EUR	
	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate	Lower range estimate	Upper range estimate
SSTs	52,500 EUR	315,003 EUR	519,961 EUR (467,460 €)	3.2 EURm (2.9 EURm)	256,210 EUR	1.6 EURm	467,460 EUR	2.9 EURm	451,483 EUR	3 EUR
Hospitality services	1.6 EURb	3.3 EURb	2.2 EURb (617.0 EURm)	4.7 EURb (1.3 EURb)	30.9 EURm	63.1 EURm	617.0 EURm	1.3 EURb	339.0 EURm	751.7 EURm
eBooks	79.2 EURm	214.0 EURm	96.0 EURm (16.8 EURm)	261.2 EURm (47.2 EURm)	1.0 EURm	2.8 EURm	16.8 EURm	47.2 EURm	9.7 EURm	28.0 EURm
Computers & OS	46.5 EURm	93.0 EURm	81.7 EURm (35.2 EURm)	163.5 EURm (70.5 EURm)	7.3 EURm	14.7 EURm	35.2 EURm	70.5 EURm	-56.6 EURm	-113.2 EURm
Television[64]	1.2 EURb	3.5 EURb	2.3 EURb (1.1 EURb)	7.0 EURb (3.5 EURb)	312.9 EURm	974.7 EURm	1.1 EURb	3.5 EURb	1.1 EURb	3.4 EURb
Websites	5.4 EURb	11.1 EURb	7.4 EURb (2.0 EURb)	15.5 EURb (4.4 EURb)	92.8 EURm	200.4 EURm	2.0 EURb	4.4 EURb	1.1 EURb	2.5 EURb
eCommerce	3.3 EURb	3.3 EURb	4.6 EURb (1.3 EURb)	4.6 EURb (1.3 EURb)	57.0 EURm	59.7 EURm	1.3 EURb	1.3 EURb	682.5 EURm	742.2 EURm
Telecom. services	145.6 EURm	145.6 EURm	1.0 EURb (882.0 EURm)	1.0 EURb (916.9 EURm)	496.1 EURm	515.7 EURm	882.0 EURm	916.9 EURm	831.0 EURm	865.9 EURm
Mobile terminals	34.4 EURm	68.8 EURm	60.5 EURm (26.1 EURm)	121.0 EURm (52.1 EURm)	7.0 EURm	14.1 EURm	26.1 EURm	52.1 EURm	-18.5 EURm	-36.9 EURm
Rail transport services	3.3 EURm	6.9 EURm	4.7 EURm (1.3 EURm)	10.1 EURm (3.2 EURm)	88,071 EUR	315,796 EUR	1.3 EURm	3.2 EURm	760,058 EUR	2.0 EURm
Bus transport services	408.5 EURm	837.6 EURm	563.1 EURm	1.2 EURb	7.9 EURm	16.1 EURm	154.6 EURm	331.9 EURm	85.1 EURm	188.7 EURm

[64] The figures for television are composed of the sub-totals for accessible DTT equipment and broadcasting services.

Types of costs calculated for the assessment of the **Policy Options**	**Total cost of accessibility (CAPEX + OPEX) based on one set of requirements (in the relevant market)**		**PO 1: Baseline Scenario (Costs in EUR, cross-border costs in brackets)**		**PO 2: Recommendation (Cost savings in EUR)**		**PO 3: Directive: partial coverage (Cost savings in EUR)**		**PO 4: Directive (full coverage) (Cost/Cost saving in EUR**	
	Lower range estimate	**Upper range estimate**	**Lower range estimate**	**Upper range estimate**	**Lower range estimate**	**Upper range estimate**	**Lower range estimate**	**Upper range estimate**	**Lower range estimate**	**Upper range estimate**
			(154.6 EURm)	(331.9 EURm)						
Air transport services	5.4 EURm	11.2 EURm	7.5 EURm (2.1 EURm)	15.8 EURm (4.6 EURm)	109,960 EUR	277,641 EUR	2.1 EURm	4.6 EURm	1.2 EURm	2.7 EURm
Maritime transport services	15.5 EURm	32.0 EURm	21.4 EURm (5.9 EURm)	44.8 EURm (12.8 EURm)	277,473 EUR	622,450 EUR	5.9 EURm	12.8 EURm	3.2 EURm	7.3 EURm
Architect services	32.4 EURm	38.9 EURm	45.4 EURm (13.0 EURm)	51.8 EURm (13.0 EURm)	6.5 EURm	6.5 EURm	13.0 EURm	13.0 EURm	13.0 EURm	13.0 EURm
Public procurement	3.0 EURb	4.5 EURb	9.9 EURb (6.9 EURb)	15.3 EURb (10.8 EURb)	3.5 EURb	5.4 EURb	6.9 EURb	10.8 EURb	6.9 EURb	10.8 EURb
Banking services	54.5 EURm	102.0 EURm	75.6 EURm (21.1 EURm)	143.2 EURm (41.1 EURm)	3.3 EURm	5.1 EURm	21.1 EURm	41.1 EURm	13.8 EURm	26.0 EURm
Overall cost	15.3 EURb	27.3 EURb	28.5 EURb (13.1 EURb)	50.2 EURb (22.9 EURb)	4.5 EURb	7.3 EURb	13.1 EURb	22.9 EURb	11.0 EURb	19.2 EURb
Average cost	958.8 EURm	1.7 EURb	1.7 EURb (820.4 EURm)	3.1 EURb (1.4 EURb)	280.2 EURm	454.4 EURm	820.4 EURm	1.4 EURb	689.7 EURm	1.2 EURb

As displayed in the above table, for policy option 1 (status quo) the total costs range from 28.5 EURb to 50.2 EURb. These estimates consist of two parts: 1) the estimated cost of providing access goods and services in line with a single set of requirements in the relevant part of the EU Internal Market[65] and 2) the estimated costs to comply with different accessibility requirements across borders.[66]

Policy option 2 (Recommendation) is expected to save businesses between 4.5 EURb and 7.3 EURb by partially addressing the differences in accessibility requirements across borders and removing part of the costs associated with these differences. Compared to the costs estimated in the baseline scenario, businesses would still incur an estimated 28.5 EURb to 50.2 EURb to make their goods or services accessible, but would save between 4.5 EURb and 7.3 EURb of costs otherwise incurred due to differences in accessibility requirements across borders. Similarly, under policy option 3 the costs to make the goods and services accessible would remain, while the costs related to differences across borders would be fully removed, saving businesses an estimated 13.1 EURb to 22.9 EURb.

Policy options 2 and 3 are, as shown in the above table, expected to result in cost savings in relation to all goods and services. This is due to the nature of these policy options, which will completely (PO 3) or partly (PO2) harmonise the accessibility requirements that are in place in the Member States, i.e. the costs of legislative fragmentation of the Internal Market will be removed without the introduction of new requirements linked to additional costs. As a consequence, costs for adaptations and for understanding requirements due to variations in the accessibility requirements in place would be eliminated. More significant cost savings are expected under policy option 3 than policy option 2 in view of the complete harmonisation of the already existing accessibility requirements in those countries.

Policy option 4 would bring about two different types of impacts. On the one hand, the accessibility requirements in place would be harmonised across all Member States in the EU, leading to cost reductions for businesses according to the same logic as for policy options 2 and 3. However, not all countries are expected to have accessibility requirements in place in 2020. Therefore, policy option 4 would on the other hand imply that new accessibility requirements would have to be introduced in those countries that do not already have any requirements in place. As a result, companies in these countries would incur new costs to ensure accessibility. The table above shows the “balance” between the savings that result from harmonisation under this policy option as well as the additional costs that are expected to result for those markets where accessibility requirements being introduced and were not in place before. In nearly all

[65] Determined based on the countries that have or are expected to have accessibility requirements in place for the relevant market.

[66] It is important to note that the figures relate to different market sizes.

cases an overall cost reduction is expected, while in only two cases a cost increase would be the result[67].

Looking closer at policy option 4, businesses in the following priority goods and services markets are expected to save costs under a Directive with full EU27 coverage:

- Self-service terminals;
- Hospitality services
- eBooks;
- Television;
- Websites;
- eCommerce
- Telecommunication services
- Transport services (rail, bus, air, and maritime).
- Architect services
- Public procurement; and
- Banking services.

While policy option 4 is expected to increase businesses' costs compared to the baseline scenario in the following cases:[68]

- Computers and operating systems;
- Mobile telecommunication terminals.

Regarding a dynamic development of the legislative situation in the EU, costs incurred under policy options 3 and 4 can be expected to converge. This means that national legislative accessibility requirements introduced by the Member States before 2020 will in any case reduce the amount of costs incurred under PO4 since the number of Member States that would be affected by the first-time introduction of legislative requirements regarding the accessibility of goods and services decreases.

Since the figures in the table above present the estimated costs and cost savings opposed to the baseline scenario they can be regarded as a gross-effect. The net-effect of policy option 4 is thus calculated by adding the baseline scenario cost estimates and the potential cost or cost savings under policy option 4.

Policy option 3 maximises the potential cost savings for businesses with estimates between 13.1 EURb to 22.9 EURb as compared to the baseline scenario in 2020. Thus, policy option 3 is most

[67] This is due to the fact that few Member States have or are expected to have accessibility legislation in place in the baseline scenario and the introduction of EU requirements would impose accessibility requirements for a large number of Member States. Hence, costs of first-time accessibility would be incurred in Member States that do not yet have accessibility requirements in place.

[68] This is due to the introduction of requirements for all 27 EU Member States of which a number is expected to incur costs of first-time accessibility.

favourable from cost perspective for businesses (i.e. a cost-focused point of view) as the savings under other policy options are expected to be smaller. However, policy option 3 does not provide for a full harmonisation of the Internal Market with regard to legislative requirements for the accessibility of goods and services and therefore does not provide the same benefit to disabled citizens and elderly as policy option 4. In policy option 4, businesses would also benefit from full harmonisation across all Member States.

In addition to the above estimates of costs and cost savings that relate to the need to ensure accessibility of goods and services, the expected administrative burden (i.e. costs due to information obligations) has also been estimated. An administrative burden is assumed to result only for those goods and services that are provided B2C and not for those goods and services that are provided B2B.[69]

The administrative burden has been estimated following the approach set out in the Impact Assessment Guidelines. The types of data that have been used include the number and proportion of relevant businesses, the number of full time equivalents (FTEs)[70] required, the expected time by information request and the work-related wage costs to provide the necessary information.

Due to a lack of data, "best estimates" have been used to estimate the administrative burden. More specifically, it has been assumed for all relevant priority goods and services that it takes one FTE one eight-hour working day with an average wage of 18 EUR per hour to provide accessible information about the respective good or service. Hence, it is assumed that each company active in the relevant markets incurs 144 EUR in relation to administrative burden. The total administrative burden is thus estimated as the aggregate assumed costs per company multiplied with the number of businesses active in the respective market. The number of companies per priority good and service for which the administrative burden has been calculated is specified in the table.

[69] B2B goods and services for which no admin burden calculation has been made are public procurement, architect services, and websites.

[70] The number of a business's full time equivalents (FTE) measures the workload of its employees in a comparable manner so that cross-business, cross-industry etc. comparisons can be drawn between various businesses.

Table 12: Estimated administrative burden by good and service and per policy option

Goods & Services	PO 2: Recommendation		PO 3: Directive (partial coverage)	PO 4: Directive	No. of companies
	Lower range estimate	Upper range estimate	Estimate	Estimate	
Hospitality services	5.8 EURm	31.9 EURm	31.9 EURm	37.4 EURm	260,000
Bus transp. serv.	1.5 EURm	8.0 EURm	8.0 EURm	9.4 EURm	65,000
Broadcasting services	830.822 EUR	1.0 EURm	1.0 EURm	1.0 EURm	7.212[71]
Banking services	152.334 EUR	838.328 EUR	838.328 EUR	982.800 EUR	6,825
Maritime transp. serv.	55.755 EUR	306.834 EUR	306.834 EUR	359.712 EUR	2,498
Air transp. serv.	19.463 EUR	107.110 EUR	107.110 EUR	125.568 EUR	872
Rail transp. serv.	11.964 EUR	65.838 EUR	65.838 EUR	77.184 EUR	536
Mobile Terminals	13.536 EUR	25.114 EUR	25.114 EUR	57.600 EUR	40
eBooks	1.119 EUR	7.762 EUR	7.762 EUR	10.080 EUR	70
DTT equipment	441 EUR	555 EUR	555 EUR	576 EUR	4
Overall admin. burden	8.4 EURm	42.3 EURm	42.3 EURm	49.4 EURm	*n/a*
Average admin. burden	838,543 EUR	4.2 EURm	4.2 EURm	4.9 EURm	*n/a*

The estimated administrative burden that would result when implementing policy option 4 is, in general, higher than for policy options 2 and 3. The reason for this is that policy option 4 would introduce accessibility requirements in countries where no requirements currently exist and would thus have a larger scope than the other policy options. The additional costs are, however, not expected to be significantly higher under option 4 than options 2 and 3, as the countries where accessibility requirements would be introduced do not account for a large share of the GDP; the proportion of GDP of the countries covered by each option has been used to estimate the proportion of companies that are assumed to incur an administrative burden.

As concerns a comparison of expected administrative burden between the different goods and services, the estimated costs are highest for the hospitality services industry and lowest for eBooks and mobile telecommunication terminals. This is due to the number of covered businesses that are expected to incur the costs; 260,000 companies are assumed to be active in the hospitality services industry, while only 70 have been estimated to operate in the eBook and mobile terminals markets respectively.

The following section highlights impacts specific to SMEs.

[71] This includes an estimated number of 7.200 TV stations across the EU27 and twelve major European commercial TV groups.

4.6 Impacts on Small and Medium Sized Enterprises

This section discusses the impacts specific to Small and Medium Sized Enterprises (SMEs) and micro-enterprises[72]. With regard to the 15 priority goods and services, one may note that some of the sectors are more relevant for SMEs than others due to **very different degrees of market concentration**:

- Sectors which are **highly concentrated** with a **relatively low market share and number of SMEs** include **banking** (no market data available), **self-service terminals** (including ATMs and ticketing machines) (estimated market share of SMEs: 10%), **computers and operating systems** (estimated market share of SMEs: <1%), **air transport service** (estimated market share of SMEs: <1%), and **rail transport services** (estimated market share of SMEs: <1%).
- Sectors with an **intermediate market concentration** include **maritime transport services** (no market data available), **DTT equipment** manufacturing (estimated market share of SMEs: 45%), **mobile telecommunication equipment** manufacturing (estimated market share of SMEs: 27%), **eBooks** (estimated market share of SMEs: 25%), and **broadcasting accessibility services** (estimated market share of SMEs: 25%).
- Sectors with a **relatively low market concentration** and thus a **large number of SMEs** include **bus transport services** (estimated market share of SMEs: 90%), **websites** (no market data available), **eCommerce** (estimated market share of SMEs: 25%), **hospitality services** (estimated market share of SMEs: 75%), and **architect services** (no market data available).

When establishing EU level accessibility requirements for the selected goods and services – as considered under policy option 2 to 4 –, the specific needs of SMEs need to be taken into account, notably in those sectors where a large share of turnover and employment is generated by SMEs.

Before turning to the assessment of impacts, it can be highlighted that in order to obtain a more precise idea of SMEs' views concerning a potential European Accessibility Act, the European Commission's Directorate-General for Justice launched a public consultation of SMEs in 2012. This SME Panel was conducted via the Enterprise Europe Network[73]. A total of 180 valid responses were received. A number of findings from the survey can inform the assessment of impacts of harmonisation of accessibility requirements on SMEs:

[72] For the purpose of this report, micro-enterprises are covered under the term SMEs, as no major differences in impacts are expected.

[73] http://een.ec.europa.eu/

- **Benefits of providing accessible goods and services**: European SMEs that provide accessible goods and services do so primarily for reasons of **corporate social responsibility** / corporate image and **compliance with legislation**. However, respondents also take into account economic factors including the ability to get **more customers** without a significant increase in costs. The profitability of providing accessible goods and services, and the possibility of participating in additional public procurement tenders are also reasons to provide accessible goods and services. In fact, 54.5% of companies that provide accessible goods and services stated to have increased their clientele as a result of improving the accessibility of their goods and services, and 38.6% have experienced increases in their financial benefits for this reason.
- **Costs of providing accessible goods and services:** The respondents generally estimated that the **extra costs of accessibility** are **relatively low**: more than half of surveyed SMEs consider extra production cost directly attributable to the provision of accessible goods and services below 5% or non-existent[74]. In cases where the additional costs attributable to the production of accessible goods and services are higher, these are more than offset by increases that companies have experienced in their clientele and resulting economic benefits. Moreover, the perception of the importance of the costs attributable to accessibility is lower in companies that actually provide accessible goods and services than those who do not provide these, pointing to the existence of prejudices that tend to overestimate the extra effort for a company to produce and market accessible goods and services.
- **Types of costs:** The **main factors that may cause additional costs to SMEs** when providing accessible goods and services are **training** staff on accessibility and **time spent on understanding requirements, standards and legislation**. These aspects are considered more important than the extra costs of design and manufacturing that accessibility may involve. Companies that do not provide accessible goods and services (or those that do not know if they do so) also considered the time spent on understanding requirements, standards and legislation and training staff as the most important elements that could cause additional costs.
- **Obstacles to providing accessible goods and services:** The **most important obstacles** to the provision of accessible goods and services identified by European SMEs are **lack of information and guidelines on accessibility**, **lack of knowledge on accessibility**, and **complexity of legislation**. In addition, the complexity of the standards, weak aggregate demand for accessible goods and services, complexity of information and guidelines and lack of knowledge about the size of investment required, are considered as important obstacles. With a somewhat lower importance, but not

[74] This reflects an overview of the responses; the actual costs vary from industry to industry.

negligible, other factors are cited such as the unwillingness of customers to pay more for accessible goods and services, the **lack of standards and legislation**, the strong position of some competitors in the market, the **differences in the accessibility requirements within countries and between EU Member States** and uncertainties about short-term performance of the investments required.

- **Market potential for accessible goods and services**: The perceptions of the SMEs surveyed suggest that there is a **modest confidence in the market potential for accessible goods and services**. The confidence in the positive effect that would result from having common European standards related to accessibility requirements is also moderate. These perceptions are influenced by knowledge and direct experience with regard to accessibility. In general, companies that provide accessible goods and services are significantly more optimistic about the market potential of these goods or services, and have a greater confidence in the positive effects that would result from having common European standards on accessibility, than companies that do not offer accessible goods and services.
- **Possible EU measures**: The SME respondents consider **financial support** (subsidies, tax incentives and R&D grants), the **adoption of common standards setting out EU level accessibility requirements**, instead of different sets of national rules on accessibility, and EU funding of a training programme for the industry on how to implement and monitor accessibility requirements as important measures that the EU could take to encourage companies to provide more accessible goods and services. In relation to the establishment of subsidies, the respondents emphasise the positive effect on the innovation process needed to meet the requirements of users. The adoption of common EU standards and legislation on accessibility is seen by companies as a way to be more competitive in a broader market and to achieve greater efficiency in resource use. Furthermore, some companies also stated that subsidies may potentially harm the functioning of market mechanisms and underlined the importance of improving training on accessibility and promoting awareness and dissemination of good practice in this area.

In light of these responses, it seems clear that a simpler regulatory environment in terms of more uniform accessibility requirements and standards across the EU is crucial to boost the production and provision of accessible goods and services on the European market, which in turn can have a positive effect on the revenues of SMEs. Generally, SMEs consider the extra costs of accessibility to be generally low and mainly related to the complexity and diversity of the regulatory landscape. The latter is also a major obstacle in the market for which harmonisation of standards and accessibility requirements is an important measure (among others) to tackle this problem.

The policy options are aimed at such harmonisation either through a Recommendation (PO2), a Directive applicable to Member States who already have accessibility requirements in place

(PO3) or a Directive applicable to all Member States (PO4). The actual impact of the foreseen actions in terms of harmonisation on SMEs depends on the extent to which these companies are involved in cross-border trade. More specifically, for those SMEs and micro-enterprises that are trading across borders, harmonisation of accessibility requirements is expected to have a positive impact. At the same time, a higher proportion of SMEs may be willing to engage in cross-border trade if divergent accessibility requirements did not exist. This said other factors also impact whether or not SMEs engage in trade across borders.

Overall, concerning the impact for SMEs of these policy options, it can be said that:

- *Policy Option 2 (Recommendation) and Policy Option 3 (Directive applicable to Member States who already have accessibility requirements in place)*: Whether through a Recommendation[75] or Directive, the harmonisation of accessibility requirements between Member States that already have such requirements in place is expected to have a positive impact on SMEs and micro-enterprises that are active across borders. The companies will have to spend less time on understanding the complexities of different legislations across countries and can potentially save costs for training and experience economies of scale while being able to address a larger market. To conclude, while micro-enterprises are generally excluded from EU legislation, the findings of this study suggest that companies of all sizes are likely to benefit from policy options 2 and 3. Hence, there is reason to include micro-enterprises in the scope of these options.
- *Policy Option 4 (Directive applicable to all Member States)*: The adoption of a Directive that is applicable to all Member States would benefit those SMEs and micro-enterprises that already provide accessible goods and services (as under PO2 and 3). Compared to PO 2 and 3 the benefit for these companies is likely larger given that these companies can now address the entire Internal Market in principle (thereby benefiting from a larger potential market, increased economies of scale, etc.). However, for those companies that are not already required to provide accessible good and services or do not do so voluntarily, the impact is likely to be mixed. More specifically, while these companies would face higher limited costs[76] due to having to make their goods/services accessible, it is likely that they will at the same time be able to expand their clientele and gain financially (as indicated by SMEs in the survey).

On balance, it is expected that policy options 3 and 4 would lead to the most positive effects for SMEs.

[75] The extent of the impact of the Recommendation depends on the Member States actually taking up the recommendation by adopting the harmonised requirements.

[76] See above response to SME consultation: *"more than half of surveyed SMEs consider extra production cost directly attributable to the provision of accessible goods and services below 5% or non-existent"*.

4.7 Assessment of effectiveness and efficiency: The achievement of the policy objectives

As indicated above, each policy option has been assessed in terms of its expected achievement of the two specific policy objectives:

- To improve cross-border trade in the area of selected goods and services and in the area of public procurement; and
- To increase competition among industry in the area of selected goods and services and in the area of public procurement.

For each good and service, the expected impacts are expressed by means of a rating from 0 to 5, where the status quo is rated as 0.

The following table provides the assessment of the specific policy objective "**To improve cross-border trade in the area of selected goods and services and in the area of public procurement**". While it is not possible to compare the impacts between the different goods and services as the assessments are relative, overall policy option 4 is, in relation to the other policy options, expected to achieve the highest degree of effectiveness, while the relative efficiency is maximised under policy option 3. The relatively highest overall rating of both - effectiveness and efficiency - is achieved by policy option 4. Effectiveness and efficiency slightly increase from policy option 2 to policy option 3 as the number of Member States that is expected to be affected by EU action increases.

Table 13: Impacts on the policy objective "To improve cross-border trade in the area of selected goods and services and in the area of public procurement"

Policy Objective: To improve cross-border trade in the area of selected goods and services and in the area of public procurement	**PO 1: Baseline Scenario** Rating		**PO 2: Recommendation** Rating		**PO 3: Directive (partial coverage)** Rating		**PO 4: Directive** Rating	
	Effectiveness	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**
Self-Service Terminals (incl. ATMs and ticketing machines)	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Hospitality services	0	0	✓✓✓(✓)	✓✓✓(✓)	✓✓✓✓	✓✓✓✓	✓✓✓✓✓	✓✓
eBooks	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Computers and Operating Systems	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Television (Broadcasting services)	0	0	✓✓(✓)	✓✓(✓)	✓✓✓	✓✓✓	✓✓✓✓	✓
Television (DTT)	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Websites	0	0	✓✓(✓)	✓✓(✓)	✓✓✓	✓✓✓	✓✓✓✓	✓
eCommerce	0	0	✓✓✓(✓)	✓✓✓(✓)	✓✓✓✓	✓✓✓✓	✓✓✓✓✓	✓✓
Telecommunication services	0	0	✓	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓✓
Mobile Telecommunication Terminals	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓	✓✓
Rail transport services	0	0	✓(✓)	✓	✓✓	✓✓	✓✓✓✓	✓✓✓
Bus transport services	0	0	✓(✓)	✓	✓✓	✓✓	✓✓✓✓	✓✓✓

Policy Objective: To improve cross-border trade in the area of selected goods and services and in the area of public procurement	**PO 1: Baseline Scenario**		**PO 2: Recommendation**		**PO 3: Directive (partial coverage)**		**PO 4: Directive**	
	Rating		**Rating**		**Rating**		**Rating**	
	Effectiveness	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**
Air transport services	0	0	✓(✓)	✓	✓✓	✓✓	✓✓✓✓	✓✓✓
Maritime transport services	0	0	✓(✓)	✓	✓✓	✓✓	✓✓✓✓	✓✓✓
Architect services	0	0	✓(✓)	✓	✓✓	✓✓	✓✓✓	✓✓
Public procurement	0	0	✓	✓	✓✓	✓✓	✓✓	✓✓
Banking services	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Overall score	0	0	29	24	44	44	62	35
Average score	0	0	1,8	1,5	2,8	2,8	3,9	2,2

A similar overview is provided in Table 14 for the specific policy objective "**To increase competition among industry in the area of selected goods and services and in the area of public procurement**": The relatively highest overall score of effectiveness compared to the other policy options is again achieved by policy option 4, while the relatively highest overall score of efficiency is achieved by policy option 3. The highest overall rating of both effectiveness and efficiency is expected to be achieved by policy option 4.

Among all goods and services, the effectiveness and efficiency of policy option 3 is ranked higher than for option 2 with the notable exceptions of telecommunication and the transport services. Except for public procurement, architect services and the transport cases, the impact on competition is ranked with at least 3 scores for all goods and services under policy option 3. This is the case because for public procurement and architect services, all 27 Member States are already expected to have some legislation regarding accessibility in place while for transport services it can be argued that accessible solutions are already provided on the market and that potential EU action would have a more modest effect in increasing citizens' take-up of different modes of transport. Especially the effectiveness under policy option 3 increases compared to option 2, because all Member States that already have legislation in place would implement the same Directive. Next to the increased effectiveness due to non-diverging accessibility requirements, this is also seen as highly efficient (generating more savings), because Member States without legislation in place are not affected and therefore no additional costs on implementing accessibility requirements occur in these countries.

With full coverage legislation on accessibility requirements (Directive) for all Member States under policy option 4, the impacts on competition are rated highest for all goods and services compared to option 2 to 3. Positive impacts on competition are expected in those countries that are covered by the common accessibility requirements across the EU27.[77] Given that cross-border trade would be expected to increase and the costs for understanding different requirements across Member States would be removed, more companies might enter the market. Overall, effectiveness and efficiency are highest under option 4, because all companies would have to deal with the same accessibility requirements in all EU 27 countries, which is assumed to stimulate competition.

[77] However and as mentioned, this would also affect those countries which have no legislation in place in the current situation and companies would face different costs in different countries to adapt to the new Directive.

Table 14: Impacts on the policy objective "To increase competition among industry in the area of selected goods and services and in the area of public procurement"

Policy Objective: To increase competition among industry in the area of selected goods and services and in the area of public procurement	**PO 1: Baseline Scenario** Rating		**PO 2: Recommendation** Rating		**PO 3: Directive (partial coverage)** Rating		**PO 4: Directive** Rating	
	Effectiveness	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**
Self-Service Terminals (incl. ATMs and ticketing machines)	0	0	✓	✓	✓✓	✓✓	✓✓✓	✓✓✓
Hospitality services	0	0	✓✓✓(✓)	✓✓✓(✓)	✓✓✓✓	✓✓✓✓	✓✓✓✓✓	✓✓
eBooks	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Computers and Operating Systems	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Television (Broadcasting services)	0	0	✓✓(✓)	✓✓(✓)	✓✓✓	✓✓✓	✓✓✓✓	✓
Television (DTT)	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Websites	0	0	✓✓(✓)	✓✓(✓)	✓✓✓	✓✓✓	✓✓✓✓	✓
eCommerce	0	0	✓✓✓(✓)	✓✓✓(✓)	✓✓✓✓	✓✓✓✓	✓✓✓✓✓	✓✓
Telecommunication services	0	0	0	0	0	0	0	0
Mobile Telecommunication Terminals	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓	✓✓
Rail transport services	0	0	✓	✓	✓	✓	✓✓	✓✓
Bus transport services	0	0	✓	✓	✓	✓	✓✓	✓✓

Policy Objective: To increase competition among industry in the area of selected goods and services and in the area of public procurement	**PO 1: Baseline Scenario**		**PO 2: Recommendation**		**PO 3: Directive (partial coverage)**		**PO 4: Directive**	
	Rating		**Rating**		**Rating**		**Rating**	
	Effectiveness	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**	**Effectiveness**	**Efficiency**
Air transport services	0	0	✓	✓	✓	✓	✓✓	✓✓
Maritime transport services	0	0	✓	✓	✓	✓	✓✓	✓✓
Architect services	0	0	✓(✓)	✓	✓✓	✓✓	✓✓✓	✓✓
Public procurement	0	0	✓	✓	✓✓	✓✓	✓✓	✓✓
Banking services	0	0	✓(✓)	✓	✓✓✓	✓✓✓	✓✓✓✓	✓✓
Overall score	0	0	24,5	21,5	36	36	49	30
Average score	0	0	1,5	1,3	2,3	2,3	3,1	1,9

4.8 Social impacts

This section provides a summary of the social impacts the policy options are likely to result in for each priority good and service. The following table shows the scores that have been assigned to each option as a comparison to the status quo. The assessment criteria according to which the priority goods and services have been rated are: (1) availability of the good or service for persons with disabilities and elderly; (2) prices paid by disabled and elderly consumers; and the (3) overall quality of the good or service itself. Account has been taken of the expected legislative situation in 2020 as well as the gap in take-up rates between disabled and non-disabled consumers.

Table 15: Overview of the policy objective "Social Impacts (impacts on different groups)"

Rating **Policy Objective:** Social Impacts (impacts on different groups)	**PO 1: Baseline Scenario**	**PO 2: Recommendation**	**PO 3: Directive (partial coverage)**	**PO 4: Directive**
Self-Service Terminals (incl. ATMs and ticketing machines)	0	✓	✓✓	✓✓✓
Hospitality services	0	(✓)	✓	✓✓✓
eBooks	0	0	(✓)	✓✓(✓)
Computers and Operating Systems	0	(✓)	✓	✓✓
Television (Broadcasting services)	0	✓	✓✓	✓✓(✓)
Television (DTT)	0	✓	✓✓	✓✓(✓)
Websites	0	0	(✓)	✓✓✓
eCommerce	0	0	(✓)	✓✓✓
Telecommunication services	0	✓	✓✓	✓✓✓
Mobile Telecommunication Terminals	0	(✓)	✓	✓✓
Rail transport services	0	(✓)	✓	✓✓✓
Bus transport services	0	(✓)	✓	✓✓✓
Air transport services	0	(✓)	✓	✓✓✓
Maritime transport services	0	(✓)	✓	✓✓✓
Architect services	0	0	0	0
Public procurement	0	✓✓	✓✓✓	✓✓✓✓
Banking services	0	(✓)	✓	✓✓✓

Rating **Policy Objective:** Social Impacts (impacts on different groups)	**PO 1: Baseline Scenario**	**PO 2: Recommendation**	**PO 3: Directive (partial coverage)**	**PO 4: Directive**
Overall score	0	9	18.5	43
Average score	0	0.6	1.2	2.7

With a total score of 43, policy option 4 is expected to achieve the most positive impacts on social groups across the different goods and services compared to the other policy options. Next follows policy option 3 with a relative score of 18.5 and policy option 2 with a relative score of 9.

General explanations and reasons for the assessment of the social impacts are:

- Both Policy Options 2 and 3 focus on Member States that are expected to have technical accessibility requirements in place by 2020. It is expected that the content of the new EU Recommendation or Directive would be reflecting the generally existing national provisions in place by 2020 across the EU. The same is valid for Policy Option 4. Hence, the Member States that are concerned under Policy Options 2 and 3 are not expected to have to implement a completely new set of accessibility requirements per priority good or service. Thus, the actual situation for the persons with disabilities, elderly, and non-disabled citizens is not expected to change dramatically in terms of the increased availability and quality of the good or service, as well as regarding decreasing prices for consumers.
- Policy option 4 would make the introduction and harmonisation of accessibility requirements compulsory across the Member States, including those that currently do not have accessibility requirements in place. This means that disabled consumers across the EU would be able to benefit from accessible goods and services, including in those countries where such requirements are not in place at present.
- For each of the goods and services, the assessments and ratings are based on the expected reduced costs and increased quality and choice that would result from economies of scale due to harmonisation of accessibility requirements across the Member States.

With a partial coverage of EU Member States, **policy option 3** would establish common accessibility requirements at EU level for the selected goods and services through a legally binding instrument (Directive) applicable to Member States that have already adopted or when they adopt new national accessibility requirements in the selected areas. Hence, while this policy option would not extend the geographical coverage of accessibility requirements, it would provide for an increased potential for economies of scale due to harmonisation of the accessibility requirements that are already in place.

Regarding **policy option 2**, the cost savings would be limited to those countries where accessibility requirements are in place and be dependent on the uptake of the Recommendation by the Member States. More specifically, in this option, only some Member States are expected to follow the Recommendation, meaning that the benefits would be concentrated on this group of countries. Consumers that buy cross-border from those countries where (harmonised) accessibility requirements would be in place would benefit in turn.

As indicated above, the social impacts of implementing common accessibility requirements for each good or service have been assessed in terms of the expected improved quality and availability, as well as any price adjustments.

The assessment suggests that improvements for persons with disabilities and elderly as concerns the *quality* of goods and services can be expected to be largest for web-based goods and services such as, for example, online booking opportunities, eCommerce, and the purchase of eBooks since inaccessible websites are an entrance barrier for persons with disabilities to make use of these goods and services. This is also relevant for mobile telecommunication terminals and services, which are key to be able to communicate with other citizens.

Improvements with regard to the *availability* of goods and services can also be expected to in particular concern web-related goods and services (e.g. websites and eBooks) while no major impact is expected regarding the availability of, for example, the number of transport vehicles although take-up is generally expected to increase.

Impacts in terms of *price decreases* for disabled and elderly consumers are also expected to relate to goods and services that can be made use of through the Internet as, for example, online booking functionalities for various modes of transport. It is, however, expected that prices paid by persons with disabilities and elderly may only decrease to the level of prices paid by non-disabled as the additional take-up of goods and services through increased accessibility is unlikely to be large enough to spur further price decreases for the general public.

The types of impacts that are expected are likely to be similar for disabled people and elderly. This said, the positive effects assumed to be slightly weaker for elderly people, due to the fact that especially the demand for goods and services with newer technologies (e.g. eBooks or mobile telecommunication terminals) is lower compared to younger consumers and is likely to continue to be so in 2020.

4.9 Environmental impacts

This section analyses the qualitative assessment of the environmental impacts of the policy options on each priority good and service. Table 16 shows the relative expected impact of each policy option on the environment.

Table 16: Overview of the policy objective "Environmental impacts"

Policy Objective: Environmental impacts	**PO 1: Baseline Scenario**	**PO 2: Recommendation**	**PO 3: Directive (partial coverage)**	**PO 4: Directive**
	Rating	**Rating**	**Rating**	**Rating**
Self-Service Terminals (incl. ATMs and ticketing machines)	0	0	0	0
Hospitality services	0	0	0	0
eBooks	0	0	0	(✓)
Computers and Operating Systems	0	0	0	0
Television Broadcasting services	0	0	0	0
Television DTT equipment	0	0	0	0
Websites	0	0	0	0
eCommerce	0	0	0	0
Telecommunication services	0	0	0	0
Mobile Telecommunication Terminals	0	0	0	0
Rail transport services	0	0	0	0
Bus transport services	0	0	0	0
Air transport services	0	0	0	0
Maritime transport services	0	0	0	0
Architect services	0	0	0	0
Public procurement	0	0	0	0
Banking services	0	0	0	(✓)
Overall score	0	0	0	0.5
Average score	0	0	0	0

By means of summary, the environmental impacts are expected to be as follows:

In the case of **self-service terminals**, the policy options are expected to have no environmental impact although less paperwork due to accessible online banking websites may potentially spare the environment. This is, however, expected to be levelled out by the production and use related pollution through accessible self-service terminals, e.g. CO_2 emissions or electricity.

With regard to **hospitality services**, no impact is expected for policy options 2 to 4. It could be argued, however, that due to the assumption of increased travel activity of persons with disabilities that accessible online booking and built environment, a negative environmental impact might potentially occur. This argument, however, lacks quantitative evidence.

The expected increase in trade is likely to have an impact on the number of **eBooks** sold and used, which will leave a minor negative environmental footprint.[78] The impact is likely to be highest under policy option 4, where the strongest impacts on competition are expected, since this is likely to result in reduced sales prices and higher sales volumes. The shift from printed books to accessible eBooks will, however, potentially also have a positive environmental impact, e.g. less paper processed, less emissions in the production and distribution of eBooks compared to printed books. Therefore, the environmental net-impact is expected to be close to zero.

Accessible **computers and operating systems** are generally to be considered as enablers of modern society. Therefore, it is expected that, although production- and use-related emissions may increase, accessible computers and operating systems provide businesses and consumers with the opportunity to take-up up goods and services that have a positive environmental impact, e.g. online banking services, information provision via the Internet as opposed to newspaper, modern forms of communication etc. Therefore, the environmental impact of the policy options 2 and 3 is slightly positive, while the impact of policy option 4 is expected to be somewhat larger. Overall, the impact is, however, expected to be minimal under all options.

The provision of accessible **DTT equipment** and **broadcasting services** is expected to be neutral since no vast additional production- and consumption-related emissions are expected to result from it.

Accessible **websites** are expected to have a neutral environmental impact as, on the one hand, accessible online booking may potentially lead to more persons with and without disabilities and elderly travelling due to potential lower prices. On the other hand, however, accessible websites have positive environmental effects such as, for example, less paper processed in banking services or paperless information provision.

[78] The slightly negative environmental impact stems from increased manufacturing and shipping of eReaders, both from the manufacturer to the stores and to the consumers. Furthermore, an environmental footprint is related to increased use of electricity related to buying eBooks online and recharging the battery of eReaders.

Accessible **eCommerce** is expected to a neutral environmental impact under policy option 4. On the one side, positive impacts are expected to stem from a decreasing use vehicles to arrive at-store. On the other side, however, increased shipping of goods and services across the EU and the increased use of electricity to purchase goods and services online have a negative impact.

No links of accessible **telecommunication services** could be identified with regard to the environment. Hence, the policy options have been rated with zero.

Assuming that higher accessibility of mobile **telecommunication terminals** would increase the production and sales, this would have a small negative environmental impact (e.g. more CO_2 emissions, transport). However, the foregone market potential for mobile telecommunication terminals is only about 1.2% of the overall market size. Therefore, even if this market potential would be realised, the increase in production is estimated to be very limited. Therefore, the impact has been rated at zero.

In the case of **air, bus, maritime, and rail transport services**, the environmental impact has been rated at zero, since the increased availability of online booking functionalities and related information for disabled consumers is not expected to have a negative environmental impact in terms of additional transport services provided as the gap in take-up rate for persons with and without disabilities is too small. Additional vehicles are not expected to have to be deployed in order to perform passenger transport services.

The provision of **architect services** for an accessible built environment has no direct environmental impact. Hence, the rating is zero.

Due to the mixed nature of the goods and services associated with **public procurement**, positive and negative environmental impacts can be associated. They are, however, expected to be balanced out. Thus, the rating is zero.

Improving the accessibility of **banking services** websites could lead to a considerable share of the population being able to use online banking services websites and is likely to increase take-up of these online services provided. This may result in more lean processes, less paperwork and potentially less need for transport (e.g. from and to a bank). In addition, improving accessibility of ATMs could lead to an environmental impact based on the conducting of transactions through ATMs electronically leading to a less paper-based process. Therefore a slightly positive environmental impact can be expected for option 4.

5 Conclusions

The **problem assessment** for the current situation as well as the baseline scenario for 2020 focused on the legislative situation in the EU Member States, the markets for the priority goods and services, costs faced by businesses with regard to the provision of accessible goods and services, as well as the problems faced by disabled consumers in the Internal Market.

The research carried out as part of the study shows that the **legislative situation** in the EU Member States varies between the priority goods and services. However, for all goods and services covered, discrepancies and even contradictions between the accessibility requirements in place have been identified. The differences are expected to increase until 2020 due to e.g. the Member States' obligations under the UNCRPD. The priority goods and services with a ***high degree of regulatory coverage and fragmentation*** of technical accessibility requirements include ***architect services, broadcasting accessibility services as well as digital terrestrial television (DTT) equipment.*** An ***intermediate degree of regulatory coverage and fragmentation*** was evidenced for ***automated teller machines (ATMs), self-service terminals in the transport sector as well as telecommunication services (relay and emergency services),*** while ***eBooks, private websites (e.g. of transport companies, banks, eCommerce companies, hospitality service providers), mobile telecommunication terminals, computers and operating systems as well as the area of public procurement*** are characterised by ***a lower degree of coverage*** by mandatory technical accessibility requirements.

The varying accessibility requirements in place and the new regulations that are expected to be introduced by 2020 in the EU Member States lead to **barriers and costs for businesses related to cross-border trade**. More specifically, in case of contradictory accessibility requirements, businesses will need to adapt their goods and services and will not be able to fully exploit the advantages of economies of scale and the benefits of the EU Internal Market. As part of this assignment, three types of costs have been estimated for each priority good and service, i.e. the total **costs of accessibility**, **costs to ensure accessibility across borders**, and **costs to understand legislative requirements in other EU Member States**. These costs are particularly high in the cases of websites, television, eCommerce, hospitality services, telecommunication services, and bus transport services. The remaining priority goods and services have lower costs.

By means of summary, the following costs related to an absence of EU legislation by 2020 have been estimated:

- Based on one set of legislative accessibility requirements across the EU, businesses active in the priority goods and services markets are expected to incur total accessibility (CAPEX + OPEX) between 15.3 EURb and 27.3 EURb;
- Costs to ensure the accessibility of goods and services across borders are estimated to range from 12.9 EURb to 21.6 EURb; and
- Incurred costs of understanding different accessibility requirements in the EU Member vary from 284.1 EURm to 1.4 EURb.

A detailed overview of the cost estimates is provided in table 8.

The markets for the priority goods and services are generally characterised by a **limited accessibility**. This is evidenced by **low take-up rates by persons with disabilities** and leads to businesses not being able to realise turnover related to persons with disabilities. This forgone market potential is expected to increase until 2020. The gap between the take-up rates of persons with and without disabilities varies between the priority goods and services with ranges from 2.1% in the case of mobile telecommunication terminals to 52% in the case of rail transport services. The gap in take-up rates between persons with and without disabilities is below 10% in half of the cases, namely: eBooks, bus transport services, telecommunication services, air transport services, mobile telecommunication terminals, and maritime transport services.

Disabled consumers and elderly incur **opportunity costs due to the lack of accessibility of goods and services**. An estimate of these costs was, however, only possible in the cases of eBooks, websites, ticketing machines, ATMs, as well as for computers and operating systems. The potential annual opportunity costs for consumers related to the (cross-border) provision of accessible goods and services have been estimated to range from 2.3 EURm in the case of eBooks to as much as 8.9 EURb in the case of computers and operating systems.

To conclude, the varying national technical accessibility requirements are likely to have a **negative impact on cross-border trade**, resulting in that the full potential of the Internal Market is not achieved. Furthermore, the limited accessibility has a **negative impact on competition among industry players** in the Internal Market as the variations between national technical accessibility requirements make it difficult for in particular new market entrants and SMEs to engage in cross-border trade. The problems that have been evidenced for business bring about **negative consequences for different societal groups**, in particular **persons with disabilities and the elderly**. Choice, quality and price are three areas where problems have been evidenced.

To address these problems, the following four **policy options** were devised:

- **Policy Option 1:** Baseline scenario or “status quo”, i.e. no additional EU policy intervention;
- **Policy Option 2:** An EU recommendation on common (non-binding) accessibility requirements for selected goods and services;

- **Policy Option 3:** Common accessibility requirements at EU level for selected goods and services through a legally binding instrument (Directive) applicable to those Member States that already have legislation in place or when they adopt new national accessibility requirements in the selected areas; and
- **Policy Option 4:** Common accessibility requirements at EU level for selected goods and services through a legally binding instrument (Directive) applicable to all Member States.

The expected impacts of these policy options were assessed both quantitatively and qualitatively with regard to their impacts and ability to achieve the general and specific policy objectives.

The expected **aggregate of cost impacts** of the different policy options are as follows:

- In the baseline scenario (**policy option 1**), businesses are expected to incur costs between 28.5 EURb and 50.2 EURb by 2020 in the absence of EU legislation;
- An EU Recommendation (**policy option 2**) has been estimated to save businesses costs of 4.5 EURb to 7.3 EURb when compared to the baseline scenario.
- The impact of **policy option 3**, a Directive that covers the EU Member States that already have legislative accessibility requirements in place for the selected priority goods and services, is estimated to save businesses 13.1 EURb to 22.9 EURb compared to the baseline situation.
- **Policy option 4**, a Directive with full EU coverage, is estimated to save businesses costs ranging from 11.0 EURb to 19.2 EURb vis-à-vis the baseline scenario for 2020.

These results are overall, the sum of all impacts estimated per priority good/service. The impacts differ between the priority goods and services, meaning that for some goods/services an EU Directive applicable to all Member States may impose costs that are higher than the savings. However, taking the results overall, the conclusion is that, from an economic perspective, a Directive with partial EU Member State coverage (i.e. policy option 3) is most favourable. Taking into account the more qualitative assessment of potential impacts policy option 3 is inferior to policy option 4 since a full harmonisation of the accessibility requirements for goods and services in all EU Member States would benefit citizens and the environment most. However, policy option 4 is less burdensome to implement than policy option 3 in terms of costs.

Regarding the quantitative assessment, the main findings are as follows:

- The quantitative estimates under policy option 1 generally refer to future costs imposed on businesses due to diverging national accessibility legislation and related to the cross-border provision of accessible goods and services on the Internal Market if no further EU action is taken;
- The overall impacts of policy options 2 and 3 are generally cost savings for businesses, i.e. cost reductions related to the cross-border provision of accessible goods and services on the Internal Market. A comparison of the estimates under policy options 2 and 3 shows that the estimated cost savings per good and service for EU businesses in the respective markets are higher under policy option 3. Thus, a Directive with partial EU

Member State coverage is to be favoured over an EU Recommendation that a certain number of EU Member States is expected to be likely to follow.

- The impacts under policy option 4 are of mixed nature. For some priority goods and services, given the limited legislative coverage in Member States, a Directive with full EU27 coverage is associated with limited additional costs for some businesses, e.g. in the case of computers and operating systems and mobile telecommunication terminals, while in most cases businesses save costs through such a Directive in comparison to the baseline scenario, e.g. in the case of self-service terminals and television.
- A comparison of the estimated impacts under policy options 3 and 4 reveals that businesses' cost savings through a Directive with partial EU Member State coverage are higher for all priority goods and services (in those Member States where legislation already exist) with the notable exception of architect services.[79] Cost savings can be expected, in any case, for businesses active in the majority of areas of the selected goods and services. The cost savings are in general expected to be lower than under policy option 3.

As regards the **qualitative assessment of the policy options**, the results of the impact analysis suggest the following:

- **Improved cross-border trade**: policy option 4 is expected to be most effective in improving the cross-border provision of accessible goods and services, while additional costs of making goods and services accessible in countries where no accessibility requirements are in place under the baseline scenario are incurred under this policy option the balance between cost savings as a result of removing barriers on the Internal Market outweigh these costs for most goods and services.
- **Increased competition among industry**: The same argumentation holds true for the objective of increasing competition among businesses. Policy option 4 provides effective results, although additional costs are incurred, it is expected to result in an overall positive impact.
- **Social Impacts**: With regard to different societal groups policy option 4 is expected to achieve the *best* results, as consumers with and without disabilities are expected to benefit from an increased cross-border provision of accessible goods and services and increased competition among industry players. A full coverage of the Internal Market under policy option 4 implies that businesses can trade their accessible goods and services across borders without barriers, this is likely to also increase competition (depending on the level of concentration in the market). Therefore, this could result in benefits for consumers linked to increased freedom of choice, higher quality and reduced prices when purchasing accessible goods and services.

[79] This is due to the existence of legislation, including accessibility requirements, in all the 27 Member States of the EU.

- **Environmental impacts**: As is the case for the social impacts, policy option 4 provides the best results with regard to environmental concerns. It has to be noted, however, that environmental impacts overall are very limited and in most industry sectors no direct environmental impacts could be identified.

To conclude, both policy options 3 and 4 have reasonable advantages, but are also linked with disadvantages that need to be considered with regard to potential EU action. In a nutshell, policy option 3 is more favourable for the business side in relation to costs while policy option 4 would benefit society and the environment in general most.