

TASK FORCE BILDT REPORT

..... OPERATIONALIZING THE RECOMMENDATIONS OF THE BILDT REPORT



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The release of the Bildt report “Calling the shots” drew strong interest from the standardization community, and it was agreed to launch a Task Force to operationalise the recommendations of the report. The Task Force was hosted by ETSI and was open to all members and non-members interested in working collaboratively on turning the recommendations into concrete measures and actions. The Task Force worked at speed to deliver its proposals and credit for this should go to all participants, including CEN and CENELEC and their members who were, as ETSI, very keen to contribute to the debate on standardization for the digital era.

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INTRODUCTION

EUROPEAN COMPETITIVENESS AND STANDARDIZATION

The world in October 2020 is fundamentally different from the world in October 2019. Covid-19 has caused a huge crisis affecting all the world, individuals, societies, economies. Recovering from the crisis has prime focus today - and almost all activities are subject to this overriding need. Against this background the European Commission has set its strategy for the recovery of Europe and the Twin Transitions, digitalisation and green, in order to accelerate the recovery with a push for innovation and strengthening European competitiveness by basing this on future technologies, and providing responses and solutions for today's key challenges.

Standardization has a role in this strategy. A well-working standardization environment and standardization system support industry in creating and accessing markets, in fulfilling regulatory requirements, in driving innovation and the creation of innovative products, solutions and services. And they foster fair competition, as well as ensure that safe and trusted products are brought to the single market as well as to global markets.

The Bildt Report, published in late summer 2019, had provided a comprehensive diagnosis of the state of the European standardization system, analysed against the objective of European competitiveness. In addition, the Bildt Report proposed concrete recommendations for improving the standardization system in Europe, with a special focus on its role in the context of the regulatory environment¹.

In order to further progress the recommendations from the Bildt report into actions, the Task Force Bildt Report was founded, comprising experts on European standardization coming from the members, counsellors and officials of the three European standardization Organisations (ESOs). The Task Force then analysed the findings and the recommendations in the Bildt report, and expanded on these by gathering and providing further evidence, insights and contexts. This process led to the concrete proposed actions outlined in this document.

In Europe, standardization has been recognised as a highly important factor impacting competition and providing additional value to business, its customers, as well as to society overall. Standardization activities have been organised based on long term understanding on the structure of business and sectors of the governance. The European standardization system has served us well, it has been both effective and efficient. CEN, CENELEC and ETSI are recognised as European Standards Organisations (ESOs) via Regulation 1025/2012. They develop standards for purposes that have strong connection to regulatory requirements. In the ICT area, but also provide an additional range of informal standards. At European level there is co-ordination between the ESOs. In addition, other SDOs (fora and consortia) develop standards in the form of technical specifications:

Standards and standardization promote competition, but additionally competition is also relevant between different standardization activities. Competition between the ESOs is limited for a good reason. There is a clear work split, and collaboration mechanisms reduce the competition and enable the organisations to serve the societal needs.

A number of ICT standards are also developed in fora and consortia. Together with the ESOs, Member States, Annex III organizations and industry, they are part of the ICT-Multi Stakeholder Platform (MSP), the advisory group put in place by the European Commission.

It is important to recognise the primary purpose of each standardization effort. Standardization will create value but only for the ecosystem it is set to serve. When there are two or more separate ecosystems competing on the market, they will need their own standardization activities to support them. This implies that those competing ecosystems will also create competition between the related standardization activities. On one hand, there is a strong motivation to make ecosystems bigger and therefore consolidate their standardization activities

1. Available at: <https://www.etsi.org/images/files/Calling-The-Shots-Standardization-For-The-Digital-Era.pdf>

2. The term "standards" is used in this document in a generic way for all such deliverables from both recognised standards organisations and from standardization fora and consortia - or the terms "standards and technical specifications" are used.

On the other hand, it is important to note that there can be competing ecosystems with their competing standardization activities, due to different ways that regulation has defined the market and its segments and sectors. For instance, license -exempted local area wireless networking has fundamentally different sets of ground rules compared to licensed mobile communication. Therefore the two ecosystems and two sets of standards is an acceptable, even a desired, approach. Similar parallel ecosystems exist in many areas of business. Competition between such standards activities is in fact competition between the different type of ecosystems. And finally, standardization in each ecosystem internally enables competition within each ecosystem.

Different types of ecosystems do not emerge randomly. The ecosystem ground rules are always set by the related legislation and regulation. It may however be useful to categorise the mechanisms into different areas.

The first critical area is the way scarce or critical resources are made available to the actors. Critical resources may, for instance, be real estate, road capacity, parking space, airport landing slots, energy in different systems, but also numbering schemes. In radio communications critical resources include primarily the radio spectrum, which may have restricted availability, e.g. only for government purposes, such as military, or in other ways for single dedicated use. Radio spectrum may also be made available through spectrum licensing or even more liberal way, as a licence exempted resource. Some part of the radio spectrum are made available without charge.

The second area relates to competition rules, which often are aligned with the rules on how to access the critical resources. Sometimes competition rules and access rules to resources are not aligned, which results a lot of confusion in the relevant business, and naturally in the related standardization activities. Competition rules may also include vertical separation, such as rules of net neutrality, or separation of networks and consumer

products in communication business. Separation of certain sub-clusters in the business requires in practice a set of standards to enable competition and collaboration over such interfaces. Martin Fransman³ has identified the 4 main clusters that digital ecosystems always comprise. This implies connecting each of the ecosystems with each other, and that there are 6 essential interfaces that require clear decisions related to the separation between the clusters.

The third area is focusing “value creation” through compatibility, this is the main interest area of all standardization. There are many different ways to facilitate compatibility (and interoperability) and in principle, all of them provide value by larger economies of scale and many different ways to enable network benefits.

Additional concerns, beyond the direct rules, are to enable the indirect influence of the consumers and citizens. The ecosystems will be fundamentally different depending on the level the end-users can make choices. One very visible evidence is the level of number, identification and, in the broader sense, all, data portability which is made available.

All of these areas of ground rules ultimately define the dimensions for ecosystems and consequently the rules of related standardization. What kind of ecosystems we want to build in Europe in order to make Europe competitive is not a simple question.

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3. Fransman, Martin. 2010. *The New ICT Ecosystem: Implications for Policy and Regulation*. Cambridge: Cambridge University Press.

STANDARDIZATION POLICY AND STRATEGY FOR EUROPE

HIGH ATTENTION TO STANDARDIZATION

Standardization strategy is the overriding theme of the Bildt Report. In particular the Bildt Report asks for standardization to be a crucial and strategic part of the EU's digital strategy; to de-silo approaches towards standardization and its connection to innovation, competitiveness and digitalisation; for the appointment of a high-level political coordinator; for proper management of resources at administrative level within the Commission.

Throughout the last decade standardization has been high on the political agenda in Europe, both at European Commission level, as well as in the Parliament and in Member States. Regulation 1025/2012, which lays down the legal framework for standardization in Europe, to some extent marks this focused attention towards standardization at legislative level. Building on this; the European Commission has addressed standardization and its benefits and value for innovation, competitiveness and growth within all major policy initiatives, in particular those on the Digital Agenda for Europe, the Digital Single Market, and those on the re-creation of industry and innovation. More specifically, several policy initiatives have addressed areas where standardization plays a key role including for example the Cloud (with the Cloud Standards Coordination activities) or advanced manufacturing, and in general seeking to align ICT standardization with the respective EU policy priorities. In addition, a number of other specific aspects of standardization have been, and continue to be, addressed at European Commission level and in interaction with stakeholders, e.g. the topic of patents and standards, or that of the relationship between standardization and open source.

It is worth noting just a few of the many actions that took place. Within the Joint Initiative on standardization⁴ several actions were taken to reinvigorate the public-private-partnership in the area of standardization. In this context the SMARRT round table was established, allowing for a close exchange with industry on the issues discussed in the Committee on Standards.

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4. See https://ec.europa.eu/growth/content/joint-initiative-standardization-responding-changing-marketplace_en.

A thorough analysis of the various instruments for planning and linking policy initiatives with standardization, as well as an analysis of the economic value of standardization for Europe, was performed. The Inter-institutional dialogue took place bringing together the European Commission, the European Parliament, the Council, the Committee of the Regions, the European Economic and Social Committee and the various stakeholders in European standardization. Recent important regulations, such as GDPR and PSD2, set new requirements for digital businesses while the related standards activities are only slowly emerging. Furthermore, the European Parliament aims to define the principles of the data society (and fair data economy), which will require solid technology and interface standards when implemented.

The new European Commission has built on this high emphasis on standardization. Key strategic initiatives published from early 2020 include a focus on standards and standardization for achieving the strategic goals and supporting their implementation of policy objectives. The Task Force highly appreciates the initiatives taken by the new European Commission, and has reacted to some of them also including them in the analyses taken, and the recommendations developed in this document.

Bringing together the two major Directorates-General that hold responsibility for standardization, DG GROW and DG CONNECT, under one Commissioner was considered positive for giving standardization the level of potential awareness and support that is required for it to fulfil the leading role it has for the single market and for competitiveness.

With the appointment of a Policy Assistant in Commissioner Breton's cabinet being responsible for standardization, a high-level responsibility directly under the Commissioner was established. This provides for multiple positive effects. Standardization is now among the topics of key strategic relevance at highest political level. There is direct contact for standardization issues

and bridges between different strategic areas are thus being built. Overall, dialogue between the different political levels and the European standardization organisations, as well as with other stakeholders, will be improved. This dialogue should also ensure that the awareness of issues related to standards and standardization are brought to the Commissioner's attention quickly in a highly informed way, and that dialogue with the Commissioner may be established on those issues.

PROPOSED ACTIONS:

- > A regular meeting should be re-established, at least once a year, between the Commissioner and the Senior Officials of CEN, CENELEC and ETSI.
- > Regular exchange should be established between the individuals in the cabinet responsible for standardization and the ESOs.
- > Regular exchange should be established between the Director Generals of DG GROW and DG CNECT and the ESOs.

The Task Force also noted that the German government announced their intention to re-invigorate a Council Working Group on Technical Harmonization. In general, dialogue and awareness about standardization should be raised within all institutions of the European Union, in order to increase the awareness of standardization, its role and its benefits for the single market in promoting innovation, sustainability, competitiveness and growth.

PROPOSED ACTION:

- > Establish regular dialogue on standardization between the European Commission, the Parliament, the Council, the European Economic and Social Committee (EESC), the Committee of the Regions (CoR), EFTA Secretariat and the stakeholders of standardization in Europe.

JOINING FORCES FOR A STANDARDIZATION STRATEGY FOR EUROPE

In their Communication on “A New Industrial Strategy for Europe”⁵ the European Commission stressed the importance of standardization for the single market and for competitiveness:

“The single market depends on robust, well-functioning systems for standardization and certification. These help to increase the size of markets and provide legal certainty. Developing new standards and technical regulations, coupled with increased EU participation in international standardization bodies, will be essential to boost industry’s competitiveness.” (COM(2020)102, p. 5)

This built on the announcement made in the Communication on “Shaping Europe’s digital future” that the Commission is going to work on and present a strategy for standardization:

“A strategy for standardization, which will allow for the deployment of interoperable technologies respecting Europe’s rules, and promote Europe’s approach and interests on the global stage.” (COM(2020)67, p.14)

The Task Force is in full support of this. Such a strategy becomes even more relevant with Covid-19 and the crisis situation it has created in Europe and everywhere in the world. Standardization needs, and is well positioned, to play its part in supporting the recovery of Europe as outlined in the European Commission’s Communication “Europe’s moment: Repair and Prepare for the Next Generation” (COM(2020)456) and as expressed in the challenge of the twin transitions: digitalisation and the green deal.

PROPOSED ACTION:

➤ Looking at the development of a standardization strategy for Europe, requirements concerning the European standardization system, and respective measures to implement them, should be checked against the following five criteria:

1. Does the measure comply with societal requirements, user requirements, and European values?
2. Does the measure take full account of the political reality and business requirements of the European market and needs of the industry, consumers and citizens?
3. Does the measure facilitate the alignment of European standards and international/global standards in order (i) for European industry to put its products on international markets; and (ii) to support digital and technological sovereignty and European values in business ecosystems?
4. Does the measure help to re-build European industry after the crisis created by the Covid-19 situation?
5. Does the measure effectively help to support and accelerate the twin transitions of digital and green?

These five different roles may not always be clearly separated, e.g. industrial/innovation policy may also be an aspect for R&D projects, and certainly for public procurement. Standards in support of regulation may also be relevant regarding innovation. Moreover, not every measure that is important and makes sense may comply with all the criteria.

In addition to these roles - and separate from them - standards can provide significant benefits to the industry in many areas where no specific policies exist (and are not needed).

5. See https://ec.europa.eu/commission/presscorner/detail/en/IP_20_416.

Taking these different roles into consideration when defining the standardization strategy for Europe will be critical for achieving clarity as to the respective requirements and proposals.

For the process of developing the strategy, the European Commission reached out to various stakeholders, inviting them to provide input and to collaborate in the strategy development process. So, for instance, the meeting of the EU Multi-Stakeholder Platform on ICT standardization in June 2020 was largely dedicated to an exchange on key strategic aspects of European standardization. Furthermore, the Presidents of the ESOs were invited to extract relevant aspects from their own current processes of strategy development, in order to inform a European standardization strategy at political level and support the key challenges of the recovery of Europe and the twin transitions.

The Task Force highly welcomes these initiatives of the European Commission for broad stakeholder involvement. They have the potential to gather important information and ideas in the broadest sense, and at the same time strengthen the involvement and support of all stakeholders, including in particular the exchange and interlock between the European Commission and the ESOs.

PROPOSED ACTION:

- Continue the open dialogue on the European standardization strategy, and further strengthen the involvement of and interlock between the European Commission and the ESOs.

THE NEW LEGISLATIVE FRAMEWORK

RELEVANCE OF THE NLF FOR THE SINGLE MARKET

The Bildt report outlines the high importance of the New Legislative Framework (NLF) - building on the New Approach - for the European single market. Since its inception the New Approach and, the legal revision in 2010, the New Legislative Framework have enabled the production of standards in support of legislation in an efficient and open manner and across sectors and domains, hereby making standardization a critical resource in building and deepening the internal market. Advanced technologies and suitable open interfaces enable removing the remaining national deviations and enabling roaming services, even beyond the Member States. The NLF has made use of expert knowledge from all stakeholders, and its mechanisms have ensured that European standards represent state-of-the-art technology and include innovations within regular review and maintenance cycles. Moreover, the openness of the standardization processes ensures that all interested parties can participate and provide comments and suggestions at any time, and that all stakeholders can plan for the fast implementation of new standards early on, and with the certainty of accommodating requirements for all EU Member States.

At the core of the NLF, presumption of conformity (PoC) has been a key asset - including particularly SMEs. Self-assessment and self-declaration of conformity being an integral part of the NLF give a tremendous time and cost saving for industry and avoid dependency of third-party testing and certification except for areas where there are justified reasons to require them, e.g. areas with special risk.

The NLF and presumption of conformity are at the core of the single market and its success is proven over recent decades. It provides for testing single market access requirements only once, and then valid for the entire single market. The NLF and presumption of conformity are the preferred way for industry in view

of the link between standards and legislation - also for addressing future areas in technical regulation, e.g. in the field of data or other future technologies.

The recent experience in the context of COVID-19 and the need for personal protective equipment (PPE) provided a further demonstration of the benefits of the NLF for the European single market. With regulation outlining the legal requirements, standards providing the technological, state-of-the-art requirements being readily available and cited in the Official Journal of the EU (OJEU) this has been a fast path to have safe and compliant products for PPE being available for the single market. This had a strong effect in helping to overcome the shortage of PPE in Europe when the pandemic spread and hit numerous regions and countries simultaneously.

The importance of the NLF has frequently been stressed. All parties highly value the NLF, whether these be the European Commission, the European Parliament, Member States, industry, or other stakeholders. There is strong commitment to having a working system to the benefit of the single market. This was also outlined by the European Commission in Communication "Enhancing transparency and legal certainty for a fully functioning Single Market" (COM(2018)764) which gave a strong commitment to the NLF.

Over the recent years, in particular as consequence of a number of judgements of the Court of Justice of the European Union (CJEU), most notably the one on James Elliott, issues have arisen concerning how the NLF is implemented. This has led to sometimes heated debate, and some controversy. The Task Force analysed the situation extensively. The following provides a summary of this analysis and finally makes some concrete proposals for actions.

THE SITUATION AND CURRENT STATUS

Three judgements of CJEU addressed harmonised standards in the context of regulation and the legal role of harmonised standards:

- > Case C-613/14, James Elliott Construction Limited v Irish Asphalt Limited, Judgement of 27 October 2016
- > Case T-474/15, Global Garden Products Italy SpA (GGP Italy) v European Commission, Judgement of 26 January 2017
- > Case C 630/16, Anstar Oy vs Turvallisuus- ja kemikaalivirasto (Tukes), Judgement of 14 December 2017.

These judgements and the interpretation of their impact on the handling of harmonised standards have had consequences for the practice of the NLF. The European Commission is seeing a much stronger and enforceable obligations with respect to the technical content of harmonised standards before publication in OJEU. Also standardization requests are sometimes made more narrow, which leads to a situation that for each update of a harmonised standard a new standardization request needs to be issued, rather than having open standardization requests which provide for updating of standards with new, innovative technologies.

Since the judgements of the CJEU, and the subsequent considerations of the European Commission to look at standards more as legal documents than technical ones, a delay in the citation of harmonised standards in the OJEU has occurred and many standards have been rejected. In consequence this means that Presumption of Conformity is not available for the stakeholders.

In a similar way notified bodies are impacted by the lack of citations of standards as they also rely on the availability of harmonised standards. Moreover, the route via notified bodies is not a solution for lack of harmonised standards, as this means a move away from presumption of conformity and thus from the NLF and from European standardization and adds cost and complexity for industry.

A number of activities have been started to reach common understanding and resolve issues. These include

exchanges between the European Commission and stakeholder organisations, as well as regular exchanges with the ESOs and workshops. These exchanges helped, but have not been sufficient to resolve issues and change the low numbers of standards being published in the OJEU.

The European Commission, following Communication COM (2018)764, also consulted stakeholders on a new Guidance document for the production of Harmonised Standards. A summary of the responses to this consultation is available and was studied in detail by the Task Force⁶.

The situation is undoubtedly critical for industry. Parts of industry have severe issues in bringing their products on the market, with presumption of conformity unavailable due to the delay in listing harmonised standards in the OJEU. It is worth mentioning that SMEs especially suffer from this situation. It is an issue of time, effort and considerable cost.

A further issue that has been identified are standards that were rejected for listing in the OJEU but are needed for compliance with regulatory requirements. About a dozen standards currently fall under this group; in addition some technical groups have ceased to produce harmonised standards as agreements with the European Commission could not be reached. Such a situation is detrimental to the functioning of the NLF and the Task Force recommends that a close look is taken into this situation and means are taken to urgently resolve this.

The Task Force considers that there is an increasing risk that industry moves away from European standardization. They do not see value in investing into the development of European standards when presumption of conformity is not available. Furthermore, the motivation of sending technical experts may be declining as the technical exchanges with the HAS consultants or the European Commission desk officers are over-ruling the consensus reached on technical arguments by the experts in the TCs.

On a higher level there is also some debate as to what extent the cases dealt with by the CJEU are representative of voluntary harmonised radio and telecommunications standards and their use in all regulation or whether they are limited to the special area of construction products.

6. Guidance on practical aspects of the implementation of Regulation (EU) No. 1025/2012 – Results of the consultation of stakeholders. See https://ec.europa.eu/growth/content/feedback-guidance-document-implementation-standardization-regulation_en

PROPOSED ACTIONS

All parties highly value the NLF, whether it is the European Commission, the EP, Member States, industry, other stakeholders and all believe the NLF remains a critical resource to the internal market as well as EU competitiveness. There is strong commitment from all interested parties to have a working system to the benefit of the single market but also taking into account the situation following the CJEU judgements.

Moreover, the NLF is widely seen as the preferred legal framework for technical regulation in new areas when a need for regulation is identified. This became clear in recent discussions and positions, for instance in the request for input on the EU standardization strategy to the EU Multi-Stakeholder Platform, where a large majority of inputs recommended the use of the NLF for regulation, this was also the case in submissions to the consultations launched by the European Commission on the European data strategy and on the White Paper on Artificial Intelligence.

The Task Force therefore recommends that pro-active measures are taken to further improve the situation and urgently resolve the issues around the NLF. This framework is of utmost importance to the European single market. It will be instrumental for supporting the recovery of Europe following the crisis caused by Covid-19 and for the twin transitions of digitalisation and the green deal towards a forward looking and highly competitive European industry embedded into modern societies reaping the benefits of new technologies as well as sustainability and a responsible use of resources.

The following concrete actions are proposed:

1. COMMUNICATION AND DIALOGUE:

The Task Force welcomes all initiatives that have been taken in order to improve communication and mutual understanding about the issues seen under the NLF and the challenges everyone is facing. There have been meetings, workshops and exchanges at various levels and all of them triggered some steps towards improvements

of the respective situation. However the issues have not yet been totally resolved. It seems that further urgent activities are required to identify a solution and set up for dialogue and communication.

PROPOSED ACTION:

> A high level dialogue should be established between Commissioner Breton, the Commissioner's cabinet, the Director General and the ESOs. The main target for this dialogue should be to reach some common understanding of the situation and awareness of the criticality of the issues for the competitiveness of Europe, reinforced by the crisis caused by Covid-19 and the need for a well-working framework to support the recovery of Europe and the twin transitions.

This dialogue should aim for identifying and agreeing on a list of topics that need be resolved. This includes possible political guidance from the highest level. Moreover, following this agreement mechanisms should be put in place for a better mutually resolving the critical issues: "put people into the same room".

PROPOSED ACTION:

> Establish means for regular exchange between the European Commission desk officers, TB chairs and other delegates at the working level, so that technical experts interact directly and often.

Following the agreements and common understanding reached in the high-level dialogue between the European Commission and the ESOs, it will be important to implement the respective means for a regular exchange at the working level - implementing the objective of putting the people into the same room.

The right level here are not workshops, but means that facilitate and ensure a fast and collaborative way to identify issues and collaboratively work on resolving them. Possible means could be to set up a task force or regular exchanges between those who need to work together. We recommend that the ESOs work with the European Commission desk officers and colleagues pro-

actively to identify possible ways for improved dialogue which goes beyond occasional and unstructured contacts. Such initial agreements would then be available to build on and follow the agreements reached at the high-level dialogue.

2. IN DEPTH LEGAL ANALYSIS

The Task Force noted and welcomed with interest the initiative taken by the German presidency of the EU to commission and publish a legal opinion on the obligations following the three judgements of the CJEU (<https://www.bmwi.de/Redaktion/EN/Meldung/20200831-legal-opinion-on-the-european-standardization-system.html>). This corresponds with the thinking of the Task Force that the European Commission should - based on such a legal opinion of the requirements according to Regulation 1025/2012 and in the light of the CJEU judgements - together with the ESOs and all stakeholders look for ways to solve the current issues and improve processes. In particular the Task Force welcomes the clarification that "It is evident that the Court did not intend to thereby subject harmonised standards to the same conditions of validity and the same legal consequences that apply to all other EU law, and thus ultimately call into question the New Approach." On this basis, and with all the other facts provided in the legal opinion, there is a solid basis for the dialogue between the European Commission and the ESOs, both at highest level as well as for the actual working level to review and adapt processes.

PROPOSED ACTION:

➤ Study the legal opinion published by the German government with the objective for political guidance for a new starting point for the NLF.

The legal opinion published by the German government should be taken up at the political level, where responsibility for European standardization lies, and should be assessed with the objective to provide political guidance for more clarity on the obligations for the European Commission following the judgements of the CJEU. If the legal analysis allows, a new starting

point may be taken to strengthen the underlying principle of the NLF, in particular regarding the interplay and separation between legal requirements and technical work; the operation under the Presumption of Conformity; the aspects of product liability; and the role of Market Surveillance. Moreover, situations may be different depending on the exact role of the standards in support of regulation, in particular whether the use of the standards is mandated, or whether presumption of conformity is foreseen. Furthermore, alignment with international thinking and agreements needs to be observed in a number of contexts. All these aspects must be considered.

A specific example is standards in the area of radio which relate to international regulations, and therefore require a close alignment with international thinking. Radio and spectrum management has a long history of successful international cooperation. This requires different considerations than in other sectors which relate less to international agreements.

3. NLF AS CORE OF A EUROPEAN STANDARDIZATION STRATEGY

The Task Force supports the European Commission's approach to consider the NLF as a major part of the European standardization strategy and welcomes the respective requests for input, e.g. as made to the EU Multi-Stakeholder Platform for ICT Standardization. For all technical regulation the NLF should be the prime choice for achieving and demonstrating compliance.

The topic of the NLF should be a core element of the European standardization strategy. This includes a strong focus on resolving all current issues. Moreover, it should be discussed to what extent a fresh and future oriented perspective can be taken and pursued, including for possible future technical regulation.

PROPOSED ACTION:

➤ The NLF should be at the core of a European standardization strategy.

4. STANDARDIZATION REQUESTS

An important element of the NLF are standardization requests - formerly known and often still referred to as standardization mandates. These are given by the European Commission - following the respective comitology process - to the ESOs for developing harmonised European Standards in support of EU regulation. These requests are important to start the work on harmonised standards as they outline the expected scope of the standard under the respective legal act. Regarding the process and the content of standardization requests some key rules should be observed.

PROPOSED ACTION:

➤ Follow and observe the five golden rules for standardization requests:

- 1. Timeliness:** New requests for standardization - especially for new legal acts - must come in time for production of standards, ideally together with new legal acts being approved and considering the complications generated by Covid-19.
- 2. Open requests:** Standardization requests should be formulated in an open manner, and leave flexibility for the technical experts to develop the content and address the appropriate technology areas and details in the standard. Open requests are to be preferred over specific or narrow requests, also for allowing future updating and maintenance under the same request.
- 3. Early involvement of ESOs:** In elaboration of a legal act and standardization requests: The European Commission should get into an exchange with the ESOs and the experts represented therein on the scope, the requirements etc. in order to facilitate the implementation and adoption of the essential requirements via standardization.
- 4. Timely citation of harmonised standards:** Presumption of Conformity, depends on the citation of harmonised standards in the OJEU. Therefore long cycles of citation should be avoided. A substantial role for monitoring implementation of the standards also lies with market surveillance.
- 5. Consider the appropriate time for industry to implement the new standards:** Adapting products and doing conformity assessment based on new requirements laid down in harmonised European Standards takes some time (including design and production). This needs to be considered in addition to foreseeing enough time in general to develop harmonised standards and reach consensus.

5. EDUCATION AND AWARENESS

Whether in Member States, industry or stakeholders' organisations, there is a need to raise awareness and understanding on the NLF, its processes and its objectives, and in particular the role of standards plus the benefits of standards to demonstrate compliance with legal requirements. This is embedded in an in-depth awareness of the NLF and its fundamental role for the single market as well as, in the current situation, its role in the context of the recovery of Europe and the twin transitions.

PROPOSED ACTION:

- > Take measures for education and awareness about the NLF and its processes.

As part of activities around Awareness - Training - Learning about standardization (ATLAS) the NLF and its processes should have strong focus. In collaboration with the European Commission, the Member States and all stakeholders ways should be identified on how to approach such knowledge transfer activities at all levels and ages of society.

ALIGNMENT WITH INTERNATIONAL REGULATORY AGREEMENTS

For the competitiveness of Europe, international markets are extremely important. International market requirements are of high relevance to industry. Therefore, in some areas international regulatory agreements need to be supported, as well, and cannot be ignored. The following example will illustrate this:

SHOWCASE: RADIO

The international body for worldwide Radio is the International Telecommunications Union (ITU) however, the radio sector of the ITU does not produce standards, it produces reports and recommendations from which regional bodies and/or administrations construct standards or radio regulation. Within this arena European standardization - in this case ETSI members - have been successful in providing input into ITU documents especially in the Broadcast, SRD, PMSE and mobile disciplines with even the FCC using masks from ETSI standards.

Alignment of "standards", their measurements and limits is a two-way process. In most cases the overall trend is improvement but, in some cases, there has been relaxation or divergence from ITU and other internationally recognised limits for technical reasons, which unfortunately the EC will not allow, to the detriment of ETSI members and European industry. This also reduces the take up of ETSI standards outside the EC and adds cost to European manufacturers in relation to their non-EU competitors.

EXAMPLE: BACKGROUND

> REGULATION:

Below 9 kHz: The ITU Radio Regulations start at 8.3 or 9 kHz dependent on the subject. The RED removed this lower limit and brought a number of devices including T-Coil systems, cochlear implants and robotic mowers into "radio". The result is the T-coil main units, which have been on the market since 1927 with no recorded interference cases, now have to measure the amperage

of the output of the audio amplifier. To date this has taken some four years without a standard being recognized as suitable by the EC.

This logically means that all audio amplifiers on sale for entertainment or professional use will require "standards" to be placed on the market (which group should do this work?).

Below 9 kHz: Cochlear implants, these are basically a transformer with one winding surgically inserted within the skull and the other winding on the outside of the skull these windings are energized by audio from a hearing aid. A decision by the March 2020 Radio Experts Group determined that these are "radio" devices and must conform to the RED, and thus show compliance to the RED. A major problem is that these are a medical device and their characteristics will vary dependent to whom they are fitted, their age and skull thickness. From recent testing it is impossible to have repeatable measurements using conventional radio measurements methods due to the extremely small radiation.

> LIMITS

EMF: Whilst ETSI does not produce EMF standards but works with CENELEC on these, the EMF limits affect all radio devices. Safety limits of the permissible levels of radiation were set originally by ICNIRP⁷ in 1998 when extensive use of radio devices by the general public had only recently started. A re-evaluation of data in recent years has resulted in a relaxation of some limits: It would appear that the EC has no plans to implement these relaxed limits in their Directives to the detriment of European industry.

Video Links & Cameras: Due to large changes in the physical size and complexity of Video cameras the spurious radiation limit was relaxed due to the current very small footprint being unable to contain large filters: The standard is unacceptable to the European Commission.

.....
7. International Commission on Non-Ionizing Radiation Protection (ICNIRP) provides scientific advice and guidance .on EMF.

PROPOSED ACTION:

> The European Commission should keep under review regulation and limits in the international arena and keep European requirements in line with them in order to provide the best environment for European industry and to prevent industry being at a cost and technical disadvantage.

LEGAL CERTAINTY

The EC has concentrated on legal certainty for standards after the various court cases. This has had some unexpected consequences: An example is the title of standards, where the Commission wishes to have all frequencies identified and within the standard all frequencies, power levels and other technical details included. Whilst this is understandable for harmonised spectrum for SRDs, it creates a problem when spectrum and its use is not harmonised, but uses a tuning range. Broadcast is a prime example, the band 470-694 MHz is "harmonised within the EU" (via CEPT and ITU) but the use of individual channels and their power for both radio and TV varies on a geographic basis, in line with the planning defined under the Geneva agreements and the coverage required. The same applies to a number of other technologies such as PMSE (Programme Making and Special Events) where "tuning ranges" are identified, but actual use is either geographical or Administration limited and power and other technical parameters defined by the Administration. Similar situations exist in PMR and Fixed Links.

PROPOSED ACTION:

> The issue where harmonised standards cannot include a range of spectrum where this would be necessary should be raised the highest political level and be included into the topics that need to be solved. Room for solving this may exist in the context of a consideration of the process requirement around the NLF.

STANDARDIZATION FOR DATA ECONOMY

KEY FOR TWIN TRANSITIONS

The Bildt report recognises the limited role of the European actors in the fast growing platform driven business using all and any kinds of data (raw data, information, knowledge and wisdom). All the current data controlling platforms are initially developed for national markets while Europe requires strong recognition of international collaboration, including the collaboration between the Member States⁸.

The data platforms are only one part of the overall ecosystem. The other parts consist of the sources of data: energy, connected mobility, all possible consumer and other end user controlled devices, machines, and systems (computers, phones, vehicles, homes, factory machinery etc.) and last-not-least the original owners of the raw data, the consumer, citizens and all the end users in the ecosystems.

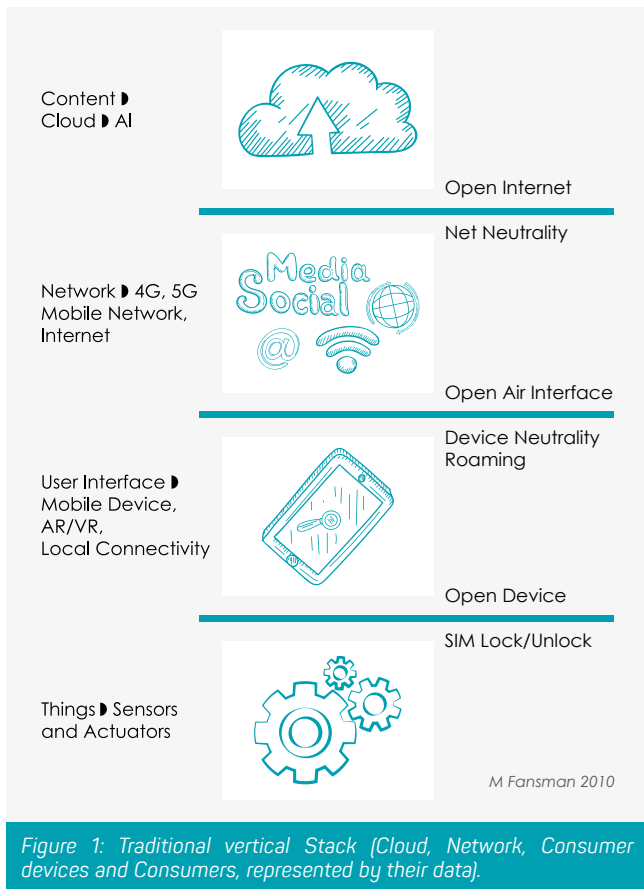


Figure 1: Traditional vertical Stack (Cloud, Network, Consumer devices and Consumers, represented by their data).

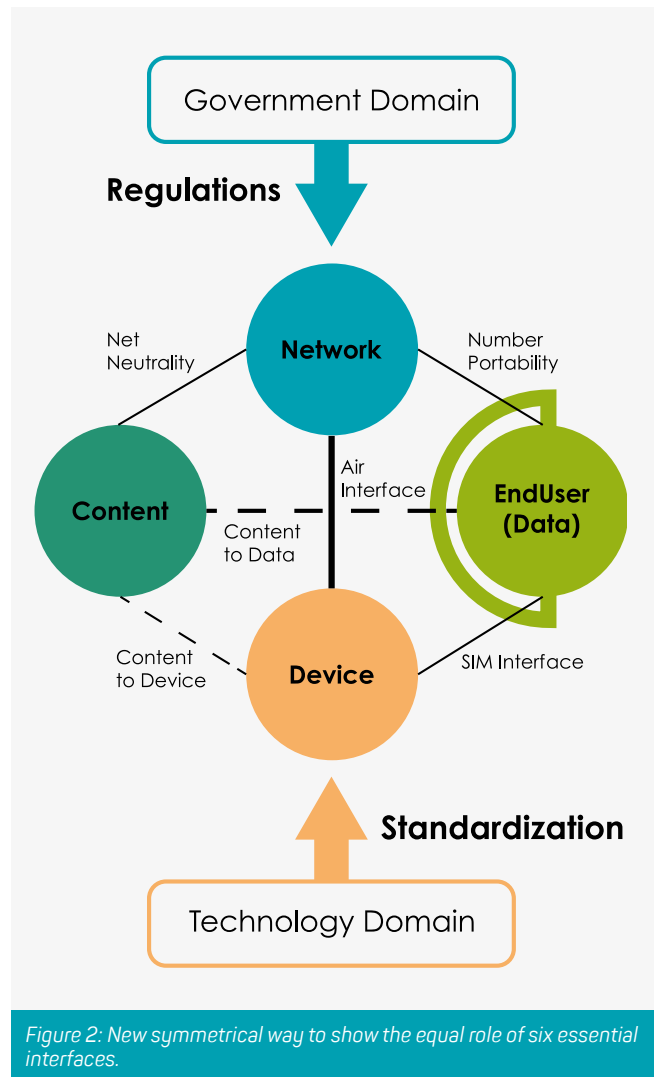


Figure 2: New symmetrical way to show the equal role of six essential interfaces.

The systemic view is crucial as the data flows back and forth in the ecosystem and new value can be created in any part, and not only in the data platforms. Four main entities have been identified and treated separately in regulation. The traditional vertical separation requires holistic separation between all the entities, transforming the traditional stack of layers to symmetric diamond shape with six essential interfaces. See the two ways to address the system in Figure 1 and Figure 2, respectively.

8. See also the SITRA report with 35 recommendations: <https://www.sitra.fi/en/publications/35-proposals-to-make-the-european-data-strategy-work/>

Today, all the six interfaces are recognized in regulation related discussions but not systematically. And therefore their role on standardization is not harmonized.

All the data interfaces require equal attention in the mature data driven business and ecosystem. Note also, that end users, especially consumers have typically an asymmetrical disadvantage to represent them as an "entity". This asymmetry requires new actors to emerge that take the role to act on behalf of the multitude of end users (like co-operatives during the early days of industrialisation).

Each main entity has its own internal structure with many potentially important internal interfaces and industry specific terminology (SaaS, BSS,...). Currently there is no need to enforce the internal structure by legislation and therefore all the interfaces can be based on voluntary standards, open source solutions and similar industry driven designs. However, there are some regulation based needs, such as legal intercept or liability-traceability, which will require standardised solutions, additional to commercial requirements.

It is no longer supportable for Europe to have overlapping but conflicting regulations, at different national levels, of data aggregation and portability at each of the four clusters defined above.

Emerging regulation addressing the data driven ecosystems, such as GDPR and PSD2 are already building requirements of essential open interfaces. However, detailed standardization requirements have not yet been set by the government to implement the regulations. In the case of GDPR, ETSI TC CYBER is already considering general specifications. Governmental requirements for Data Portability will necessarily remain weak unless there are standards available that makes it possible to discover data, interpret the meaning and quality of the data, detect the allowed permissions, confirm the identities of the owners/processors of the data, manage transfer between authorised agents, and monitor compliance

(e.g. "right to be forgotten") between all relevant service providers including also cross sectoral actors (for instance data portability to/from/between social media platform, healthcare, payment services, communication and transportation sectors). It must be emphasized that the majority of data, even open data, is today lacking appropriate metadata to describe it precisely in a cross-domain, machine-readable, reliable way: a combination of regulation and standardization can be of huge benefit to achieve reliable deployment (see e.g. INSPIRE Directive). Experts speak of incompatible ontologies, gaps in data-series, missing calibration certification, etc, creating a whole sub-industry, just to "clean-up data".

PROPOSED ACTIONS:

- > A fundamentally important area of future standardization is to support the implementation of the EU strategy for data - including data pools (health and industrial data) GDPR and PSD2 and other similar directives and their requirements of full data portability.
- > Proposed Action: Data sharing within each ecosystem and potentially between ecosystems is also important. Further interface standards between end-user data and all other clusters (cloud, networks and consumer products) are needed.
- > Proposed Action: Ethical use of data is an issue addressed in various contexts. The NLF with its link between standardization and regulation provides starting point for driving standardization in this area, addressing key issues, but also allowing for regular innovation by requiring the state-of-the-art.

The European single market is a special exception in the world. It is at the same time a diverse set of member states with their own characteristics and languages and a strong common market with maximum need of interoperability. There is no other similar diverse region in the world. This special situation requires special attention in standardization and especially in the data economy.

History shows us, this problem has been solved at least once. Initially pan-European roaming of telecommunication services solved this problem in a sustainable way and enabled European leadership in mobile communication. For the European data economy we need a special set of standards that allow data roaming between citizens, between citizens and services (open source, commercial or governmental) and between the member states and beyond. It shall be the end-user's decision to make his data portable between the data platforms, between the networks (note here also the other networks associated with verticals e.g. road transportation, or. specific social media, between the consumer products (such as different cars, tractors..) and including sharing the data with other end users. The European special requirement is to add the portability of the data between different member states.

The entire value creation system from the generation of data at the physical level – including the rights of the end users – the devices collecting the data, the transport through multitude of networks and the use of data in the cloud, all require an interoperable system design. Each of these recognised regulation entities have their internal structures such as infrastructure as a service, platform as a service and software as a service. The four main entities – end-user data, device, content and network – require a mandatory open interface between each of them (six essential interfaces) while the entity internal interfaces are defined by the industry as needed, strengthening competition and fit-for-purpose design. Industry driven open source technologies may complement the role of standardization in specific application areas.

PROPOSED ACTION:

➤ A concerted effort should be taken to explore role of standards at all levels, including all possible sets of competition rules and focusing of the essential interfaces defined by existing regulation.

We recommend that a concerted effort be started with all stakeholders, including alignment throughout the traditional sectors of society. In a data driven world the different vertical sectors will all each have their own “four main entities” and “six essential interfaces” but societally beneficial common ecosystem ground rules should be established (e.g. by permissions that are adjudicated by government, clearly licensed or specifically license exempt, or license free permissions). These sets of ground rules define the ground rules for standardization and therefore special attention is

needed to maintain the different ecosystems systematically in policy making, regulation, standardization and also in the businesses. Hybrid ecosystems can be built but in limited fashion only. Technologies are neutral but when applied to a specific ecosystem, they will be moulded accordingly. One or more legal frameworks are required to support the building of data ecosystems for the European market.

Deep collaboration of policy making, research, standardization, public funding and business is needed to define the market principles, incentives and architectural structures. The details should be built by consensus of the key experts in each area to decide, including the key experts in standardization.

REGULATION

The ESOs have a core responsibility in this area – this will include new areas such as data or AI, . In case of standards which are used to show compliance to regulation the ESOs respond to standardization requests issued by the European Commission according to the respective processes including comitology. The outcome of the standardization work, European Standards, are adopted, listed in the OJEU and may be used for demonstrating compliance and operate under the presumption of conformity.

ESO can be active in other areas also. But the role of these fully voluntary standards is different since they are driven by the industry and not by the policy making or regulation.

Part of Europe's economic success of the past decades has been built from changing from 27+ national standards -- or even many more considering CEPT – to one European standard. European economy and all stakeholders have been successful against this background both regarding operation on the internal market and for international trade. Future regulation should be based on the NLF / New Approach in order to streamline compliance with basic regulatory requirements for industry.

With the New Legislative Framework and its close linkage to international standardization European industry has been given a highly competitive advantage and the European single market has been a driver of innovation in many sectors. For future regulatory action and policy making in the area of data, standardization based on standardization requests and done within the framework of the ESOs should always be considered first as the way to achieve conformity and compliance, including the well-proven path of self-assessment, self-declaration, and operation under the Presumption of Conformity.

Also, the cost for industry and thus for all is an important aspect here: NLF reduces cost; one type approval instead of many; one process for determining compliance instead of many; clarity and economy of size for the market.

PROPOSED ACTION:

- > The NLF should be used for technical regulation in new areas including data.

This should go together with further actions to fix the current issues around the NLF. In particular a new category of standards has evolved: In addition to standard that are relevant for regulation and listed in the OJEU there are those that got rejected for listing in the OJEU but are required to achieve compliance. This latter category should disappear. Standards are technical documents which is increasingly in conflict with "legal certainty".

CERTIFICATION

In cases of high risk applications certification may be required by law, based on the modules of the NLF and against standards,. Proportionality is required when it comes to requiring third party certification.

PROPOSED ACTION:

- > Areas that require certification must be built on standards and proportionality.

COMPLEMENTARY STANDARDS ON SECURITY AND PRIVACY WHICH ARE OF HIGH RELEVANCE IN THE CONTEXT OF DATA

Europe has taken a leading role globally in setting rules for security and privacy, in particular with the Network Information Security Directive (NISD) and the General Data Protection Regulation (GDPR). In building on these successes, it should further be analysed whether standards should be used more for achieving compliance, in particular with technical requirements. There seems to be some gap in the respective legal frameworks regarding the role of

standards (e.g. in providing data portability). In the context of upcoming review actions, it should, therefore, be aimed for an approach to have all European Standards developed within the framework of the ESOs as a way to achieve compliance related to European regulation.

Also in this context it may be a lesson learned from the COVID-19 crisis that, if standards were available to demonstrate compliance with legal requirements in the context of security and privacy, products and technologies to support combating the coronavirus and the COVID-19 disease may be developed and deployed on the European market faster.

PROPOSED ACTION:

- > Review regulation in the area of security and privacy regarding the possible role of standards for demonstrating compliance with legal requirements.

INDUSTRIAL/INNOVATION POLICY AND PUBLIC PROCUREMENT

In order to have the full spectrum of technologies available Europe needs to make choices to combine the products of the relevant European and global initiatives and standards organisations. A lot of work in the area of data is already under way in the respective technical working groups, e.g. in ISO/IEC JTC 1 SC 40, OASIS, W3C. Furthermore, there are a lot of relevant open source developments under way in the leading open source initiatives like Linux Foundation and Eclipse Foundation. Europe has strong presence and experts from Europe are driving the innovation. It is essential that European policy making in non-regulated contexts includes the standards and open source software from this broad spectrum of initiatives and standards bodies and has the processes and means in place for being able to use their deliverables.

PROPOSED ACTION:

- > The ESOs should closely cooperate and look at partnerships for synergies.

ENGAGEMENT - COLLABORATION - CO-WORKING

This part of the Report considers how standards organisations can work, whether individually or together, to involve the widest possible range of interested stakeholders. It considers in particular the following three recommendations from the Bildt report:

- > Recommendation 2: The EU and its member states need to step up efforts to de-silo their approach to standardization, coordinate and connect it to their industrial strategy and corresponding policies, especially in the areas of innovation, competitiveness and digitalization
- > Recommendation 5: In line with a unified political direction, streamline, adapt, clean up and manage the extended standardization machinery, as well as the processes that govern it
- > Recommendation 7: Connect research to standardization “by design”, e.g. in Horizon Europe programmes

Without strong engagement, standardization would wither on the vine. Standardization needs to adapt to changing strategies and needs of industry and other stakeholders, which is in a constant process of transformation. Over the last decade the range of topics covered by standardization activities has remained comprehensive and dynamic, witness the work already being done on topics such as blockchain or AI.

This said, the Bildt Report identified some problems that in part emerge from the all-pervasiveness nature of standardization. Sometimes these are perceived rather than substantive, except that these perceptions may deter stakeholders new to the standards-making environment from constructive engagement. There is also a “silo” mentality in established standards communities that sometimes makes interaction difficult.

Digitalisation implies that different sectors have to be brought together. This requires more and perhaps also new ways of interaction, and of collaboration between standards bodies and their respective stakeholders - or

at least a mutual understanding of different approaches towards standardization and the role and use of standards. With the different sectors also sometimes different cultures are coming together.

The other fundamental challenge is that standardization relies on the input and active contribution of experts. The challenge all stakeholders face is shortage of resources and this can become critical where work gets duplicated, repeated or rejected. This may also have impacts on inclusiveness.

Most of the possible improvements that can be made do not seem to require massive upheavals in the way standards bodies actually work. In Europe, Regulation 1025/2012 has laid down a firm ground for European standardization, and globally the extensive machinery remains strongly supported. Nevertheless, whether we are talking about aspects internal to the system, or its interfaces with others outside, an improvement in communication is essential to improve clarity.

In this, we need to distinguish between the collaboration function - how new topics are addressed, what are the interfaces with stakeholders, and the co-ordination function - how SDOs should collaborate on the actual standards preparation. Each of these will require a different approach the arrangements for both functions need to be kept as straightforward and flexible as possible. For collaboration on new topics, the key is to engage the relevant stakeholders, and do so as early as possible in a concerned manner, without spending time on creation of detailed rules. Often for these topics, a clear promotion and outreach is needed. Engagement needs to be as comprehensive as possible, i.e. to ensure requirements of societal stakeholders, SMEs and others are being met.

Generally the arrangements for collaboration between Europe and the international level seem to be satisfactory given the provisions of the Vienna and Frankfurt Agreements for ISO and CEN and for IEC and

CENELEC, respectively, and the global partnerships of 3GPP and oneM2M where ETSI is the major leader for developing standards that are globally accepted and used. Also the sectorial agreements such as the ETSI – ITU Collaboration Agreement collaboration for the area of Environmental Engineering. These structures may have to be adapted or complemented for future needs as green and digitalisation transitions develop and the data economy proceed. Adapting and being open for further developing the structures will, therefore, be an ongoing task for standards bodies in collaboration with policy makers and all stakeholders involved.

The benefit of standardization over other ways of setting guidelines or rules as standardization is by default open and transparent and also open for different sectors to come together or form liaisons. This becomes even more critical with digitalisation which is a transversal topic. In order to establish the right structures for leading standardization in the data economy the right work split between the ESOs as well as cooperation with other standards bodies is required. This should be based on expertise and proven track records, e.g. in specifying interfaces, etc.

PROPOSED ACTION:

- > Ensure that for new topics, there is a clear assessment of who are the interested stakeholders and involve them fully in the process, and do so in a collaborative way between the interested SDOs in advance of the work starting .

AWARENESS - TRAINING - LEARNING ABOUT STANDARDIZATION (ATLAS)

INTRODUCTION

A coherent standardization strategy and its implementation very much depend on the right level of information being available about standardization, its processes, its benefits and opportunities. The topic of education about standardization has been addressed by the European Commission for a long time and in collaboration with all stakeholders, in particular with academia and with the ESOs. A number of interesting studies are available, education material has been produced, and some education programmes are in place at a number of universities in Europe. Major leadership is provided by the EURAS, the European Academy on Standardization, which focuses on promoting standardization research – a critical evaluation thereof in the interest of scientific education, improving opportunities to publish research results, and supporting the development and professionalization of standards education (www.euras.org).

Education is an important instrument to raise awareness and support for standardization: Awareness of the potential synergies between research, innovation and standardization also needs to be raised through better education and training about standards.

This is a complex topic offering many benefits and challenges. To achieve the benefits, adequate education is needed. This has been widely acknowledged among different stakeholder groups such as researchers, policy makers and standards setting organisations. It becomes even more apparent, when taking into account that ICT has become a subject that is highly pervasive.

To advance ICT standardization, it is necessary to increase its attractiveness to lecturers and students. Strong teaching materials give a major way to convey the value and raise awareness of standardization. For lecturers, effective teaching materials enable the mitigation of barriers and ease the access to standardization knowledge. Good teaching materials can provide “soft” entries for lecturers and researchers who are not necessarily standardization experts, but envisage the integration of an introduction to standardization topics in their lectures. Teaching materials can also help foster ICT standardization as a scientific discipline within business economics, next to traditional topics such as innovation management, finance, marketing, and law.

Shaping the knowledge and skills of potential standardization experts early on in their careers can have a positive impact on the outcomes of standardization such as increased quality, coherence and consistency of ICT standards.

Students are potential business managers and professional experts of the future. Standardization education raises awareness among management employees, so they will engage more intensively in standardization initiatives and recognise the opportunities provided by standardization to supporting their businesses.

The Task Force strongly supports the need for education about standardization. It can be observed in other regions that a much more systematic approach is taken in this respect. However, Europe is well positioned with a well working network of researchers, global impact, and a lot of work that has been done and is available already. Building on this and taking it further the Task Force proposes the ATLAS perspective about awareness - training - learning about standardization for further progressing the topic and expanding respective education programs and approaches.

ATLAS - ADDRESSING DIFFERENT LEVELS OF EDUCATION ABOUT STANDARDIZATION

ATLAS PROPOSES TO TAKE A HOLISTIC PERSPECTIVE STARTING WITH THREE BASIC LEVELS:

- > Awareness: Increasing the knowledge level about standardization across the board;
- > Training: Train people about standardization, the processes, the benefits, etc.
- > Learning: Include standardization into curricula at university and higher education and similar teaching programs

Going a bit more into detail, several target groups may be identified and can be mapped to the three categories above:

1. UNIVERSITY STUDENTS OF

- > Technology: learn about standards and their function and role in technology;
- > Business: learn about standardization and business strategies; world trade; economic benefit; market access;
- > Law: learn about standardization and regulation; global governance; IP; governance of SDOs

2. POLICY MAKERS, PUBLIC ADMINISTRATIONS, PUBLIC AUTHORITIES, PARLIAMENTARIANS: AWARENESS,

- > regulatory model
- > the role of standardization industrial/innovation policy
- > procurement
- > R&D relation

3. NEWCOMERS TO STANDARDIZATION: TRAINING

- > introduction to processes etc.

4. PRACTITIONERS: TRAINING, AWARENESS

- > Incl. awareness with higher management in industry

ATLAS ALSO REQUIRES AMBASSADORS, TEACHERS AND TRAINERS. ROUGHLY THE FOLLOWING FOUR DIFFERENT GROUPS CAN BE DISTINGUISHED:

1. UNIVERSITY TEACHERS

Following the categorisation and the target group of university students above there is a benefit to include teaching about standardization into university curricula and other higher education plans. Partly material to share is already available; partly experience with respective courses has been made.

2. SDOS

ETSI and CEN/CENELEC have done a high investment into collecting as well as developing teaching and training material (e.g. the ETSI book standards education). They run regular training courses for newcomers, organize dedicated information session (i.e. StandarDays) for all interested parties into the standardization processes. They also contribute to awareness raising and education at various levels. e.g. with policy makers, with the European Parliament etc.

3. INDEPENDENT TRAINERS

ATLAS in general is already an opportunity for independent trainers to offer courses, seminars, webinars etc. Moreover, some creative ways like interactive online games are being offered and provided.

4. PRACTITIONERS

A further source for ATLAS are practitioners who act as ambassadors sharing their real-life experience, providing real-life use cases, etc. Industry, with standardization experts, has always been ready and available to support teaching and awareness creating activities in such a way. This is important and helps to complement basic or theoretical education.

PROPOSED ACTIONS

Building on the large amount of work that has already been done and on the activities that are running, the TFBR recommends the following actions:

PROPOSED ACTIONS:

- > The European Commission and Member States to continue community building and jointly work on a Roadmap for ATLAS.
- > The European Commission and the Member States to start an initiative to include standardization into teaching curricula and to promote ATLAS across the board and to facilitate sharing of material and best practices.
- > The European Commission and the Members States to include standardization into training courses for new hires into the administrations as well as skill building for all staff members.
- > The European Commission to include education about standardization and ATLAS into funding programs like CSAs (e.g. coordination and support actions within EU funded programmes related to standardization, like StandICT.eu).
- > The ESOs together with their stakeholders to continue to provide recognition/awards for outstanding achievements in the field of standardization.
- > Industry associations, chambers of commerce, etc. to take up the topic of ATLAS into their events, trainings, etc.
- > Academia:
 - > Research should continue on the relevance and impact of standardization for business models, business strategies, trade, etc.
 - > Stocktaking should be taken of available research on standardization and provide surrogate of most important results.
 - > In the course of regular reviewing process of curricula – integrate standardization as topic EURAS to integrate, continue and strengthen the EU ACAS network started under the auspices of the Commission.

STANDARDIZATION AND RESEARCH

Standardization is a process involving stakeholders in the development of standards – national, European and International. One stakeholder group with a strong influence in the evolution of industry, technology and society is the research and innovation community. Strengthening the relationship has mutual benefits for both the research and innovation community and standardization organisations. Cooperation with the research community can ensure the timely inclusion of research results in standardization activities. On the other hand, bringing research and innovation ideas for the development of new standards can facilitate market acceptance of innovative products, increase their relevance, and to provide interoperability and compatibility.

Engaging in Standards groups at the appropriate stages of research and innovation cycles is crucial to the development of new and evolved technologies. It is important to identify research topics for standardization at an early stage of all research projects in order to ensure that the requisite standards are available to the industry when they are needed to take the relevant new technologies to market.

Why Standardization? Every ICT device, for example, and every application or service implements standardised technologies, at many levels. Standards support interoperability across technologies. They help create global markets and enable networked development, where innovation occurs on top of existing technology platforms.

ICT standards embody a 'state of the art' of technology development. They are an essential resource for researchers in ICT. ICT markets are shaped by standards and if ICT research should lead to new products, new services, or whole new markets, then clearly research must result in standardization activities.

The main research and innovation actors (R&I) include universities, research and technology organizations, innovators, start-ups, development and innovation departments in industry, including Small and Medium Enterprises. R&I actors can engage in CEN-CENELEC and in ETSI standardization activities via the respective processes and/or by linking their specific projects to European standardization activities.

Researchers benefit from interactions with technical groups in standardization and gain early exposure to the feedback from the standards community that is essential to consider before taking the results of research to full-market deployment. Research results need to influence standards in order to have a market impact.

Industry benefits from faster exploitation of relevant research results and feedback from a far wider community. Research input is highly relevant to the early study phases of product development when multiple alternative technical solutions have to be evaluated. Standards need innovative contributions from researchers to advance the state of the art.

The European Framework Programmes for Research and Innovation (currently Horizon 2020, Horizon Europe from 2021) – under which a great amount of European research and innovation activity is performed – are already feeding into standardization activities, directly and indirectly. Reinforcing the link with these programmes is an excellent opportunity to integrate standardization in innovative fields and to reach out to new stakeholders and engage them in our standardization activities.

ACTIVITIES TAKEN IN CEN/CENELEC ON STANDARDIZATION AND R&I PROJECTS

There are different ways in which standardization is addressed in R&I projects, including contributing to existing and/or initiating new standards or other standardization deliverables. R&I projects increasingly contact Technical Bodies or other relevant CEN/CENELEC groups such as Sector Fora, Focus Groups and Coordination Groups, looking for feedback that can align their R&I works with the standardization workplans and needs. When a Technical Committee is already active in the same field, a project can directly provide input into the standardization processes through a Project Liaison, which allow the project consortium to exchange information throughout the running of the project with the standardization community and contribute to ongoing European standardization work. If new standard needs arise during the project lifetime the project can also process these through into the CEN and CENELEC work programme through a Workshop Agreement.

To acknowledge the important contribution of research and innovation to standardization, a number of national award schemes addressing researchers and innovators have been launched by NSBs and NCs. CEN and CENELEC have in place an annual award targeting a European R&I project and an individual researcher/innovator that successfully contributed to standardization.

INNOVATION PLAN

To endorse CEN and CENELEC strong wish to support innovations in reaching out to the market, an Innovation Plan was approved at the CEN and CENELEC General Assemblies in June 2018.

THE PLAN HAS THREE FOCUS AREAS:

1. To engage with researchers and innovators through recognizing contributions from research:

This includes recognitions and awards at national and European level, collecting success stories, best practices, information sessions for R&I communities as well as the Venture Capitalists and SMEs about the value of standardization to reach the market

2. To offer deliverables and processes that meet researchers and innovators needs by a fast – track approach

Agile and flexible standardization deliverables tailored to the needs of R&I communities

Dedicated tools for smooth engagement of R&I communities are built via CEN-CENELC standards + Innovation initiative

3. To obtain the support and recognition of (national and European) institutions

The R&I communities are concerned about the value of their contribution in standardization and they see lack of official recognitions that can add a positive weigh in their carrier profiles. Therefore, this part of the Innovation Plan focuses on initiating contact with decision makers at the EU-level (DG RTD, DG EAC) in supporting this challenge.

ETSI TOOLS AND STRATEGY FOR RESEARCHERS

ETSI offers many tools to support the productive interaction between researchers and Industry, both in our standards committees and also during our public workshops and events. ETSI tools for researchers include:

- > A dedicated ETSI research support team to guide and advise researchers on how to best channel research results into our committees and get full value from their membership and participation in ETSI
- > ETSI open workshops are free to attend and an excellent entry point for researchers, and provide the perfect platform for researchers to showcase their research results using presentations, poster sessions and even demos. They are the ideal place to disseminate research results to large audiences, gain essential feedback and identify the potential next steps for standardization
- > ETSI is present in a number of EU research projects, and can provide participation, advice, partnership and Letters of Support to EU project proposals when the appropriate criteria are met. Including real areas for standardization in project proposals will often increase the quality of the proposal and the probability it is accepted.

THE ETSI 8-POINT PLAN FOR RESEARCHERS

Standardization is a business process which is driven by industrial and commercial considerations. Reaching a collective agreement on a technology through consensus can take time, but is surprisingly fast when interests are aligned. The following 8-point plan developed by ETSI provides researchers with a roadmap for bringing research results into Standards.

1. Allocate budget and a long/medium funding source for standardization
2. Develop a standards landscape, examining which standards bodies are involved, which companies are leading, what is the status of work, what are the procedures of the different bodies, including IPR policies. ETSI can help with the mapping of the ETSI work programme to the Network2020 SRIA (Strategic Research and Innovation agenda)
3. Compare their project schedule with the corresponding schedules of relevant standards bodies in order to identify opportunities to introduce changes to standards under development. ETSI helps here by making the work programme and ETSI deliverables freely available to all
4. Identify the key results from the project which are candidates for standardization. ETSI can provide guidance on what type of results could be candidate for standards (and which ones are not)
5. Match candidate results for standards to suitable standards bodies
6. Identify project partners to participate in standards activities where they may present the project results. Such partners may come from within the project, from interested industry partners, also identified through networking at ETSI workshops etc.
7. Develop a standardization action plan from the beginning of the project proposal. This often helps with the success of the project acceptance and ETSI can help by identifying 'early on' potential standards synergies
8. Actively track standards activities, contributions and impacts

CEPT

COOPERATION BEYOND EU AND EFTA

BACKGROUND

The European Conference of Postal and Telecommunications Administrations (CEPT) is an organization where policy makers and regulators from 48 countries across Europe collaborate to harmonise telecommunication, radio spectrum, and postal regulations to improve efficiency and co-ordination for the benefit of European society. The CEPT is a voluntary association of European countries. It seeks to deliver greater efficiency through the effective coordination of its work to create a dynamic market in the field of European posts and telecommunications. All 27 European Union member countries, the EFTA countries and further Eastern European countries are members of CEPT⁹.

ANALYSIS IN THE BILD T REPORT

The wide geographical area and the number of countries of the CEPT are seen in the Bildt report as a possible opportunity to increase the political and strategic cooperation beyond the EU and to substantially increase the weight of EU policies and narrative on the global stage. A transversal approach in the industrial and digital policy is seen based on EU assets.

COMMON PRACTICE TODAY

ETSI has a close cooperation with the CEPT/ECC in setting corresponding technical parameters in ETSI standards and CEPT deliverables. The existing MoU¹⁰ works well in practice.

There is a lot of expertise in the EU, in the CEPT and in the SDOs. On specific technologies and services, it has already been seen for many years that the exchange of expert knowledge via Liaison Statements and by attending meetings works well for many years.

BUT: Typical ICT Standards and CEPT deliverables are still service orientated and allocated to a specific medium and technology. Allocations of frequency bands and time- limited licensing models controlled by Administrations are common practice. New technologies, new requirements and new services (e.g. AI, IoT, Cloud, Data, Cyber Security, hybrid systems), that require a more horizontal approach, may not be served adequately by this traditional current system anymore.

CHALLENGE

Identify (new) means to coordinate EU and member states approach to standardization as a strategic discipline.

To increase the political and strategic cooperation beyond the EU and to substantially increase the weight of EU policies and narrative on the global stage.

IDEAS FOR IMPROVEMENTS. WHAT COULD BE NEW? WHAT MAY BE BEYOND RADIO MATTERS?

There is a lot of synergy of knowledge inside the EU, the CEPT and the SDOs. Especially on horizontal topics (cyber security, Data, IoT etc.) there may be good ideas or even revolutionary cross-sectoral approaches that could not be developed further by a single benefit from cooperation between these organisations. New ways for collecting and exchanging ideas and proposals may stimulate the evolution of the digital environment.

The SDOs could benefit from the expertise in CEPT and vice versa. The CEPT has already established a COM-ITU Group to organize the CEPT's engagement with the ITU for all activities except World Radiocommunication Conferences and Radiocommunication Assemblies. The committee co-ordinates its members' positions for the Plenipotentiary Conferences, World Telecommunications Development Conferences, World Telecommunications Standardization Assemblies, and various other meetings.

It may be helpful to step up further develop the relations with CEPT committees discuss with the CEPT the establishment of a new Group called e.g. COM-SDOs which may coordinate all activities around the horizontal topics aspects in the ICT standardization area beyond radio matters. The CEPT may be stimulated to forward issues of common interests, and ETSI as well as other SDOs may intensify existing routes towards their policy objectives. New horizontal technologies and trends could be discussed in regular physical meetings with participation of CEPT Administrations and SDO representatives.

OBSTACLES

Although CEPT reach decisions usually by consensus, Voting rights inside the CEPT are limited to national Administrations only.

There may be some concerns about exchanging political strategies on standardization issues with bodies and organisations from other areas.

9. <https://www.cept.org/cept/membership-and-observers>

10. https://docbox.etsi.org/Partners/Agreements/ECC_MoU_2016.pdf

11. <https://www.cept.org/com-itu/>

CONCLUSIONS

In this document, we have tried from standardisers' perspectives to take the Bildt Report's proposals and to explore how far they can be used to improve the already prominent place of standardization as a European economic tool. In this process, we have come to value the overall benefit of the European standardization system and to communicate that as widely as possible to stakeholders. This means it is important to address standardization at a strategic level, with the ESOs and all their stakeholders involved supporting a high-quality system.

The NLF is a key and well-proven asset of the European regulatory system governing the single market, and it is required for future new technologies. But outstanding issues need to be addressed and processes changed fast. We hope these can be considered at the highest levels and agreement to resolve these issues reached.

Data is an area for the near future, and we believe standards will play a key role, albeit when required within regulated frameworks, to create data ecosystems and the European data economy.

A key to the future is collaboration, and this requires a constant effort to provide for efficient processes for establishing collaboration between SDOs or their technical groups and to contribute successful joint work.

Research and development are also important to link standards to new or improved technologies. The close linkage between research and standardization should be continued and further strengthened, so as to bring more R1D results into the standards arena.

Finally, actions are needed at global level to ensure and continue to drive further progress, whilst securing Europe's economic interest.

PROPOSED ACTIONS

ON STANDARDIZATION POLICY AND STRATEGY FOR EUROPE:

A regular meeting, at least once a year, should be re-established between the Commissioner and the Senior Officials of CEN, CENELEC and ETSI.

Regular exchange should be established between the individual in the cabinet responsible for standardization and the ESOs.

Regular exchange should be established between the Director Generals of DG GROW and DG CNECT and the ESOs.

Establish regular dialogue on standardization between the European Commission, the Parliament, the Council, the European Economic and Social Committee (EESC), the Committee of the Regions (CoR), EFTA Secretariat and the stakeholders of standardization in Europe.

Looking at the development of a standardization strategy for Europe, requirements concerning the European standardization system, and respective measures to implement them, should be checked against the following five criteria:

1. Does the measure comply with societal requirements, user requirements, and European values?
2. Does the measure take full account of the political reality and business requirements of the European market and needs of the industry, consumers and citizens?
3. Does the measure facilitate the alignment of European standards and international/global standards in order (i) for European industry to put its products on international markets; and (ii) to support digital and technological sovereignty and European values in business ecosystems?
4. Does the measure help to re-build European industry after the crisis created by the Covid-19 situation?
5. Does the measure effectively help to support and accelerate the twin transitions?

Continue the open dialogue on the European standardization strategy and further strengthen the involvement of and interlock between the European Commission and the ESOs.

ON THE NEW LEGISLATIVE FRAMEWORK

A high level dialogue should be established between Commissioner Breton, the Commissioner's cabinet, the Director General and the ESOs. The main target for this dialogue should be to reach some common understanding of the situation and awareness of the criticality of the issues for the competitiveness of Europe, reinforced by the crisis caused by Covid-19 and the need for a well-working framework to support the recovery of Europe and the twin transitions.

Establish means for regular between the European Commission desk officers, TB chairs and other delegates at

the working level, so that technical experts interact directly and often.

Study the legal opinion published by the German government with the objective for political guidance for a new starting point for the NLF.

The NLF should be at the core of a European standardization strategy.

Follow and observe the five golden rules for standardization requests:

1. **Timeliness:** New requests for standardization - especially for new legal acts - must come in time for production of standards, ideally together with new legal acts being approved and considering the complications generated by Covid 19.
2. **Open requests:** Standardization requests should be formulated in an open manner, and leave flexibility for the technical experts to develop the content and address the appropriate technology areas and details in the standard. Open requests are to be preferred over specific or narrow requests, also for allowing future updating and maintenance under the same request.
3. **Early involvement of ESOs:** In elaboration of a legal act and standardization requests: The European Commission should get into an exchange with the ESOs and the experts represented therein on the scope, the requirements etc. in order to facilitate the implementation and adoption of the essential requirements via standardization.
4. **Timely citation of harmonised standards:** Presumption of Conformity, depends on the citation of harmonised standards in the OJEU. Therefore long cycles of citation should be avoided. A substantial role for monitoring implementation of the standards also lies with market surveillance.
5. **Consider the appropriate time for industry to implement the new standards:** Adapting products and doing conformity assessment based on new requirements laid down in harmonised European Standards takes some time (including design and production). This needs to be considered in addition to foreseeing enough time in general to develop harmonised standards and reach consensus.

Take measures for education and awareness about the NLF and its processes.

ON ALIGNMENT WITH INTERNATIONAL REGULATORY REQUIREMENTS

The EC should keep under review regulation and limits in the international arena and keep European requirements in line with them in order to provide the best environment for European industry and to prevent industry being at a cost and technical disadvantage.

The issue where harmonised standards cannot include a range of spectrum where this would be necessary should

be raised the highest political level and be included into the topics that need to be solved. Room for solving this may exist in the context of a consideration of the process requirement around the NLF.

ON STANDARDIZATION FOR DATA ECONOMY - KEY FOR TWIN TRANSITIONS

A fundamentally important area of future standardization is to support the implementation of the EU strategy for data - including data pools (health and industrial data) GDPR and PSD2 and other similar directives and their requirements of full data portability.

Data sharing within each ecosystem and potentially between ecosystems is also important. Further interface standards between end-user data and all other clusters (cloud, networks and consumer products) are needed.

Ethical use of data is an issue addressed in various contexts. The NLF with its link between standardization and regulation provides starting point for driving standardization in this area, addressing key issues, but also allowing for regular innovation by requiring the state-of-the-art.

A concerted effort should be taken to explore role of standards at all levels, including all possible sets of competition rules and focusing of the essential interfaces defined by existing regulation.

The NLF should be used for technical regulation in new areas including data.

Areas that require certification must be built on standards and proportionality.

Review regulation in the area of security and privacy regarding the possible role of standards for demonstrating compliance with legal requirements.

The ESOs should closely cooperate and look at partnerships for synergies.

ON ENGAGEMENT - COLLABORATION - CO-WORKING

Ensure that for new topics, there is a clear assessment of who are the interested stakeholders and involve them fully in the process, and do so in a collaborative way between the interested SDOs in advance of the work starting.

ON AWARENESS - TRAINING - LEARNING ABOUT STANDARDIZATION (ATLAS)

The European Commission and Member States to continue community building and jointly work on a Roadmap for ATLAS.

The European Commission and the Member States to start an initiative to include standardization into teaching curricula

and to promote ATLAS across the board and to facilitate sharing of material and best practices.

The European Commission and the Member States to include standardization into training courses for new hires into the administrations as well as skill building for all staff members.

The European Commission to include education about standardization and ATLAS into funding programs like CSAs (e.g. coordination and support actions within EU funded programmes related to standardization, like StandICT.eu).

The ESOs together with their stakeholders to continue to provide recognition/awards for outstanding achievements in the field of standardization.

Industry associations, chambers of commerce, etc. to take up the topic of ATLAS into their events, trainings, etc.

Academia:

> Research should continue on the relevance and impact of standardization for business models, business strategies, trade, etc.

> Stocktaking should be taken of available research on standardization and provide surrogate of most important results.

> In the course of regular reviewing process of curricula - integrate standardization as topic EURAS to integrate, continue and strengthen the EU ACAS network started under the auspices of the Commission

ON STANDARDIZATION AND RESEARCH

The ESOs should continue to actively promote by means of seminars and webinars the most efficient means of bringing research into standardization, which may be sector-dependent. As part of this, cooperation with programs like StandICT.eu should continue and further be strengthened.

The ESOs, together with expert from the EC and others, should bring together the knowledge of when and where standards "make sense" in the life-cycle of innovation: too soon or too late, can both be unfortunate.

The information level needs to be increased about what the paths are for taking research results to standardization.

Member States should also look at creating, improving and strengthening the links between standardization and research, provide respective paths for transferring R&D results in to standardization, not just at a national level in cooperation with National Bodies but on the basis of where the best expertise rests for a specific topic.

