



THE EUROPEAN STANDARDISATION SYSTEM AT A CROSSROADS

REPORT

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ABOUT CERRE

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EXECUTIVE SUMMARY

The European Standardisation Strategy issued by the European Commission in February 2022 heralded what could be the most momentous change in European standardisation policy in a generation. In addition to the immediate proposal to modify the voting rules of European Standardisation Organisations (ESOs), the Commission rethinks the position of the European Standardisation System towards the rest of the world; advocates broader changes in ESO governance to ensure better representation and inclusion of societal interests; calls for European Standards to better foster EU policy objectives; and promotes greater alignment between European public authorities, ESOs, and European industry on the global scene.

In this study, we propose an in-depth examination of these different prongs of the strategy, against the backdrop of the history of standardisation in Europe. In our analysis, the key feature of the European Standardisation System (ESS) is its dual role, which is to serve the needs of the EU industry and other private stakeholders while also assisting in the implementation of EU public policies. The ESS also exhibits a dual nature, having both a public dimension – as a self-regulatory system subject to a set of governance principles – and a private dimension – as a cooperative endeavour driven by open competition between different particular interests as well as the shared ethos and professional norms of a community of experts.

Position of the ESS towards the rest of the world. Empirical evidence shows that the ESS is closely integrated into the global standardisation ecosystem. Hence firms from all around the globe are drawn to participate and contribute to the activities of ESOs and Member State Standardisation Bodies (NSBs), which bolsters the strength of the ESS. The openness of the ESS to foreign participation and the seamless cooperation between European and international standardisation processes have brought European industry, ESOs, and NSBs significant influence and power in international standardisation. The success of the ESS can be seen as a significant global asset for the EU.

Changes in EU governance to ensure better representation and inclusion of societal interests. It is useful to distinguish between SMEs and other societal interests (consumers, labour, and the environment). SMEs may not only have certain particular interests that standards should reflect but also may benefit from direct participation in standards development as an opportunity to promote their technology or connect with industry leaders. Consumer, labour, and environmental interests, by contrast, are some of the public interest considerations that may be relevant in standardisation.

There are many channels to bring public interests into standard development, e.g. through procedural rules designed to foster objectivity in technical decision making, or the intervention of public authorities upstream (mandate) or downstream (recognition) of standard development. In addition to these tools, European standardisation policy has long emphasised the role of representative organisations specifically tasked with representing public interest considerations. The Strategy further strengthens the commitment of European standardisation policy to the representation of societal interests. In particular, the Strategy shifts powers towards NSBs in the hope of improving the participation of SMEs and curbing the perceived excessive influence held by “multinationals” over other stakeholders.



Calls for European Standards (ENs) to better foster EU policy objectives. The Strategy is based on an expansive reading of the European Court of Justice decision in *James Elliott Construction*, according to which the decision requires the Commission to increase its oversight of the European standards that are used in support of EU legislation. Hence the Commission, relying on the results of the Harmonised Standards (HAS) consultant system introduced after *James Elliott Construction*, finds that ESOs are not performing as expected when it comes to discharging standardisation mandates under Regulation 1025/2012. Indeed empirical evidence points to delays in the assessment of hENs, and failures of large numbers of hENs offered for citation in the Official Journal to be approved. However, a thorough review by HAS consultants into the content of hENs poses serious issues, which go to the very foundations of the ESS as established with the New Approach in the 1980s. Furthermore, it is not clear whether substantive issues resulting in the non-conformity of proposed hENs may plausibly be attributed to alleged deficiencies in the process of hEN development (such as a lack of balanced representation of different societal interests).

Alignment between authorities, ESOs, and European industry in the global standardisation ecosystem. The Strategy points to two strategic dimensions of the ESS at the global level, namely the promotion of European values and the support of EU industrial policy by creating niches for EU firms within a standardised environment. Both strategic aims, if they are to be achieved, require continuing European influence at a global level; however, the current context is characterised by increased geopolitical tensions, with public authorities in China and the US trying to pull “their” firms closer to them. While the EU could emulate these geopolitical moves, it stands to lose the most from an unravelling of the global standardisation ecosystem.

Having put these strategic moves in context, we then provide a critical assessment of the Strategy. Our central claim is that the Strategy burdens the ESS with increased political considerations and attributes of political processes, thus threatening to upset the traditional balance between the two purposes of the ESS. Emphasising the public dimension of European standardisation at the expense of its primarily private nature poses the risk of a decoupling between the development of European standards under Article 10 of Reg. 1025/2012 and other standardisation activities as well as further fragmentation of the global standardisation ecosystem.

A narrow reading of the Strategy would centre it around reducing friction in the use of European standards in support of EU regulation. It would lead to a “revised procedural approach”: the procedural approach has traditionally allowed policy makers to defer to industry and other private stakeholders regarding the substance of technical standards, conditional upon the respect of procedural guarantees. The Strategy would significantly expand the procedural conditions for this deference, requiring that “European standards are decided by European players” and standard development comes closer to a democratic model.

Deciding which stakeholders are “European” is not straightforward in a globalised ecosystem. In any event, empirical evidence indicates that “foreign influence” (according to the criterion now put forward by the Commission – location of the controlling shareholder) is a longstanding feature in the ESS, which has been a boon to European influence in standardisation at the global level. Introducing an infelicitous



distinction between “European” and “foreign” stakeholders in European standardisation may thus diminish the impact of ESOs globally.

As for the greater inclusion of societal interests, it does not stand on solid ground theoretically: societal interests represent facets of the general interest (consumption, employment, environment) as opposed to discrete particular interests. By putting forward “inclusiveness” as a new goal for representation of societal interests, and seeking to reduce the influence of active stakeholders representing clearly defined particular interests in favour of an indirect representation of large and vaguely defined groups, the Strategy appears to seek to bring ESOs closer to a democratic model of representation. Nevertheless, standardisation is not a matter of democracy and voting, but rather of ensuring that all interests are accounted for in the search for a technical consensus.

Even on this narrow reading, implementing the Strategy could lead to a decoupling of European Standards, in particular hENs, developed under Article 10 of Regulation 1025/2012. Heightening the requirements regarding the public dimension of this aspect of the ESS may make it increasingly difficult for one set of institutions to efficiently serve both the needs of EU policy makers and their (larger) private constituencies. Either at least some ESOs (ETSI) may be excluded from this aspect of European standardisation, leaving the corresponding European Standards to be developed by other ESOs or even the Commission itself (common specifications); or ESOs will be increasingly running two tracks: one for European Standards under Article 10 of Regulation 1025/2012, and one for other standardisation activities. Either scenario may result in a loss of synergies, which have historically allowed the Commission to tap into the subject matter expertise of private industry stakeholders for the development of the standards required for EU regulatory activities.

The Strategy could also be read more broadly to extend beyond addressing the efficacy and legitimacy of the development of European Standards in support of EU regulation, towards leveraging the ESS to promote EU strategic goals globally. We are sceptical of attempts to use the ESS to promote European values globally, through some form of “Brussels effect”. The conditions for the Brussels effect to arise are not met – standardisation is a dual public-private system that differs from the enactment of legislation. Insistence on a specific construction of “European values” that should be reflected in European standards is difficult to reconcile with the technical objectivity that is the hallmark of voluntary consensus standardisation. With respect to the promotion of more tangible European interests, the ESS has historically afforded significant influence to European stakeholders precisely because of its cohesion with the global standardisation ecosystem.

The decoupling which is likely to obtain in the narrow reading of the Strategy is therefore compounded by the risk of fragmentation that comes with the broader reading. If decoupling is to be minimised and fragmentation avoided, four options emerge:

1. Pushing for changes in ESO governance in order to improve the alignment with EU public policies, thereby undermining the cohesion of ESOs and decreasing their attractiveness. Fragmentation is more likely to occur and more likely to harm EU interests in this option;



2. Leave ESOs as they are and develop new institutions and procedures to develop standards to support EU regulation (alternatively, the Commission could increasingly rely on CEN/CENELEC, leaving ETSI to continue its global role). This option would reduce the risk of fragmentation, but European standards would then evolve in a parallel universe, with timing issues and a possible loss in quality;
3. Leave ESOs as they are and preserve their place in the New Approach, but work instead on reforming the procedures of Article 10 and 11 of Regulation 1025/2012. This may require revisiting the HAS consultant review and the Commission's role in the scrutiny of the substance of technical standards, based on a more modest reading of *James Elliott Construction*. This would minimise decoupling and avoid fragmentation. This is the best option.
4. A fourth option, more daring, is to expand the range of eligible standard development organisations under Regulation 1025/2012 beyond ESOs. This would mark a sharp break in EU standardisation policy. At the same time, if decoupling and fragmentation take place, EU public authorities might find themselves in a situation where they are forced to recognise standards that were developed outside of the ESS, maybe without significant European involvement, but that managed to gain the upper hand globally.



1. INTRODUCTION

Over the past years, standardisation policy has risen to a prominent place in EU policy making. While standardisation has played a role in the European integration process more or less from its very beginning, it has, in recent years, acquired a new, strategic significance. The new European Standardisation Strategy, issued in February 2022,¹ both reflects this strategic significance of standardisation for the EU, and tries to further strengthen the strategic role and use of standardisation policy.

While the Strategy identifies many opportunities for European standardisation to usefully contribute to the pursuit of EU policy goals, it also identifies deficiencies in the workings of the European Standardisation System, and presents possible remedies. We distinguish between two aspects of the performance of the European Standardisation System: the ability to produce standards that support EU regulation, and the ability to promote and support the EU's broader strategic goals. For both aspects, the Strategy identifies a number of concerns and possible improvements. Two priorities expressed by the European Commission have been particularly highlighted in recent discussions, and provide a common theme to many of the specific measures and proposals: the Commission's view that European actors should be in a leading role in the development of European standards, and the Commission's concern about the balance in the representation of different stakeholder constituencies in European standardisation processes.

In this report, we aim to put the Strategy in a broader perspective, against the history of standardisation in Europe (Part 1). We argue that the duality between its private and public roles provides the foundation for the European Standardisation System, and many features of the system reflect a balance between the prerequisites of each of these two roles (Part 2). Against that background, we develop the main thrusts of the Strategy further, in the light of additional data and legal and economic analysis, in order to test their solidity (Part 3). Part 3 focuses on four of these main thrusts: the European Standardisation System and its relationship with the rest of the world; the governance of ESOs and societal interests; the use of European standards in pursuit of EU policy goals; and the strategic significance of European standardisation in the global geopolitical context.

On that basis, in Part 4, we then provide a critical view of the Strategy, highlighting the risks that (i) the European Standardisation System becomes decoupled, with the development of European Standards supporting EU legislation being increasingly separated from other activities, and (ii) that an assertive stance on European leadership in the development of European standards further contributes to the growing danger of fragmentation in the global standardisation ecosystem.

¹ European Commission, "An EU Strategy on Standardisation – Setting global standards in support of a resilient, green and digital EU single market" COM(2022)31 (2 February 2022).



2. HISTORY OF STANDARDISATION IN EUROPE

2.1. The First One Hundred Years

In Europe, as elsewhere, standardisation began within engineering and technical circles in the late 19th century.² The current national standardisation bodies³ (NSBs) were formed as private associations in the early 20th century, including BSI in 1901, DIN in 1917, and AFNOR in 1926. Standardisation, therefore, predates the European project, and to some extent, the history of the EU standardisation policy can be seen as the progressive integration of existing standardisation institutions into the broader frame of EU economic policy.

In the post-war era, two European Standardisation Organisations (ESOs) were formed, in order to bring the NSBs together and draw up European standards that would be common to all NSBs: CEN was founded in 1961, and CENELEC, in 1973. Yet, prior to the 1980s, the EU⁴ did not fully exploit the synergies with ESOs in its internal market policy. ESOs produced European standards and, in parallel, the EU institutions kept busy with the details of technical harmonisation and standard development.

Developments in the late 1970s prompted a change of tack. For one, the significance of standards for international trade was highlighted with the inclusion of an Agreement on Technical Barriers to Trade in the GATT, following the Tokyo Round.⁵ Pursuant to that Agreement, WTO members undertook to ensure that standards are not prepared, adopted, or applied so as to create barriers to trade. At the same time, the CJEU also gave new prominence to standards in the construction of the internal market, with a pair of major rulings. In 1974 in *Dassonville*, the Court held that product requirements, even if indistinctively applicable to domestic and imported products, could constitute quantitative restrictions on trade, in breach of Article 30 TFEU.⁶ Later in 1979, in *Cassis de Dijon*, the CJEU added that, while Member States retain the ability to regulate imported products for policy reasons in the general interest (where no EU-level harmonisation has taken place), the fact that products have been lawfully produced and marketed in another Member State will be relevant in assessing whether such regulation is justified as a restriction on intra-EU trade.⁷ These rulings gave a new impetus for harmonisation within the EU, in order to seize the initiative and use the opportunity opened by the CJEU. As regards the harmonisation of technical norms, the experience in the 1970s was generally seen as a failure: since the entirety of the technical

² For a thorough historical account of standardisation, see JoAnne Yates and Craig N. Murphy, *Engineering Rules* (Baltimore: Johns Hopkins University Press, 2019).

³ Throughout this document, we use ‘national standardisation bodies’ and ‘NSBs’ to refer to standardisation bodies at national or domestic level, within the meaning of ISO/IEC Guide 59:2019, *infra* note 27, point 3.6., as opposed to those at regional or international level. Regulation 1025/2012, *infra* note 26, Art. 2(10), defines ‘national standardisation bodies’ more restrictively as only those NSBs from EU Member States (and EEA members), to the exclusion of national bodies from countries outside of the EU/EEA. When the context so requires, we explicitly indicate that we are using the more restrictive definition of Regulation 1025/2012 by referring to “EU NSBs” as opposed to “non-EU NSBs”.

⁴ For the sake of convenience, we will use EU throughout, even though the relevant policies pertained to the EEC up to 1993 (before the EU was created) and the EC between 1993 and 2007 (under the three-pillar EU structure in force at that time).

⁵ Agreement on Technical Barriers to Trade [1980] 1186 UNTS 276. This is the predecessor to the TBT Agreement under the WTO : Agreement on Technical Barriers to Trade, part of Annex 1A to the WTO Agreement: Marrakesh Agreement establishing the World Trade Organisation, 1867 UNTS 154 (1994).

⁶ CJEU, 11 July 1974, Case 8/74, *Dassonville* [1974] ECR 838.

⁷ CJEU, 20 February 1979, Case 120/78, *Rewe-Zentral AG and Bundesmonopolverwaltung für Branntwein* (“*Cassis de Dijon*”) [1979] ECR 650.



norm had to go through the legislative process, the pace was glacial. Improvements were urgently needed, and a smarter use of standardisation offered a promising path.

2.2. The “New Approach”

In 1985, the “New Approach” marked the dawn of the current policy.⁸ The New Approach was part of a broader concerted effort to usher in the internal market, as set out in the Single European Act.⁹ Under the New Approach, a line is drawn between the legislative and standardisation realms. The EU steps away from the details and focuses legislation on defining essential requirements that products must meet. Technical details are to be specified in voluntary European standards to be developed by ESOs, acting on an EU mandate. Whilst Member States retain their power to act on product safety, products made to harmonised European standards are presumed to conform to the essential requirements.

As part of the New Approach, the position of ESOs also had to be clarified. The European Commission entered into an agreement with CEN and CENELEC in 1985, in the form of Guidelines to govern this cooperative relationship between a public authority and private associations.¹⁰ The Guidelines specify shared policy objectives and list mutual expectations, including expectations as to the governance and procedures of the ESOs.

The New Approach played a significant part in the success of the Single Market programme. After its inception, European standardisation policy underwent a series of policy cycles, which did not fundamentally alter the New Approach. These cycles tended to connect with broader trends in EU policy.

In the early 1990s, the Commission advocated a more centralised European standardisation system.¹¹ One of the reasons behind the Commission proposal was the perceived slowness of standard development within CEN and CENELEC.¹² The Commission suggested that allowing industries to create sectoral standards bodies offering greater opportunities for direct stakeholder representation may improve the efficiency of European-level standard development.¹³ This different organisation of standardisation was exemplified by the newly formed third ESO, ETSI. The Commission’s suggestion to form additional sectoral ESOs, however, was abandoned after being widely rejected by stakeholders.¹⁴

ETSI was created as part of the liberalisation of the European telecommunications sector, initiated with the 1987 Green Paper on Telecommunications.¹⁵ The pre-existing national monopolists saw their exclusive

⁸ The New Approach is set out in Council Resolution of 7 May 1985 on a New Approach to Technical Harmonization and Standards [1985] OJ L 136/1 and its Annexes.

⁹ Single European Act of 9 September 1985 [1987] OJ L 169/1.

¹⁰ CEN-CENELEC Guide 4, now superseded by the *General Guidelines for the Cooperation between CEN, CENELEC and ETSI and the European Commission and EFTA* of 28 March 2003 [2003] OJ C 91/7.

¹¹ European Commission, *Green Paper on the development of European Standardization : Action for faster technological integration in Europe* COM(1990)456 final (8 October 1990).

¹² Ibid. at 23.

¹³ Ibid. at 6.

¹⁴ European Commission *Standardization in the European Economy (Follow-up to the Commission Green Paper of October 1990)* [1992] OJ C 96/2. Also see Council Resolution of 18 June 1992 on the role of European Standardisation in the European economy [1992] OJ C 173/1.

¹⁵ European Commission, *Green Paper on the Development of the Common Market for Telecommunications Services and Equipment : Towards a Dynamic European Economy* COM(1987)290 (30 June 1987).



rights progressively rolled back as equipment and service markets were liberalised.¹⁶ Regulatory and operational functions were separated, with the former being entrusted to new national regulatory authorities, and the latter being given a corporate form and eventually privatised. Furthermore, where equipment manufacturing was integrated with infrastructure and service provision, these functions were separated. In the midst of all these major changes, standardisation needed to be properly handled, given its strategic significance for the emerging internal market in telecommunications. The former monopolists were used to working together on standardisation at the European level within CEPT,¹⁷ but CEPT was turned into a regulatory club and therefore not suitable for standardisation work. Indeed, standardisation was of interest both to the new regulatory authorities and to the new firms handling equipment and services. In addition, neighbouring industries (IT) were used to work through NSBs within CEN and CENELEC, which did not co-ordinate well with CEPT. The solution was to create a new ESO, ETSI, that would bring together all interested firms (manufacturers, operators, and so on) and public authorities, directly at the European level. Contrary to CEN and CENELEC, ETSI's membership is made up not just of NSBs, but rather of many stakeholders and partners. Accordingly, standard development could be originated and carried out directly at ETSI, without the need to rely on or involve NSBs.

A new policy cycle began in 1995, in the wake of the Commission White Paper on Growth, Competitiveness and Employment¹⁸ and of the Information Society policy initiatives.¹⁹ It is also around that time that the term “European Standardisation System” (ESS) started to be used more frequently, in order to designate the overall system governed by EU legislation (now Regulation 1025/2012) and comprising the ESOs and the NSBs.²⁰ In the 1995 cycle, the strategic significance of standardisation was confirmed, but no major changes were brought to the New Approach. A subsequent cycle, beginning in 1998, was prompted by Commission concerns about efficiency and accountability in standardisation;²¹ it took place against the backdrop of the surge of interest in governance issues after the resignation of the Santer Commission in 1999. Whilst here as well no formal change was made, the ESOs were put under pressure to be more efficient and to reach out to all stakeholders.²² As an outgrowth of that policy cycle, a new mechanism was introduced to secure European financing for ESOs and their activities.²³

2.3. Regulation 1025/2012

It is only with the 2008 policy cycle that significant changes were brought to EU standardisation policy.²⁴ That cycle was part of the broader discussion on growth, jobs and innovation.²⁵ It led to the enactment of

¹⁶ Directive 88/301 on competition in the markets in telecommunications terminal equipment [1988] OJ L 131/73 and Directive 90/388 on competition in the markets for telecommunications services [1990] OJ L 192/16.

¹⁷ Conférence Européenne des Postes et Télécommunications (CEPT).

¹⁸ European Commission, *Growth, Competitiveness, Employment – The Challenges and Ways Forward into the 21st Century* COM(1993)700 (5 December 1993).

¹⁹ See the Bangemann Group Report “Europe and the global information society” (26 May 1994) and the European Commission Communication *Europe's Way to the Information Society – An Action Plan* COM(1994)347 (19 July 1994).

²⁰ Originally, the term “ESS” extended to the ESOs only, but over time it came to include the NSBs as well.

²¹ European Commission, *Efficiency and Accountability in European Standardization under the New Approach* COM(1998)291 (13 May 1998).

²² Council Resolution of 28 October 1999 on the Role of Standardization in Europe [2000] OJ C 141/1.

²³ Decision 1673/2006 on the financing of European standardization [2006] OJ L 315/9, now superseded by Regulation 1025/2012.

²⁴ The cycle began with the European Commission, Communication *Towards and increased contribution from standardisation to innovation in Europe* COM(2008)133 (11 March 2008).

²⁵ See European Commission, *Europe 2020 – A strategy for smart, sustainable and inclusive growth* COM(2010)2020 (3 March 2010).



Regulation 1025/2012, which consolidated major EU legislation on standardisation under one instrument – turning it into a Regulation in the process – and added new provisions.²⁶

2.3.1. Criticism of the existing SDO structure and rise of new types of SDOs

The changes made by Regulation 1025/2012 reflect the evolution of the Standard Development Organisation (SDO) landscape. Fifty years ago, it was a relatively clean pyramidal scheme, with three global bodies – ISO, IEC, and ITU – at the apex, a large number of NSBs at the base, and regional organisations – such as the ESOs – in the middle, where applicable.²⁷ Historically, all of these organisations (save for ITU²⁸) – whether international, regional, or national – are private associations. Membership differs depending on the level of the organisation, however. Whilst the NSBs (and ETSI) bring together a range of stakeholders, from firms to public authorities, the top two layers (ISO, IEC, and CEN/CENELEC) emulate the international model. Their membership is not made out of individual stakeholders, but rather of NSBs.

The main criticism levelled at the established structure was that, at the regional or global level, it tended to be slow (not unlike international organisations proper). Such slowness became an impediment once the pace of technological change picked up in the 1980s, in the ICT sector in particular. This led to the birth of two competing SDO models.

First of all, starting from the 1980s, private actors began to undertake standardisation outside of the established structure, via industry associations and consortia that could operate more swiftly and more globally, without the international straitjacket. Some of these associations and consortia have become household names in their own right as SDOs. They tend to be operating in the computer hardware space. One could name here the European Computer Manufacturers Association (ECMA), the JEDEC Solid State Technology Association (JEDEC), the VMEbus International Trade Association (VITA) or, more recently, the Bluetooth Special Interest Group (Bluetooth SIG) or the USB Implementer Forum (USB-IF). Industry associations and consortia differ from traditional SDOs in many respects, including the time dimension. Whereas international standards bodies, ESOs and NSBs have been around since at least the mid 20th-century and will most likely remain active for an indefinite period, industry associations and consortia can be more transient. Some are created but never succeed in gaining traction; others fade away into irrelevance. The barriers to forming them are low, and if stakeholders and participants are no longer convinced of their merit, they can create a new SDO or migrate to another existing one. The persistence of the SDOs listed just above reflects their success in becoming a significant forum for industry players, combined of course with some measure of path dependency.²⁹ It should also be noted that many of these

²⁶ Regulation 1025/2012 on European standardization [2012] OJ L 316/12.

²⁷ See the canonical description in the ISO/IEC Guide 59:1994, *Code of good practice for standardization* (1993) now superseded by ISO/IEC Guide 59:2019, *ISO and IEC recommended practices for standardization by national bodies* (2019).

²⁸ The ITU is a proper international organisation, emanating from an international treaty.

²⁹ The significance of path dependency should not be exaggerated. Our research in a previous project highlighted that, even for time-tested SDOs that are less vulnerable to stakeholder migration, competitive pressures can be felt from within, when dissatisfied stakeholders “step out of the room” to form coalitions or alliances with a view to influencing discussions within the SDO, or when they simply try to take over the governing bodies of an SDO: see Justus Baron, Jorge Contreras, Martin Husovec, Pierre Larouche and Nikolaus Thumm, *Making the Rules – The Governance of Standard Development Organisations and their Policies on Intellectual Property Rights* JRC Science for Policy Report (Luxembourg: EU Publications Office, 2019) at 68-71.



SDOs bring their standards to organisations in the established structure in order to have them “officially” endorsed.³⁰

Secondly, with the rise of the Internet in the 1990s, another type of SDO emerged from the early user communities.³¹ Three of them cover the Internet layers. The IEEE Standards Association (IEEE-SA) develops and manages the Ethernet and Wi-fi standards that pre-dominate the transport layer. As for the middle layers (exemplified by TCP/IP), they are standardised by the Internet Engineering Task Force (IETF). At the application layer, the World Wide Web Consortium (W3C) is a significant SDO, home to HTTP/HTML, XML, and others. These three SDOs tend to be global groupings of individuals (usually engineers and IT professionals) who downplay or outright ignore the corporate or public sector affiliation of their members.

Now these alternative SDO types are part of a vast “standardisation ecosystem”, together with the more traditional SDOs.³²

2.3.2. Adoption of Regulation 1025/2012

In legal and policy terms, Regulation 1025/2012 fulfils two major roles. First of all, at a more general level, it provides a legal framework for standardisation in Europe, taking into account international trade, internal market and competition law. Secondly and more specifically, it sets out a mechanism for the production of European standards, in line with the New Approach.

2.3.2.1. Legal framework for standardisation in Europe

As far as the general legal framework is concerned, Regulation 1025/2012 enshrines in EU law the “founding principles” arising from WTO law.³³

Significantly, the Regulation derives from these founding principles an additional principle of stakeholder participation,³⁴ which is at the core of the Regulation. Stakeholders include SMEs as well as “societal stakeholders”, namely consumer, environment, and labour organisations. ESOs are expected to involve these stakeholders at all stages of standard development.³⁵ In addition to the EU financing made available to ESOs,³⁶ the EU is also extending support to representative stakeholder organisations directly, in order to enable them to fully participate in standard development.³⁷

Another change brought by Regulation 2015/2012 concerns the conceptual architecture of European standardisation. The Regulation maintains the traditional EU legislative approach whereby the overarching concept is “technical specification”. “Standards” are then defined limitatively as a subset of “technical specifications” comprising only those specifications produced by an established international

³⁰ Ibid. at 59-60.

³¹ For a more detailed account, see Yates and Murphy, *supra* note 2, chap. 7 and 8. See also Andrew L. Russell, *Open Standards and the Digital Age – History, Ideology, and Networks* (Cambridge : Cambridge University Press, 2014).

³² See Baron et al., *supra* note 29 at 41 and ff.

³³ Albeit only in a Recital and then incidentally through the Regulation : *supra*, note 26, Rec. 2. For more detail, see *infra* , Heading 2.2.1.

³⁴ Ibid.

³⁵ Ibid., Art. 5. The Commission is also bound to notify them of its activities relating to standardisation : Art. 12.

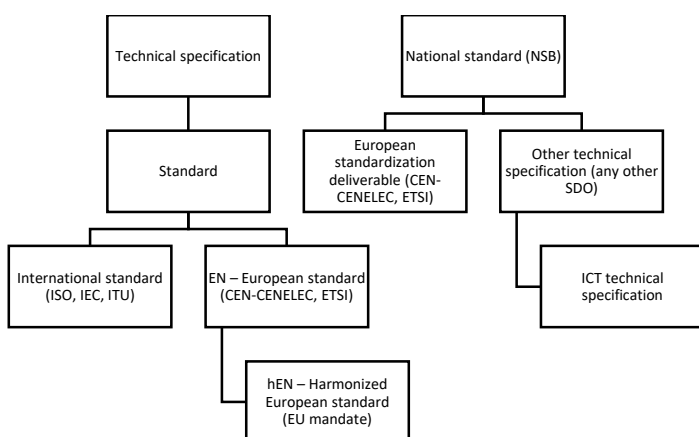
³⁶ Ibid., Art. 15.

³⁷ Ibid., Art. 16.



SDO,³⁸ an ESO or an EU NSB.³⁹ Any technical specification emanating from another source – be it a national or regional standardisation body outside the EU or another type of SDO – is not a “standard” within the meaning of the Regulation, even though it is common parlance to use the term ‘standard’ (in a non-legal way) as well, in relation to such specifications. Within “standards” under Regulation 1025/2012, one finds international standards, national standards as well as “European Standards” (ENs). Only the three ESOs may develop ENs. A subset of these ENs are “Harmonised European Standards” (hEN), which are developed upon a mandate from the European Commission and offer a presumption of conformity with the essential requirements of internal market directives.⁴⁰

As a consequence of the criticism levelled at the traditional approach, the set of definitions is expanded to add a new category of “European standardisation deliverable”. A standardisation deliverable designates a technical specification produced by an ESO which may not be as full-fledged as a standard within the meaning of Regulation 1025/2012, but nonetheless represents some level of limited or informal consensus. Of course, deliverables are produced faster and more flexibly than standards proper.⁴¹



Next to that, some recognition is given to a subset of the “other” technical specifications developed outside the established channels, namely those in the ICT sector. The Regulation points out that these ICT technical specifications cannot be assimilated to standards since the SDOs where they are developed do not follow the same governance principles.⁴² Nonetheless, the significance of these specifications in practice cannot be ignored, and the Regulation provides for them to be allowed in public procurement,

³⁸ ISO, IEC or ITU.

³⁹ While CEN and CENELEC membership also includes NSBs of non-EU countries, for the purpose of Regulation 1025, NSB is defined to include only those from EU/EEA Member States : Regulation 1025/2012, Art. 2(10).

⁴⁰ See the list at https://single-market-economy.ec.europa.eu/single-market/european-standards/harmonised-standards_en.

⁴¹ Regulation 1025/2012, *supra* note 26, Art. 2. See the explanation given in the Report of the Expert Panel, *Standardization for a competitive and innovative Europe: a vision for 2020* (February 2010) at 23.

⁴² *Ibid.* at Rec. 31.



as long as the SDOs that produced them meet certain criteria (a subset of the founding principles) and the specifications themselves are of a certain quality.⁴³

2.3.2.2. European standards and Harmonised European standards

Regulation 1025/2012 also updates the procedure for the development of European standards upon a request from the European Commission. The standardisation requests (mandates) are cast within a broader annual Union work programme for standardisation.⁴⁴ The procedure comprises a request from the Commission to one or several ESOs; a decision by the ESO(s) within one month whether to accept the request; EU funding if necessary; production of a European standard or deliverable; and a joint assessment of the standard's compliance with the request by the ESO and the Commission.⁴⁵

Additional provisions apply in the case of hENs. If found compliant, a reference to the hEN is published in the Official Journal.⁴⁶ In addition, a uniform procedure for formal objections to hENs – by a Member State or the European Parliament – is introduced, replacing the various provisions found throughout specific directives.⁴⁷

The specific legal regime of hENs was at the core of *James Elliott*, a case where the CJEU held that it had jurisdiction to give a preliminary ruling⁴⁸ on the interpretation of hENs.⁴⁹ The CJEU found that a hEN, even if it is not binding and does not originate from EU institutions, nonetheless forms part of EU law, because of the EU mandate under which it was prepared and the subsequent publication of its reference in the Official Journal, which confers some effect on it (presumption of conformity for products manufactured in compliance with the standard). This turns the hEN into a “necessary implementation measure” for the EU legislation under which the mandate was issued.⁵⁰ *James Elliott* definitely served as a reminder of the significance of hENs for EU law, and of the care with which EU institutions must issue mandates and review hENs before referring to them in the Official Journal.

Following the adoption of Regulation 1025/2012, a new policy cycle was launched in 2016,⁵¹ with the first report on the application of the Regulation.⁵² The main outcome so far has been the creation of the Joint Initiative on Standardisation (JIS), a multi-stakeholder group bringing together ESOs, NSBs, industry associations, SMEs, consumer associations, trade unions, environmental organisations, Member States as well as EFTA and the European Commission.⁵³ The JIS is meant to afford a forum to manage the European

⁴³ Ibid, Art. 13-14 and Annex II.

⁴⁴ Ibid, Art. 8.

⁴⁵ Ibid, Art. 10.

⁴⁶ Ibid., Art. 10.

⁴⁷ Ibid., Art. 11.

⁴⁸ Pursuant to the Article 267 TFEU procedure, whereby national courts can submit questions to the CJEU for preliminary rulings on the interpretation or the validity of EU law.

⁴⁹ CJEU, 27 October 2016, Case C-613/14, *James Elliott Construction v. Irish Asphalt* ECLI:EU:C:2016:821.

⁵⁰ Ibid. at para. 43.

⁵¹ European Commission, *European Standards for the 21st century* COM(2016)358 (1 June 2016).

⁵² Periodic reviews are mandated by Regulation 1025/2012, *supra* note 26, Art. 24(3). European Commission, *Report on the implementation of Regulation 1025/2012 from 2013 to 2015* COM(2016)212 (1 June 2016).

⁵³ The JIS was preceded by the Multi-Stakeholder Forum (MSF), a similar organisation concerned with ICT standards and technical specifications.



Standardisation System (ESS) as an outgoing concern, thereby replacing the succession of sometimes disjointed policy cycles.

2.4. The 2010s: changes in the content, ambit, and geopolitics of standardisation

2.4.1. Technological changes shaping the nature of standardisation

Since the enactment of Regulation 1025/2012, the formal processes of the ESS have remained largely stable, while the substance of standardisation has continued to change along many dimensions.

First of all, in terms of content, technology standards used to fall relatively neatly within two different technological spheres – ICT on one hand, and the other, “traditional” technological sectors on the other hand. The ESS has traditionally recognised different processes for these two different sectors.⁵⁴ Furthermore, the distinction between the two spheres is reflected in the traditional division of tasks between the ESOs, with ETSI predominantly developing ICT standards, and CEN and CENELEC predominantly developing standards in the remaining industries and technologies. The differences between the governance of ETSI (direct stakeholder representation) and the other two ESOs (NSBs in charge of representing a national consensus among different societal stakeholder constituencies) reflect differences in how ICT specifications and traditional standards are developed worldwide.

The different governance principles for the different standardisation processes reflect the different roles of standards: in many traditional sectors, standard setting involves choices amongst existing technical solutions in order to arrive at a common technical specification (such as, for interoperability, purposes of safety, quality, variety reduction, environmental and social impact, etc). ICT standards, however, are usually developed in parallel to the actual technology. Instead of choosing amongst solutions, the standardisation exercise involves combining contributions from various stakeholders into a complex technological system.⁵⁵

Over the last decade, technological convergence has made the traditional separation between two different standardisation ecosystems increasingly untenable.. As ICT (and in particular connectivity technology) has permeated an increasing number of industries (such as automotive, utilities, medical devices), an increasing number of industries experience the structuring role that standardisation may play when standards are used to construct technological solutions rather than just arbitrate between them. Technology standards define roles and niches upon which firms can rest their strategy; e.g. mobile communications standards create roles for manufacturers of network or terminal equipment, network operators, and so on. Standardisation then moves further away from detailed technical specifications, towards more general statements that create the conditions for subsequent technological developments to take place.⁵⁶

⁵⁴ For instance, Regulation 1025/2012, *supra* note 26 recognises a possible role of consortia only for ICT.

⁵⁵ Choices are still present, but they concern elements of the standardised solution, as opposed to the entire solution.

⁵⁶ As such, the generalisation of the content of standards is not a new phenomenon, since it began when standardisation started to extend to services. See Jean-Christophe Graz, *The Power of Standards – Hybrid Authority and the Globalisation of Services* (Cambridge : Cambridge University Press, 2019), Ch. 4.



Internet of things (IoT) standardisation illustrates that this technological convergence also vastly increases the range of interested industry stakeholders. ICT standardisation already brought together a large set of firms. Yet this is dwarfed by the set of stakeholders in IoT, where next to ICT, major sectors such as automotive, energy, household goods, health care, and so on, have an interest in standards development.

Another long-standing dividing line, which is intrinsically related to the distinction between ICT specifications and other standards, is also blurring. As reflected in EU standardisation policy, a distinction has always been made between product quality standards – concerned with safety, health, environment or consumer protection – and compatibility standards (mostly present in the ICT sector). The former are often perceived to raise greater public policy concerns and to require more careful consideration (and thus to take more time), whereas the latter are seen to raise fewer policy concerns⁵⁷ but to be infused with a greater sense of urgency given rapid product development. Very roughly speaking, this maps to the different governance models in Europe, with product quality standards being concentrated at CEN and CENELEC and compatibility standards at ETSI (with some at CENELEC as well).⁵⁸

Starting with the rise of personal data protection as a policy concern and now with the larger range of policy issues surrounding AI, the ICT sector is increasingly confronted with public policy concerns of heretofore unusual magnitude – sometimes touching upon fundamental rights.⁵⁹ The longstanding product quality/compatibility divide, and its institutional mapping, is therefore receding.

As the spheres of ICT and traditional standards development are converging, the relatively stark divide in the ESS is beginning to appear fragile. On one hand, concerns about societal implications – which have long been largely excluded from consideration in ICT standardisation – are increasingly salient in the standardisation of AI and the development of standards to support EU policy regarding the protection of personal data and cybersecurity. On the other hand, traditional standards development, which has long focused on codifying relatively discrete technological choices between existing solutions, is increasingly confronted with the challenges of constructing complex technological systems.

2.4.2. The changing geopolitics of global standardisation

At the international level, over the past decade, standardisation has been caught up in its own version of the geopolitical debates surrounding the evolution of Chinese economic policy and the repositioning of other major trading blocks. The global standardisation ecosystem has been fundamentally transformed by the rapid rise of Chinese participation – and sometimes leadership – in international standardisation efforts.

Largely a consequence of the rising industrial power of China, China's rise in global standards also has benefited from a supportive domestic policy environment. Whereas previous standardisation policies of the Chinese national government encouraged the development of domestic standards, China's current

⁵⁷ Rightly or wrongly, product compatibility is often still seen as an “internal matter” for industry to figure out by itself.

⁵⁸ To the extent that compatibility standard development takes place within the European standardisation system at all, as discussed *supra*, Heading 1.3.1.

⁵⁹ For instance, data protection standards concerning data portability (as mandated by the General Data Protection Regulation (GDPR), Regulation 2016/679 of 27 April 2016 [2016] OJ L 119/1, Art. 20) could very well be couched in terms of product compatibility (ensuring that rival services are interoperable) and yet also touch upon fundamental rights.



standardisation policy strongly encourages Chinese stakeholders to actively engage in standards development, and seek leading roles. Strategy papers of the Chinese government (such as China 2035) lay out China's ambition to become a world leader in global standards development.

While China and Chinese stakeholders have embraced international standards and increasingly actively engage in international standards development efforts, some significant differences between standardisation systems in China and many Western countries (including Europe) persist. In particular, there is a significantly more active role of government in standardisation, as evidenced not only by the fact that China's National Standards Body SAC is a public administration; but also by the large share of government-controlled entities among the leading Chinese contributors to global standards development efforts. In addition, whereas European and especially American participation in global ICT standards bodies such as 3GPP and IETF has traditionally been the work of hundreds or thousands of competing companies, a large share of Chinese participants are affiliated with a smaller number of particularly large and active stakeholders.⁶⁰

These evolutions have triggered concerns and responses in other parts of the World, especially the US. The rise of Chinese stakeholders in global standards development (in particular in ICT standards bodies such as 3GPP and IETF) is portrayed not only as a challenge to the leadership positions of incumbent Western stakeholders, but also as an evolution that contributes to greater "politicisation" of standardisation (for example the use or misuse of private sector standards development in furtherance of national governments' strategic goals). In an effort to preserve and promote US leadership in international technology, the US government has taken increasingly assertive steps to limit the role of Chinese stakeholders in global technology, with the possible consequence (and sometimes explicit intention) to restrict the participation of at least some of these stakeholders in leading positions in international standards development.

As we will see in Section 3, these technological changes and geopolitical evolutions that have shaped the standardisation ecosystem over the last decade are key issues identified in the European Commission's Standardisation Strategy of 2022.⁶¹

⁶⁰ Justus Baron and Olia Kanevskaia "Global Competition for Leadership Positions in Standards Development Organizations" (29 April 2021), available on www.ssrn.com.

⁶¹ Strategy, *supra* note 1.



3. The duality of the European standardisation ecosystem

This section explores the dual nature of the European standardisation system along two dimensions. Firstly, the ESS serves a dual purpose, on the one hand, to foster market functioning in the interest of European industry and its competitiveness, and on the other hand to serve the achievement of EU public policy objectives, usually relating to safety, health, environmental or consumer protection (often referred to as “SHEC”). Secondly, the ESS can be analysed both from a public perspective – as a self-regulatory system relying on a set of governance principles for SDOs – and a private perspective – as a cooperative community effort to solve co-ordination issues in a public-service mindset. These two dualities are linked with one another. Furthermore, neither of them can be ignored when analysing standardisation policy.

3.1. The dual purpose of the European standardisation system

The European Standardisation System (ESS) serves a **dual purpose** – to serve European industry; and assist EU policy. European standards and standardisation deliverables are voluntary, stakeholder-driven, and consensus-based. European standards are widely implemented in the products and services of European and foreign companies and serve a variety of functions (compatibility, quality, and so on). At the same time, European Standards may also support EU policy and regulation. As explained above, European Standards may be cited in EU regulations, and provide for a presumption of conformity with EU regulations. Reflecting this public role of European Standards, the European Commission may issue standardisation mandates to ESOs, and provide funding for standardisation activities.

The relative weight of these purposes (which are often interrelated) differ by sector, type of standardisation activity, and ESO. According to stakeholders surveyed in a study commissioned by DG GROW, “it can be noted that for half of the sectors **the main reason for using ENs is to improve product/service quality**, while the other half stated that ENs are mainly used **to comply with regulations** and facilitate affixing the CE marking on products”.⁶²

3.1.1. ESO activities in support of EU policy

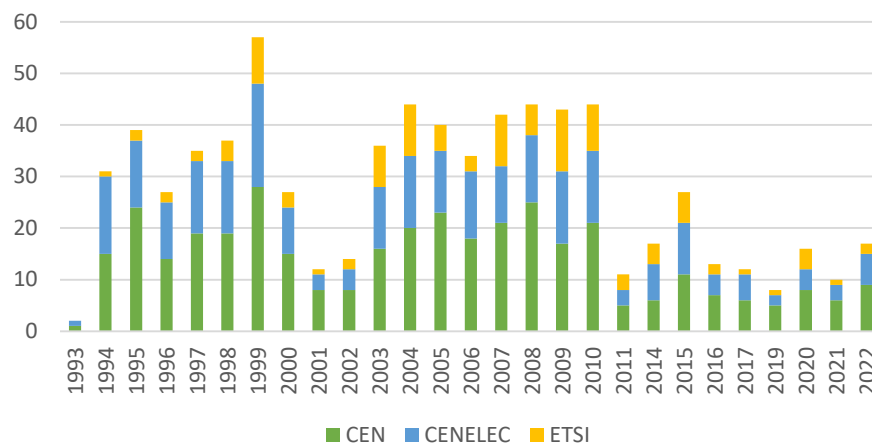
About a fifth of all European standards are developed following a standardisation request (mandate) from the European Commission to the European Standardisation Organisations (ESOs).⁶³

⁶² European Commission, *Study on the Functions and Effects of European Standards and Standardisation in the EU and EFTA Member States – Final Report* (30 November 2021) at 96 [emphasis in original; footnotes omitted]. This study was carried out by Ernst&Young, Menon Economics and Knowence.

⁶³ Data compiled from European Commission website at [https://single-market-economy.ec.europa.eu/single-market/european-standards/standardisation-requests-mandates_en#:~:text=Standardisation%20results%20from%20voluntary%20cooperation,European%20Standardisation%20Organisations%20\(ESOs\).](https://single-market-economy.ec.europa.eu/single-market/european-standards/standardisation-requests-mandates_en#:~:text=Standardisation%20results%20from%20voluntary%20cooperation,European%20Standardisation%20Organisations%20(ESOs).)

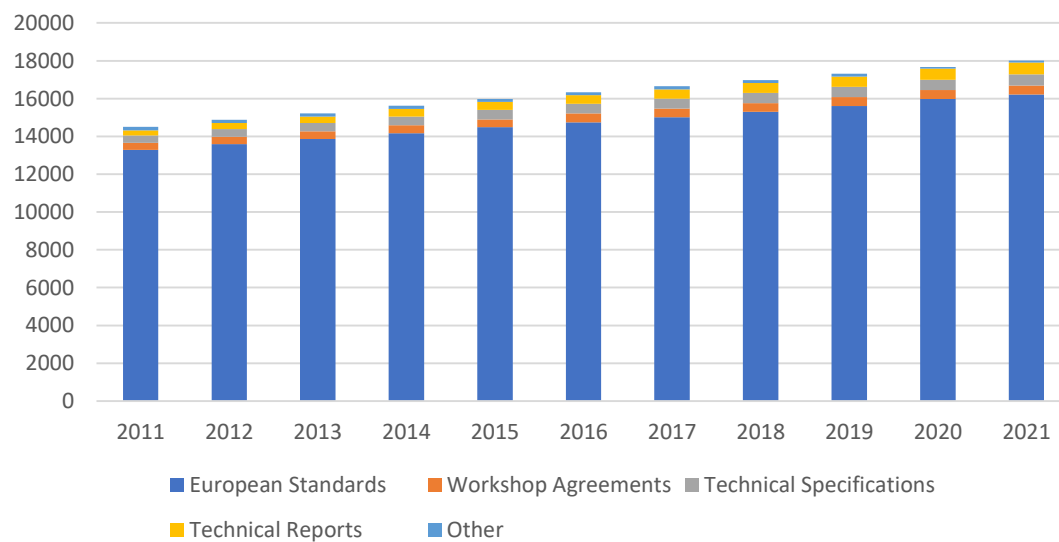


EU Mandates over time by ESO



It is important to recognise, however, that none of the ESOs is only a producer of ENs, let alone ENs used in support of EU regulations. CEN for example issues CEN Workshop Agreements, Guides, Technical Reports, and Technical Specifications, in addition to European Standards. At CEN, however, ENs account for more than 90% of the organisation's deliverables, and that share has remained constant (and even very incrementally increased) over the last ten years.⁶⁴

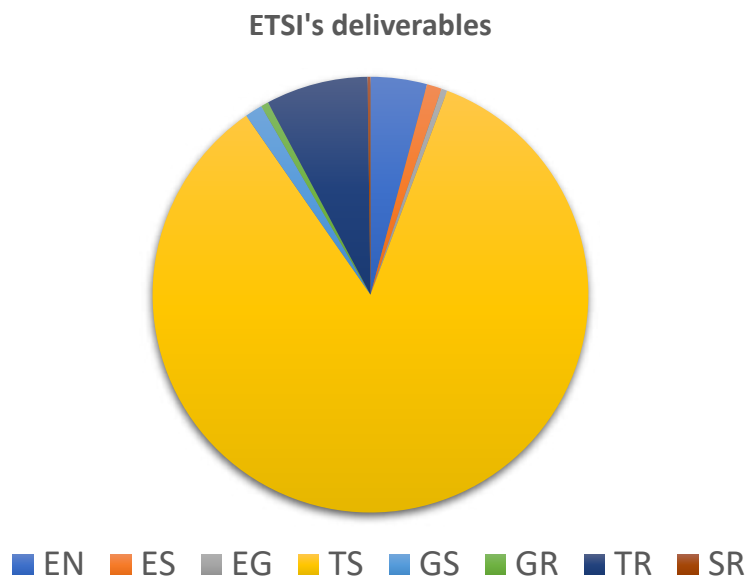
CEN portfolio of deliverables



⁶⁴ Data compiled from CEN Annual Reports 2011 thru 2021 (Section "CEN at a glance")



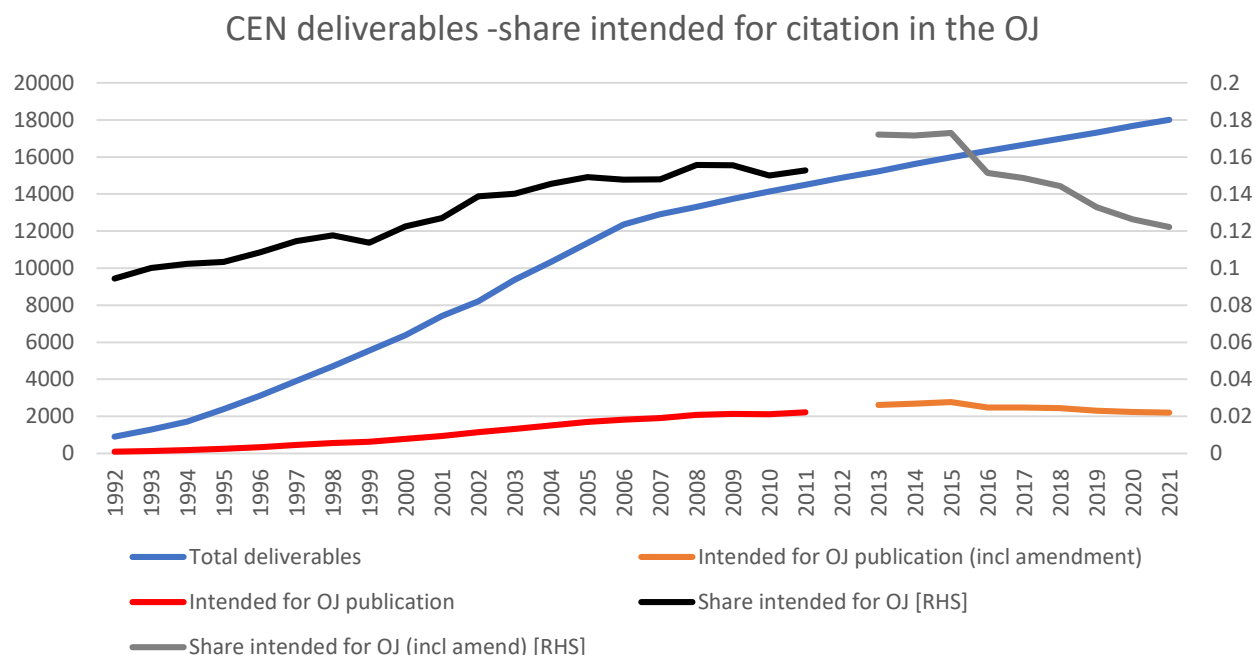
At ETSI, the composition of deliverables is very different – 83.8% of ETSI’s active work items are Technical Specifications (TS), followed by Technical Reports (TR; 7.5% of ETSI deliverables). European Standards (EN) only account for 4.1% of ETSI active work items.⁶⁵



Among the ESOs’ various deliverables, ENs are particularly relevant to EU policy. Nevertheless, ENs also serve multiple purposes. hENs, which are a subset of ENs, are an implementation tool for EU regulation. Some ENs and other ESO deliverables may also directly be referenced in EU regulations. To acquire these regulatory roles, ENs (and other ESO deliverables) need to be cited in the Official Journal (OJ) of the European Union. A subset of ESO deliverables are thus developed with the intention to be cited in the OJ (usually based upon a mandate by the European Commission).

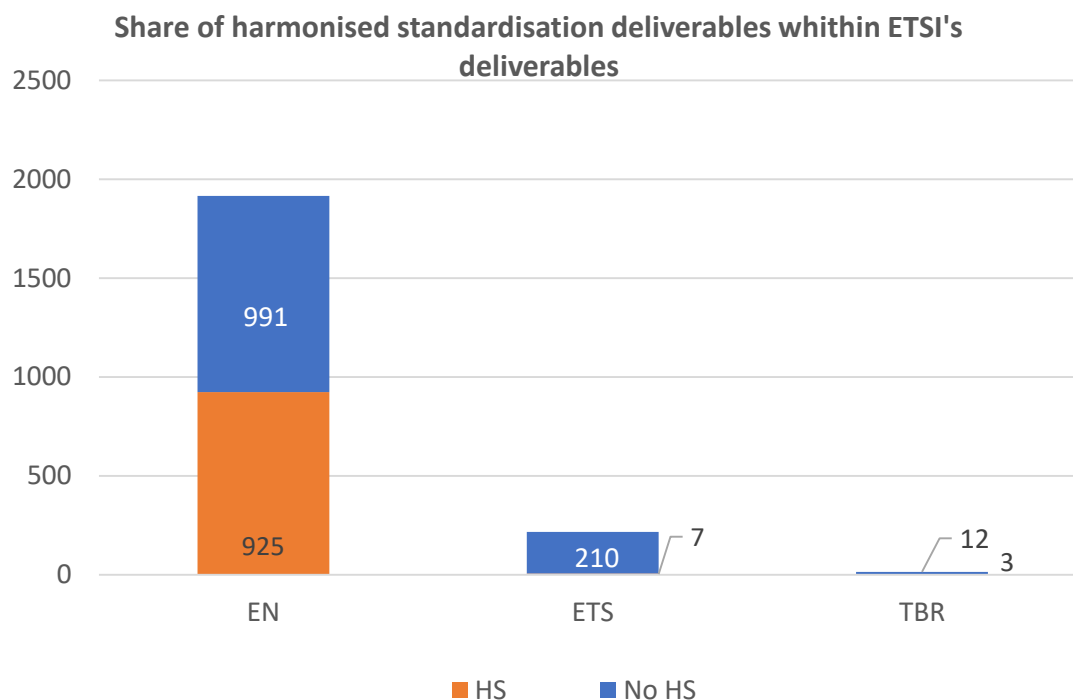
At CEN, the share of deliverables intended for OJ citation is fairly significant (12.2% in 2021). Over time, this share has continuously and significantly increased from 9.4% in 1992 up to 17.3% in 2015. Since 2015, the trend has reversed, and the share of CEN deliverables intended for OJ citation has significantly declined.

⁶⁵ Data retrieved on 5 November 2022 from ETSI’s work program resulted in 1,916 ENs among a total of 46,232 work items. <https://portal.etsi.org/webapp/WorkProgram/Expert/QueryForm.asp>



Approx. 48% of ETSI-developed ENs are hENs, but overall harmonised standardisation deliverables represent only a tiny fraction of the ETSI deliverables.⁶⁶ Given the small share that ENs represent among ETSI deliverables, only a very small share of ETSI overall deliverables are thus specifically related to a standardisation request from the European Commission, or intended for a specific regulatory use.

⁶⁶ <https://portal.etsi.org/webapp/WorkProgram/Expert/QueryForm.asp>, search for "Harmonised Standards"

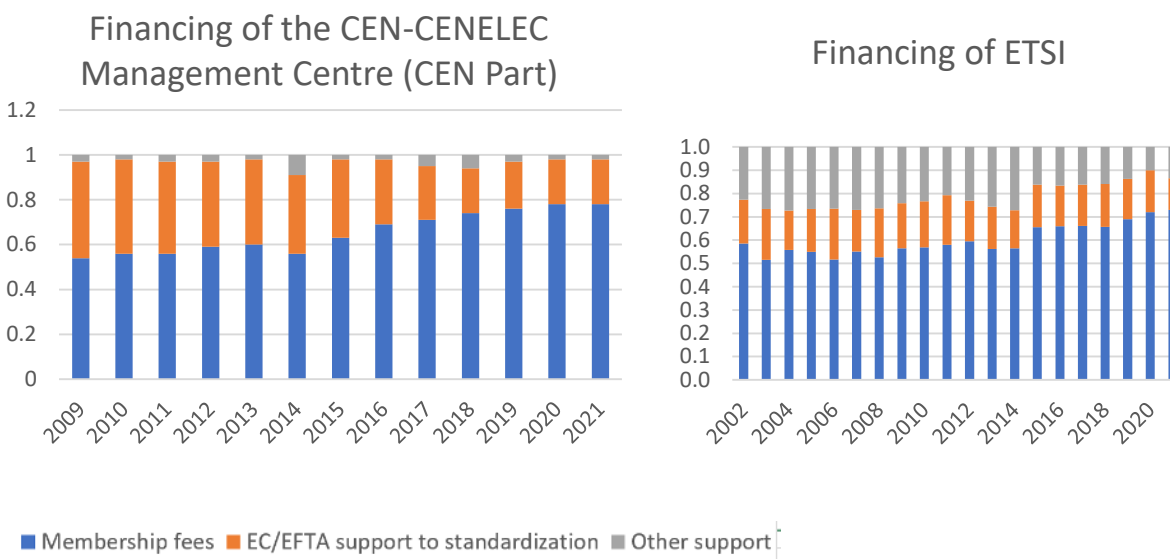


While all ESOs produce a variety of deliverables, there are thus significant differences over time and between ESOs. ENs represent a much greater share of deliverables at CEN and CENELEC than at ETSI. hENs represent a small share of ETSI's work programme. While the share of CEN deliverables intended to support EU regulation had long increased, they have always been a minority of CEN deliverables; and in more recent years, the share of such standards in support of EU regulations has decreased also at CEN.

These differences between ESOs and trends over time are also reflected in the ESOs' finances. Reflecting the role of CEN in developing standards that support public policy, the EU and EFTA contribute to the financing of the CEN-CENELEC Management Centre.⁶⁷ In 2021, this support accounted for 20% of the finances of the CEN part of the Management Centre, whereas membership fees accounted for 78%. While still significant, the role of the support from EU and EFTA has continuously and significantly declined over time – in 2009, support from the EU and EFTA accounted for 43% of the CEN part of the cost of the management centre. At ETSI, the share of EU and EFTA support in the organisation's budget has always been lower than at CEN, and currently is situated at 13.6%.⁶⁸ Also at ETSI, this share has gradually decreased over time, even though less significantly than at CEN.

⁶⁷ Data compiled from CEN Annual Reports 2011 thru 2021 (Section "Annual Accounts")

⁶⁸ Data compiled from ETSI Annual Reports, "Budget Statements - Income"



Overall, while production of the standards supporting EU policy is an important activity for ESOs, it does not account for the majority of these organisations’ deliverables or revenues. The relative role of this activity is larger for CEN than it is for ETSI. Nevertheless, both in terms of deliverables and funding, the relative importance of this activity for CEN has declined in recent years (especially since 2015).

3.1.2. Standardisation and the achievement of EU public policy objectives

A trio of EU policy objectives were always central to EU standardisation policy, namely those relating to the internal market, competition, and international trade. As the Council stated nearly 40 years ago, “standardization goes a long way towards ensuring that industrial products can be marketed free and also towards creating a standard technical environment for undertakings [...], which improves competitiveness not only on the Community market but also on external markets [...]”.⁶⁹ To a large extent, the self- or co-regulatory approach, resting on governance principles, is a realisation of these policy objectives. At the same time, standards also affect other policy objectives, relating typically to safety, health, environmental or consumer protection. But these objectives were incidental and seen statically. They were defined in applicable legislation (nationally and increasingly at EU level), and usually standards simply sought to provide technical specifications that would conform to the “essential requirements” of these objectives.

A shift has been underway for some years already, where public authorities turn “non-economic” objectives into dynamic priorities for standardisation. Standards are no longer meant to comply with the essence of these non-economic objectives, as distilled elsewhere, on their way to fostering economic objectives. Rather, standards become a dynamic vehicle whereby non-economic policy aims can also be pursued. As the Commission puts it in the 2022 Strategy, “[t]he EU’s ambitions towards a climate neutral,

⁶⁹ Council Conclusions of 16 July 1984 on Standardization, annexed to the Resolution of 7 May 1985 on a new approach to technical harmonization and standards, *supra* note 8.



resilient and circular economy cannot be delivered without European standards on testing methods, management systems or interoperability solutions”.⁷⁰

The full implications of this shift are better grasped by looking at recent EU legislative instruments, some of which are still undergoing the legislative process. The starting point should be the proposed AI Act.⁷¹ For the “High-Risk” AI systems category, the AI Act sets out a series of requirements that must be complied with before any high-risk system can be put on the market. They are:⁷²

- A risk management system must be established, implemented, documented, and maintained;
- If data training is involved, appropriate data governance and management practices must be in place;
- Technical documentation must be drawn up beforehand;
- Logging (automatic recording of events) must take place during operation, to enable traceability and monitoring;
- The AI system must be transparent to users, so they know how to use it and interpret its output;
- The AI system must be subject to effective human oversight during its use;
- The AI system must achieve an appropriate level of accuracy, robustness, and cybersecurity.

Each of these requirements is already defined with a fair amount of detail in the AI Act itself, yet they are still far from being operationalised. To that end, the AI Act follows the New Approach, in that it provides that conformity with harmonised standards leads to a presumption of conformity with the requirements set out above.⁷³ It is accordingly expected that harmonised standards will be developed regarding most if not all these requirements, wherein the detailed developments of the AI Act will be further translated into even more detailed technical specifications.⁷⁴ No standard or technical specification currently exists regarding these requirements, but a number of SDOs are already working on them.⁷⁵ This is where harmonised standards will be a crucial instrument to ensure that the policy choices underpinning the AI Act are effectively translated into practice.⁷⁶

In the wake of the AI Act and its reliance on standardisation, provisions were added to the Digital Markets Act (DMA) during the legislative process to provide for European standardisation regarding the obligations to be imposed on platform operators under the DMA, in particular those relating to data access, data

⁷⁰ Strategy, *supra* note 1 at 1.

⁷¹ Proposal for a Regulation laying down harmonized rules on Artificial Intelligence (Artificial Intelligence Act) COM(2021)206 (21 April 2021).

⁷² *Ibid.*, Art. 9-15.

⁷³ *Ibid.*, Art. 40 (see also Art. 17(1)(e)). Harmonized standards are even expressly mentioned in the provisions on risk management systems (Art. 9(3)) and on logging and record-keeping (Art. 12(1)).

⁷⁴ It should be noted that, at Art. 41, the AI Act also empowers the Commission to draw up common specifications itself, in lieu of harmonized standards from ESOs, if the standards do not exist, are insufficient or if “specific safety or fundamental rights concerns” need to be addressed.

⁷⁵ Including, for instance, IEEE-SA, see <https://standards.ieee.org/initiatives/autonomous-intelligence-systems/>.

⁷⁶ In comparison, the traditional economic objectives (trade and competition) take a back seat in the case of the AI Act, all the more if the EU intends to use harmonized standards to propel its policy choices globally (see below).



portability and interoperability.⁷⁷ Similarly, the Digital Services Act makes room for the development of European or international standards on many issues, often as regards communication between users and platforms, interoperability, monitoring or even the protection of minors.⁷⁸ The more recent proposal for a Data Act includes a chapter on interoperability, which follows the path of the AI Act in providing for harmonised standards regarding interoperability of data and data sharing between operators of data spaces;⁷⁹ open interoperability between operators of data processing services;⁸⁰ and smart contracts regarding data sharing.⁸¹

These four pieces of EU legislation combine into a very full agenda for European standardisation in the digital sector, in addition to the other strategic areas already identified in the Strategy and included in the 2022 Work Programme.

3.2. The dual public-private nature of the European standardisation ecosystem

From a public perspective (the perspective of public authorities), it can be analysed as a largely self-regulatory system, subject to a set of governance principles embodying a procedural approach to standardisation policy. At the same time, the ecosystem cannot be understood fully without a private perspective, for example the perspective of the mostly private stakeholders and SDOs.⁸²

3.2.1. The public perspective: governance principles and the procedural approach

The starting point for the public perspective is the applicable legal framework. To begin with, standardisation activities are the main focus on the Agreement on Technical Barriers to Trade (TBT), which is part of the WTO Agreement.⁸³ The TBT Agreement recognises the value of standards to foster international trade, and seeks to ensure that standards do not in practice hinder trade, intentionally or not. To that end, WTO members are bound to ensure that SDOs within their territories comply with a Code of Good Practice.⁸⁴ When they pledge to comply, SDOs are then subject to certain obligations relating to, among others, publicisation action of their activities, co-ordination with other SDOs, notice and comment periods, prioritisation of international standards, and publication of standards.⁸⁵ While the TBT Agreement as such contains few provisions on SDO governance, a subsequent decision of the TBT Committee, in 2000 (the 2000 TBT Committee Decision), set out governance principles directed at SDOs in order to improve confidence in the conformity of their standard with WTO law.⁸⁶ In a sign of

⁷⁷ Regulation 2022/1925 on contestable and fair markets in the digital sector (Digital Markets Act) [2022] OJ L 165/1, Art. 48 and Rec. 91.

⁷⁸ Regulation 2022/2065 on a Single Market for Digital Services (Digital Services Act) [2022] OJ L 277/1, Art. 44.

⁷⁹ Proposal for a Regulation on harmonised rules on fair access to and use of data (Data Act) COM(2022)68 (23 February 2022), Art. 28.

⁸⁰ Ibid., Art. 29.

⁸¹ Ibid., Art. 30.

⁸² The broader literature on transnational private regulation emphasizes that this public-private duality is essential for a good understanding and analysis of these endeavours. See in particular the insightful work of Fabrizio Cafaggi, Colin Scott and Linda Senden, "The Conceptual and Constitutional Challenge of Transnational Private Regulation" (2011) 38 J Law & Society 1, and the other contributions to that special issue of the Journal of Law and Society.

⁸³ *Supra* note 5.

⁸⁴ Ibid., Art. 4.

⁸⁵ Code of Good Practice, at Annex 3 to the TBT Agreement, *ibid*.

⁸⁶ TBT Committee, Decision on Principles for the Development of International Standards, Guides and Recommendations with relation to Articles 2, 5 and Annex 3 of the Agreement, G/TBT/1/Rev. 15 (13 November 2000).



cooperation between the trade and standardisation communities, ISO/IEC were entrusted with tracking SDO pledges under the 2000 TBT Committee Decision, and they also contributed to the development of these principles through the two versions of ISO/IEC Guide 59.⁸⁷

In the EU, the principles of the 2000 TBT Decision are presented as “founding principles” for the ESOs and NSBs in Regulation 1025/2012,⁸⁸ and most of them are listed as a pre-condition for the recognition of ICT technical specifications prepared by non-established SDOs.⁸⁹

Another source of legal constraints on SDO governance comes from EU competition law. Both Articles 101 and 102 TFEU have been applied to standardisation; Article 102 TFEU has mostly been used in the context of SEP disputes,⁹⁰ and we will leave it aside for the purposes of this report. The prohibition on restrictive agreements at Article 101 TFEU is more germane to SDO governance: standardisation can be used to cover hard-core restrictions (on price, output, and so on), to limit innovation or to exclude certain firms. The Horizontal Guidelines issued by the Commission in 2011 sum up the decision practice regarding standardisation and set out a series of guiding principles that SDO should comply with to avoid running afoul of Article 101(1) TFEU.⁹¹

In order to make the overview complete, it is interesting to bring into the picture the instruments whereby the United States ensures compliance with WTO law. The federal Office of Management and Budget (OMB) has issued an administrative directive, Circular A-119, which sets out the conditions under which standards can be used in US regulation and procurement.⁹² OMB Circular A-119 is presented as the implementation of the TBT Agreement (including the 2000 TBT Committee Decision) in the US.⁹³ Next to this official document, the American National Standards Institute (ANSI), a private organisation, offers SDOs the ability to turn their standards into American National Standards (ANS) if they so choose, which is advantageous commercially and legally. In order to achieve ANSI recognition for its standards, the SDO must meet the so-called “ANSI essential requirements” in the development of the standard.⁹⁴ The essential requirements predate the WTO governance principles but overlap with them.

In addition to the above, US antitrust law also influences SDO governance in a way similar to EU competition law. However, there is no pronouncement like the EU Horizontal Guidelines offering a summary of US antitrust practice regarding standardisation. The leading Supreme Court case, however,

⁸⁷ ISO/IEC Guide 59:1994, *supra* note 27. The original version of Guide 59 pre-dated the TBT Committee 2000 decision and anticipated on some of the principles found therein. The subsequent version, ISO/IEC Guide 59:2019, *supra* note 26 is completely recast as a guide to the implementation of the principles of the TBT Committee decision.

⁸⁸ Regulation 1025/2012, Rec. 2. The Regulation itself just assumes that ESOs will comply with these principles. If there is any source that binds the ESOs to these principles, it would be the General Guidelines for the Cooperation between CEN, CENELEC and ETSI and the European Commission and EFTA [2003] OJ C 91/7.

⁸⁹ *Ibid.*, Art. 13 and Annex II.

⁹⁰ Among others in CJEU, 16 July 2015, Case C-170/13 *Huawei v. ZTE* ECLI:EU:C:2015:477.

⁹¹ European Commission, *Guidelines on the Applicability of Article 101 TFEU to Horizontal Cooperation Agreements* [2011] OJ C 11/1 at para. 280 to 286.

⁹² The Circular has been revised many times since its first issue in 1980. The current version is Office of Management and Budget, OMB Circular A-119 “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities” 81 FR 4673 (2016).

⁹³ Baron et al, *supra* note 29 at 47.

⁹⁴ For the latest version, see ANSI, *ANSI Essential Requirements : Due process requirements for American National Standards*, 2022 Edition, available at <http://www.ansi.org>.



offers SDOs the prospect of avoiding antitrust liability as long as their standard development activities offer sufficient transparency, openness and due process guarantees.⁹⁵

The table at the end of the report puts side by side the governance principles found in the six instruments discussed above, namely the TBT Agreement (including the TBT Committee 2000 Decision), ISO/IEC Guide 59, Regulation 1025/2012, the EU Horizontal Guidelines, OMB A-119 and the ANSI Essential Requirements. The table illustrates how these principles tend to overlap and converge around a common set. It is beyond the scope of this report to provide a detailed analysis of these principles; we will limit ourselves to comments that are relevant to the rest of the report, structured along the headings that we supplied in the table.

Co-ordination with other SDOs: SDOs must avoid overlaps and conflicts with existing standards and standardisation activities of other SDOs, and prioritise international standardisation. Placed under “coherence” in WTO and EU law, and under “Coordination and harmonisation” by ANSI.

Features of standard: The voluntary nature of standards is a key element throughout for both trade and competition law. The “effectiveness and relevance” principle under WTO law translates into “efficiency” under EU law. It comprises a host of substantive precepts that are found everywhere (including under US law), albeit not always regrouped under one heading: fostering open markets, trade, innovation; periodic review of standards; user-friendliness and linguistic simplicity; use of performance rather than design characteristics.

In addition, in both the EU and the US, SDOs must make standards accessible. WTO law does not make this a separate principle.

Membership and participation: Openness, for example, the ability of any interested stakeholder to join standardisation activities, is present everywhere. However, there is some variation on the “impartiality” principle set out in WTO law, which is reworded as “balance” in the US.⁹⁶ A first variant is “vertical balance”, namely the balance between vertically related interest groups (producers, users, and so on) which is necessary to avoid standardisation being used by one group to gain an advantage at the expense of the other.⁹⁷ “Horizontal balance” (alluded to by “lack of dominance” or “non-discrimination”) implies that the SDO remains impartial as between competing technological solutions. Finally, “societal balance” refers to the balance among stakeholders (industry, consumers, environmental groups, and so on), which is present everywhere but receives particular emphasis in the EU, with the principle of “stakeholder representation” arising out of Regulation 1025/2012.

Procedure: while the headers may differ, there is convergence on a set of procedural principles regrouped under “transparency” in WTO and EU law, and either listed separately or subsumed

⁹⁵ *Allied Tube & Conduit v. Indian Head* 486 US 492 (1988). See also *American Society of Mechanical Engineers (ASME) v. Hydrolevel* 456 US 556 (1982).

⁹⁶ See Justus Baron, Jorge L. Contreras and Pierre Larouche, “Balance and Standardization: Implications for Competition and Antitrust Analysis” (2022) 84 Antitrust LJ 425.

⁹⁷ This is the original meaning of the principle, dating from the 19th century, which is now being revived (in a slightly modified version) in the context of disputes around IPR policies.



under “due process” in the US. In addition, both ISO/IEC Guide 59 and US law specifically insist on the presence of an appeals process within the SDO.

Decision-making: Consensus decision-making is the basic principle everywhere. Its practical implementation can of course differ from one SDO to the other.

Developing countries: The development dimension is present at the international level, but not picked up in either the EU or US instruments.

Seen from a public perspective, a self-regulatory, procedural model emerges. Indeed SDOs are given a free rein to develop and adopt standards, as long as they respect a number of governance principles which, if not identical from one jurisdiction to another, are nevertheless broadly convergent around the principles listed in the TBT Committee 2000 Decision. The governance principles are centred on procedural and institutional issues – including membership and participation, standardisation procedure or decision-making – with few substantive requirements, save for the voluntary nature of standards and the “effectiveness and relevance” principle.⁹⁸

The development of harmonised European standards departs from this model, in the direction of a more co-regulatory relationship between the public authorities (European Commission) and the SDOs (ESOs). At the outset, the Commission specifies the substantive expectations for the standard in the mandate issued to the ESO, and subsequently, the Commission checks the finalised standard for compliance as against the mandate, as described above.⁹⁹

3.2.2. The private perspective: a cooperative endeavour within a community with a shared ethos

The self-regulatory, procedural model sketched above takes a public perspective on standardisation, for example, looks at it from the point of view of public authorities implementing public policies. In order to fully account for standardisation, it is necessary to complement it with a private perspective, for example, standardisation as seen from the point of view of the participating stakeholders.

From a private perspective, standardisation is essentially a cooperative endeavour between stakeholders, with a view to reaching a mutually advantageous result, when compared to the absence of standardisation.¹⁰⁰ In this respect, each SDO presents a unique set of stakeholders, subject-matter, leadership, and so on, which can lead to a different institutional outcome, depending on what is perceived to be optimal under the circumstances. The governance principles set out above become not commands, but rather parameters within which that endeavour takes place:¹⁰¹ for instance, the principle of “openness” will be translated as an understanding that a solution will be found to enable participation by stakeholders, not necessarily along the exact same lines for everyone, but in a way that everyone is satisfied with. Similarly, the principle of consensus decision-making can be rendered into different procedures depending on the SDO, including cases where the actual decision-making practice differs from

⁹⁸ Baron et al., *supra* note 29 at 75-80.

⁹⁹ Regulation 1025/2012, *supra* note 26, Art. 10-11.

¹⁰⁰ Baron et al., *supra* note 29 at 83-84.

¹⁰¹ *Ibid.* at 75-77.



the written rules.¹⁰² Finally, as regards impartiality and balance, we found a wide range of allowable implementations, with each SDO choosing the formula that fits its needs best.¹⁰³

The governance of established SDOs – at the international, regional, or national level – tends to converge (save for ETSI, as seen below). Reflecting a century of experience with standardisation, these SDOs were the archetype at the time when governance principles were developed, in the 1990s, and they continue to fulfill an exemplary function for other SDOs. SDOs based on industry associations or consortia exhibit greater variance in their governance, in keeping with their more focused nature and the more competitive environment in which they emerge and sometimes vanish. Finally, the SDOs relating to the Internet also break from the established SDOs as regards governance, with individual membership and rules that emphasise openness and consensus.

This private law perspective on SDOs would not be complete without factoring in the significant overlap in corporate membership amongst SDOs (at least those where corporations can officially be members). It is not uncommon for large global firms to be participating in the activities of tens of SDOs (and an even larger number of working groups under these SDOs), all over their product space. This requires a significant commitment in resources on the part of each firm, typically embodied in a department in charge of overseeing participation in standardisation activities, to which individual employees representing the firm in SDOs would report.

As a result, there is a community of individual SDO participants, representing their respective firms, that interacts repeatedly across the various SDO fora. SDO management and officials are typically drawn from that community. These participants are personally invested in standardisation and have a stake in its success. Over time, they develop precious contextual (relationship-dependent) expertise. Their investment is such that they will often move from one firm to the other, capitalising on their expertise, or become consultants.

The standardisation community shares a certain public-service ethos ever since the beginning of organised standardisation in the 19th century.¹⁰⁴ Early standardisation efforts were driven by individual engineers, with an unmistakable drive to contribute to improving society through their actions. Later on, the global organisations – ISO and IEC – undertook to foster global collaboration in the public interest despite the political tensions that characterised most of the 20th century. This same public-service ethos on a global scale can be observed in the Internet-related SDOs – IEEE-SA, IETF and W3C.¹⁰⁵

Sociologists have emphasised the specific “technical rationality” of the standardisation community since they began investigating it, in the 1990s.¹⁰⁶ Indeed the emergence and cultivation of a shared global ethos – including a commitment to universalism, rationality, and homogenisation – was the best theoretical

¹⁰² Ibid. at 106-107.

¹⁰³ Baron, Contreras and Larouche, *supra* note 96.

¹⁰⁴ Murphy and Yates, *supra* note 2.

¹⁰⁵ Russell, *supra* note 31.

¹⁰⁶ Starting with Thomas A. Loya and John Boli, “Standardization in the World Polity: Technical Rationality over Power”, in John Boli and George M. Thomas, eds., *Constructing World Culture: International Nongovernmental Organizations since 1875* (Stanford: Stanford University Press, 1999) 169-197. Loya and Boli based their research on a study of established SDOs (ISO and its member NSBs).



explanation for certain observed features which did not fit well with rival theories coming from international relations.¹⁰⁷ These features include the professed will to keep political (State) and economic (corporate) influence at bay and its implementation in practice;¹⁰⁸ the extraordinary degree of authority enjoyed by SDOs, given that they have so few resources; and the essentially social-contractarian basis for that authority (in the absence of strong coercive powers). Subsequent literature has expressed some reservations towards this analysis,¹⁰⁹ without however fundamentally challenging the basic finding of a shared ethos. More recent works offering historical accounts of standardisation assume the presence of such an ethos; they are dedicated to documenting it and tracing its evolution over space and time.¹¹⁰

3.2.3. Dual nature and legitimacy

The dual nature of the standardisation ecosystem, with the combination of a public and private perspective, carries significant legitimacy, coming from different sources.¹¹¹ First of all, the stakeholders have *consented* to the rules and policies of the SDO in which they take part, which provides a bedrock of legitimacy amongst them. Secondly, many SDOs are subject to the disciplining and incentivising effect of *market forces*; especially for industry associations and consortia, persistence over time in a competitive environment denotes competency and effectiveness. Thirdly, in the case of harmonised European standards, some *democratic* legitimacy flows from the mandate issued by the Commission, under the scrutiny of the Member States and the European Parliament.¹¹² Fourthly, the model itself confers some *procedural* legitimacy on the activities of the SDOs, arising from the respect of typical procedural safeguards regrouped under the heading of “transparency” or “due process”. Last but not least, SDOs typically benefit from the *expertise* of their officers, staff, and participants.

At the same time, the legitimacy of the standardisation ecosystem, while undeniable, must be kept in perspective. It is largely assessed from the point of view of trade law and competition law, where the expectations are formulated negatively: standardisation is welcome as long as it does not restrict trade or distort competition within the meaning of these respective bodies of law. The self-regulatory, procedural model is perceived to meet these expectations, and even to exceed them by delivering standards that are genuinely helping to foster trade and enhance competition.

Yet these are not the only expectations: most standards relate to public policy objectives, typically safety, health, environmental protection, or consumer protection. In these cases, the standardisation ecosystem is expected to produce standards that positively contribute to achieving these objectives. Looking back at

¹⁰⁷ Including realist or institutionalist theories, all of which rest on the premise that the international order is based on competition between states.

¹⁰⁸ Interestingly, some of the literature on comitology in the EU documents a similar “unmooring” of a specialist, technical community from the broader political and economic interests that would be expected to influence it: see Christian Joerges and Jürgen Neyer, “From Intergovernmental Bargaining to Deliberative Political Processes: the Constitutionalisation of Comitology” (1997) 3 European LJ 273. For a recent piece revisiting this literature and competing accounts, see Daniel Finke and Jens Blom Hansen, “Contested comitology? The overlooked importance of the EU Commission” (2022) 29 J European Pub Policy 891.

¹⁰⁹ See Walter Mattli and Tim Büthe, “Setting International Standards: Technological Rationality or Primacy of Power?” (2003) 56 World Politics 1-42. Mattli and Büthe actually reject both the sociological theory and the competing realist theory in favour of their own “institutional complementarity” theory, which emphasises the significance of the fit between domestic and international SDOs. Their theory, which led them to conclude that Europeans held an advantage over Americans in international standardisation because of a superior fit, became influential but is also dismissed by other writers.

¹¹⁰ Murphy and Yates, *supra* note 2; Russell, *supra* note 31.

¹¹¹ Baron et al., *supra* note 29 at 124-128.

¹¹² See Regulation 1025/2012, *supra* note 26, Art. 10(2), 22(3).



the five sources of legitimacy mentioned above, consent and market forces are of limited import; in order to enjoy legitimacy when it comes to achieving public policy objectives, the standardisation ecosystem draws from democracy, procedure or expertise as sources of legitimacy.



4. The current state of the European Standardisation System in the prism of the EU Standardisation Strategy

With the second report on the application of Regulation 1025/2012, in February 2022,¹¹³ the European Commission used the opportunity to launch a new EU Standardisation Strategy. It released its communication “An EU Strategy on Standardisation – Setting global standards in support of a resilient, green and digital EU single market”.¹¹⁴ It was also accompanied by the 2002 work programme,¹¹⁵ and by a legislative proposal to modify Regulation 1025/2012.¹¹⁶

In this Section, we identify key themes from the Strategy; and discuss the empirical context and relevance of these themes in the current European Standardisation System. We will provide our own critical assessment of the Commission Strategy in Section 4.

4.1. The new EU Standardisation Strategy of February 2022

The Strategy is based on the following findings by the Commission:¹¹⁷

- Standards have been at the core of the EU single market, and they benefit both EU companies and consumers;
- The global context within which European standardisation operates is increasingly competitive, and European actors must be successful in international standardisation, for the sake of European competitiveness and public policy objectives;
- European standardisation must cope with an accelerating innovation pace and stay competitive with industry-led consortia to keep a “first-mover” advantage;
- The strategic importance of standards for the EU has not been adequately recognised.

The main prongs of the Strategy are as follows:

- European standards are needed to further major policy aims of the EU regarding the environment, the digital economy, and the single market, lest Europe lets other regions define its standards. The Commission proposes to act with more urgency on agenda-setting, mandating and reviewing European standards, and working with ESOs to accelerate standard development and adoption.¹¹⁸

¹¹³ European Commission, *Report on the implementation of Regulation 1025/2012 from 2016 to 2020* COM(2022)30 (2 February 2022).

¹¹⁴ Strategy, *supra* note 1.

¹¹⁵ Report on the Implementation of Regulation 1025/2012 from 2016 to 2020, COM(2022)30 and 2022 annual Union work programme for European standardisation, C(2022)546.

¹¹⁶ Proposal for a Regulation amending Regulation 1025/2012 as regards the decisions of European standardisation organisations concerning European standards and European standardisation deliverables COM(2022)32.

¹¹⁷ Strategy, *supra* note 1 at 1.

¹¹⁸ In that part of the Strategy, the Commission also made institutional announcements regarding the new High-Level Forum, the Chief Standardisation Officer and the EU excellence hub on standards.



- The governance of ESOs – in particular ETSI – must be improved, since they deal with “core EU democratic values and interests”. This leads to the proposed change to Regulation 1025/2012, whereby key ESO decisions regarding to European standards must be made by NSB representatives. Furthermore, ESOs are invited to propose further changes to improve the representation of “SMEs, civil society and users”. Finally, the Commission wants to develop a horizontal approach for a “fallback solution” of developing direct alternatives to standards by itself, when SDOs fail to deliver.
- At the global level, the EU must be more strategic in its approach to standardisation. Member States, ESOs, and EU industry must better co-ordinate their actions in international standardisation, in order to leverage synergies with like-minded partners, and to avoid that standard development is dominated by other regions whose values and policies are not compatible with those of the EU. Internet standards are identified as a critical area. International SDOs should be pushed to improve the participation of civil society, SMEs, unions, and consumer representatives.
- EU research funding should be directed more towards pre-standardisation research, to build bridges between research, innovation, and standardisation.

In our analysis of the strategy, we will look at four themes, which cut across the strategy:

1. The interlinkages between the ESS and the Rest of the World;
2. The governance of ESOs and societal balance;
3. The use of European standards in pursuit of EU policy objectives;
4. The strategic significance of standardisation in industrial policy and international geopolitics.

These themes are interrelated. For instance, from the point of view of the Commission, European leadership and societal balance in the development of Europeans standards are essential to the acceptability of the use of European standards in EU policy. At the same time, European leadership in international standardisation, and a strong representation of societal interests, are seen as integral to the promotion of European core values and interests more broadly. These policy ambitions might not be entirely compatible. A broader perspective on European standardisation is necessary to resolve these apparent tensions. After looking at each theme in Section 3., we will explore their interaction and take a broader perspective in Section 4.

4.2. The European Standardisation System and the Rest of the World

One of the overarching concerns enshrined in the Strategy is the place of Europe, European interests, and European values in standardisation. There are at least two aspects to the Commission’s concern, as voiced in the Strategy and in other concurrent communications: European influence and leadership in



international standardisation on one hand, and freedom of European standardisation processes from foreign influence and control on the other hand.

European standardisation is subject to a variety of foreign influences, and in turn influences international and foreign standardisation in a variety of ways. Two of the most salient manifestations of these mutual influences are the place of ESOs in a variety of international alliances, and the participation of foreign entities and their employees in ESOs and their processes. We will describe these two interlinkages between the European Standardisation System and the Rest of the World in turn.

4.2.1. The place of the ESOs in different international alliances

While CEN, CENELEC, and ETSI are the key players in the ESS, they are also tightly integrated members of an international standardisation ecosystem.

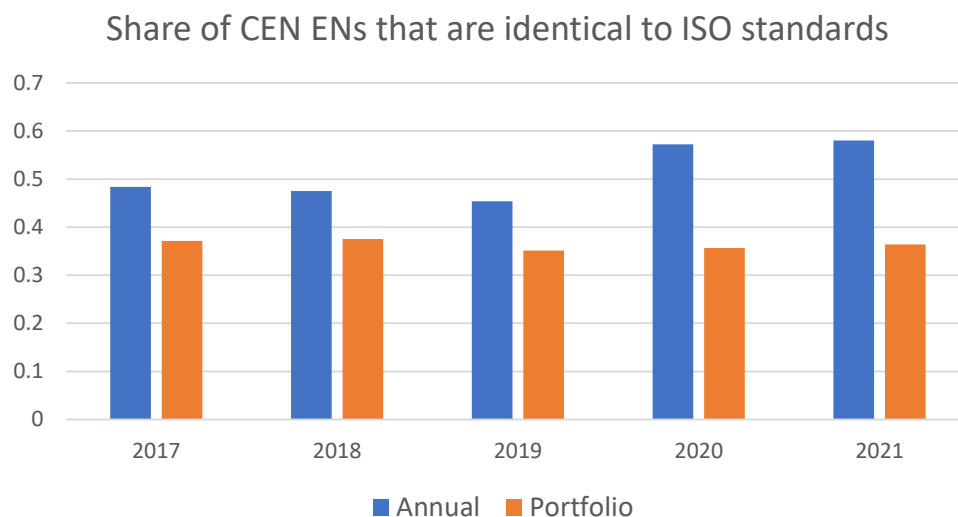
CEN and CENELEC. All CEN members (the NSBs) are also members of ISO, and similarly CENELEC members are members of IEC. CEN and ISO co-ordinate their standardisation activities through the Vienna agreement,¹¹⁹ and IEC and CENELEC similarly co-ordinate through the Frankfurt agreement.¹²⁰ Both ESOs are thus tightly integrated parts of the global ISO/IEC architecture.

In line with TBT principles, the Vienna and Frankfurt agreements stipulate that ESOs should generally give preference to International Standards. Where a suitable international standard exists, ESOs may transpose this international standard as an EN. If no international standards exist for a standardisation need that ESOs seek to address, or an existing international standard is not suitable, the ESOs should first request ISO or IEC to jointly develop a new international standard. Either the ESO or the international standards organisation may be in the lead of this parallel development of an EN and identical international standard. Only if the international standards organisations are not interested in jointly developing a new international standard, may the ESOs develop a “home-grown” EN for which there is no international equivalent.

Compared to Europe’s trading partners, the share of ENs that are identical to international standards is particularly large. 58% of the ENs published by CEN in 2021 were equivalent to an ISO standard. While that share has significantly increased over recent years, the share of standards with an identical ISO equivalent in CEN’s portfolio of active standards is somewhat lower, and has not been increasing in recent years – perhaps indicating that ENs with an identical ISO equivalent are more short-lived, and many of the ISO-equivalent ENs published every year are replacements of existing ISO-equivalent ENs.

¹¹⁹ The current version is the Agreement on Technical Co-operation between ISO and CEN (Vienna Agreement) of 20 September 2001, available on www.cen.eu

¹²⁰ The current version is the IEC-CENELEC Frankfurt Agreement of 14 October 2016, available on www.iec.ch.

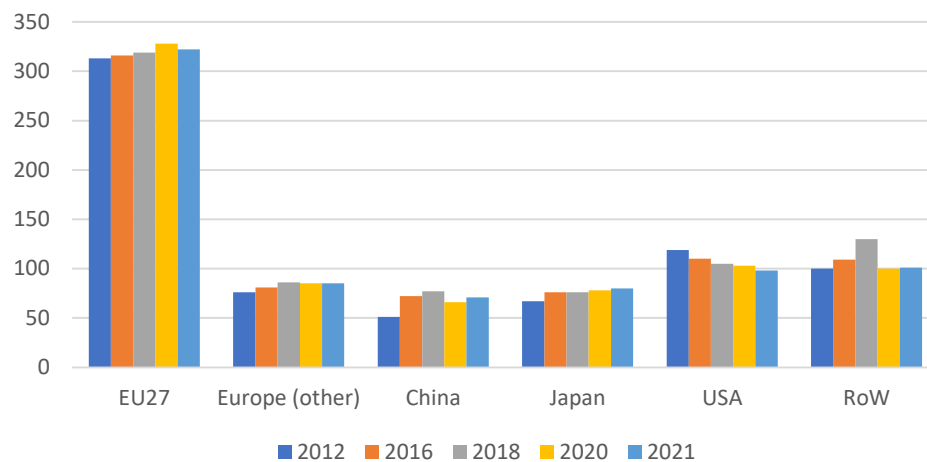


While Europe is thus particularly diligent in adopting international standards, European NSBs are also particularly active in the development of these international standards. This is reflected in the large number of ISO Technical Committees (TC) and Sub-Committees (SC) in which a European NSB holds the Secretariat. In 2021, of the 757 ISO TC and SC Secretariats, 322 were held by the NSB of one of the 27 EU Member States, and 85 further Secretariats were held by NSBs of other European countries. European NSBs thus hold the Secretariat of more than half of the ISO TC/SCs, a far greater number than any of the other major World regions. Over the last decade, European NSBs have increased the number of ISO Secretariats, while the US has ceded ground. China and the Rest of the World (outside Europe, China, Japan, and US) have seen significant increases until 2018, followed by a recent decline.¹²¹

¹²¹ While our data go back to 2012, data collected by Blind and von Laer (2022) on ISO secretariats by country in 2008 and 2016 shows that these trends extend further back in time – while the US was the country with the largest number of ISO Secretariats in 2008, it ceded this position to Germany starting in 2012; the number of Chinese-held secretariats grew particularly rapidly from 2008 to 2016. EU Member States Germany and France saw significant increases from 2008 to 2012. [Paving the path: drivers of standardization participation at ISO](#), Journal of Technology Transfer

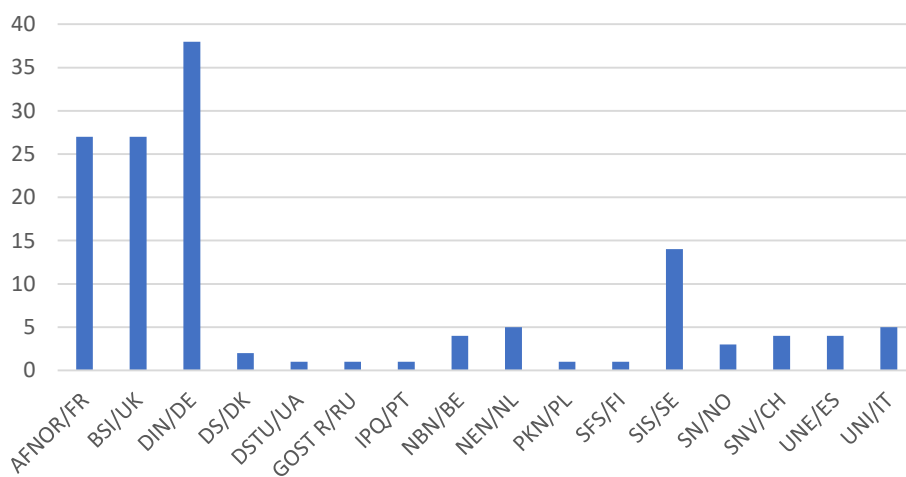


ISO TC/SC Secretariats, by region



Among EU Member States, Germany, France, and Sweden stand out as countries with particularly significant numbers of ISO leadership roles (as measured by TC Secretariats):

ISO TC Secretariats, by European Countries



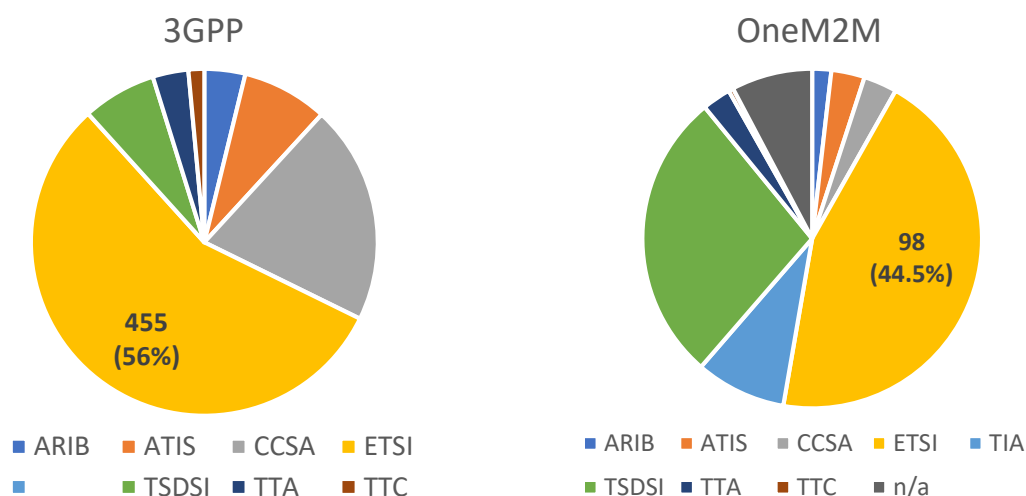
The healthy influence of European stakeholders at the international level of the international standardisation ecosystem (in ISO and IEC) is not only felt in the disproportionate number of ISO Secretariats held by European NSBs; but also in the influence of European firms on standardisation decisions. Buethé and Mattli report survey evidence that European firms are significantly more likely to report having been successful in influencing standardisation decisions at ISO or IEC than their US



counterparts – a fact they attribute to the stronger “institutional complementarity” between the European and international standardisation systems.¹²²

ETSI. ETSI is member of not only one, but a variety of international architectures. ETSI is bound by a Memorandum of Understanding with ITU-T. It is a Sector Member of ITU-T and ITU-R, and may thus participate in ITU meetings and make technical contributions to ITU work.¹²³ In addition, a large share of ETSI deliverables have resulted from two global alliances with foreign-based SDOs: 3GPP and OneM2M. Both 3GPP and OneM2M bring together private- and public-led SDOs (Organisational Partners) from different World regions. Unlike the international organisations ISO and IEC, however, 3GPP and OneM2M operate by the principle of direct stakeholder representation: instead of Organisational Partners such as ETSI and others representing their respective members within 3GPP or OneM2M, stakeholders (primarily companies) that are members of ETSI or another Organisational Partner may become individual members of 3GPP or OneM2M and thus directly participate in these two global standardisation alliances.

In both 3GPP and OneM2M, ETSI is the Organisational Partner with the largest number of individual memberships. A majority of 3GPP individual members entered 3GPP through their membership with ETSI.



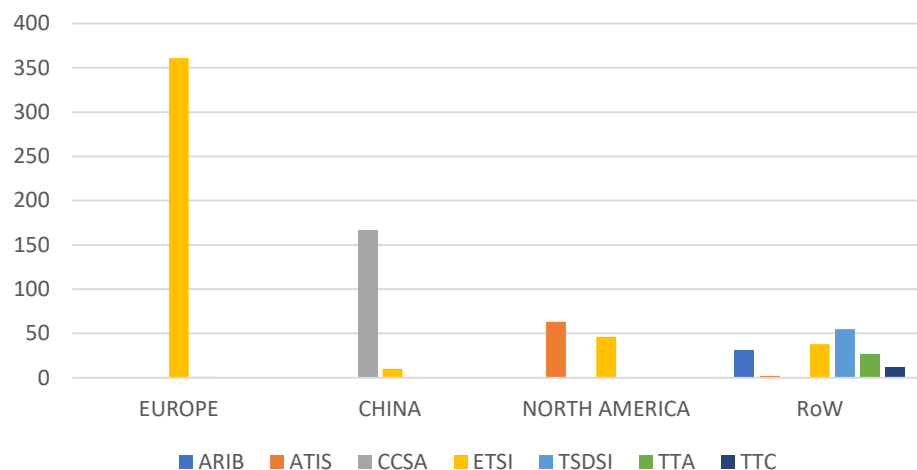
While virtually all European-based stakeholders (with the exception of one single UK-based firm) have chosen ETSI membership to participate in 3GPP, even stakeholders from the US, China, and many other countries in the World participate in 3GPP through ETSI. This leading role of ETSI in 3GPP has significant implications – for instance, the vast majority of potential Standard-Essential Patents that are declared potentially essential to 3GPP Technical Specifications are disclosed under ETSI’s IPR Policy. Accordingly, the vast majority of SEP licenses related to 3GPP standards are governed by licensing requirements specified in ETSI’s IPR Policy.

¹²² See Walter Mattli and Tim Büthe, *The New Global Rulers – The Privatization of Regulation in the World Economy* (Princeton: Princeton University Press, 2011); at 175.

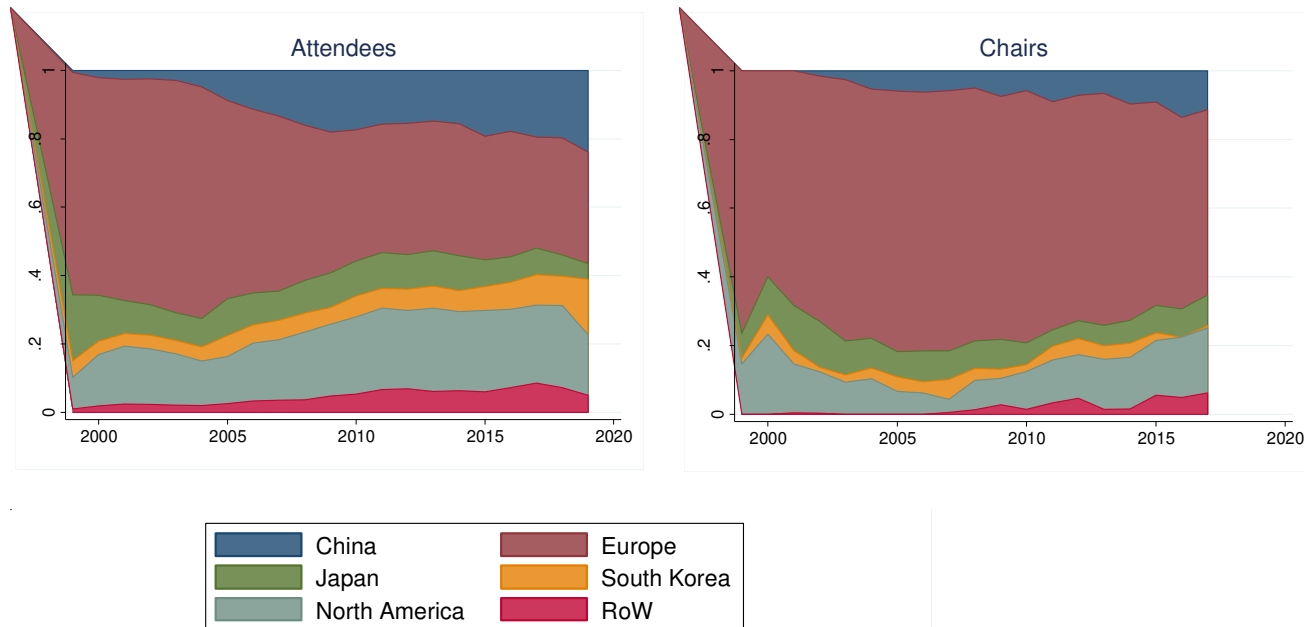
¹²³ Memorandum of Understanding between ETSI and ITU (5 May 2016), available on www.itu.int.



3GPP members, by partner and region



The large share of ETSI members in 3GPP's individual membership is also reflected in the demographic composition of 3GPP leadership. While the geographic composition of *delegates* (representatives of individual 3GPP members participating in 3GPP working group meetings) has become increasingly diverse, European individuals continue to hold a disproportionately large share of working group chair positions.¹²⁴



¹²⁴ For the purpose of this analysis, we classify individuals by their presumed country of residence (inferred mostly from the country code of the individual's phone number provided in meeting attendance records). For methodology, see Baron, Justus. "Participation in the standards organizations developing the internet of things: Recent trends and implications." *Shaping the Future Through Standardization* (2020): 117-147.

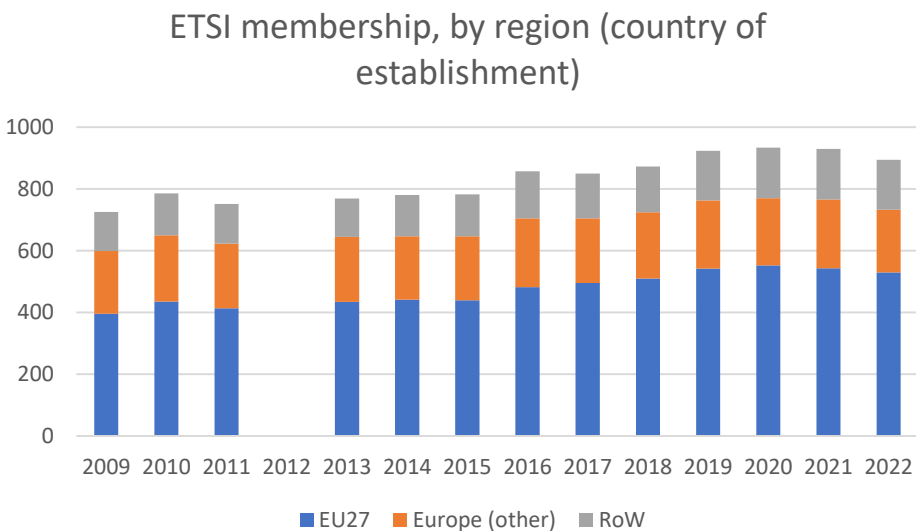


Both CEN-CENELEC and ETSI are thus tightly integrated members of worldwide collaborative networks. Many of their deliverables are transpositions of internationally developed standards and specifications. While European stakeholders cannot dominate or control these international processes, tight collaboration between European-based standards organisations and their international counterparts also offers opportunities for European leadership.

In both the international standards organisations ISO and IEC, and consortia such as 3GPP and OneM2M, ESOs and their members enjoy leading positions. European leadership in such organisations is a significant achievement and offers major industrial and strategic advantages. In addition to Europe's significant public and private investments in standardisation, this leadership position is a result of the openness of the ESS to the world.

4.2.2. Foreign participation in ESOs

Transposition of international standards by ESOs is only one facet of the international openness of the ESOs. Unlike CEN and CENELEC, ETSI offers stakeholders the possibility to become a member and directly represent their interests at the European level. *Full membership* is largely reserved for organisations established in one of the 44 countries falling within the geographical area of the European Conference of Postal and Telecommunications Administrations (CEPT), which includes EU Member States. Nevertheless, companies and other organisations established in other world regions also take advantage of the opportunity to participate in ETSI as *Associate Member* or *Observer* (including all EU Member States, and other European countries), as reflected in the composition of ETSI's membership:

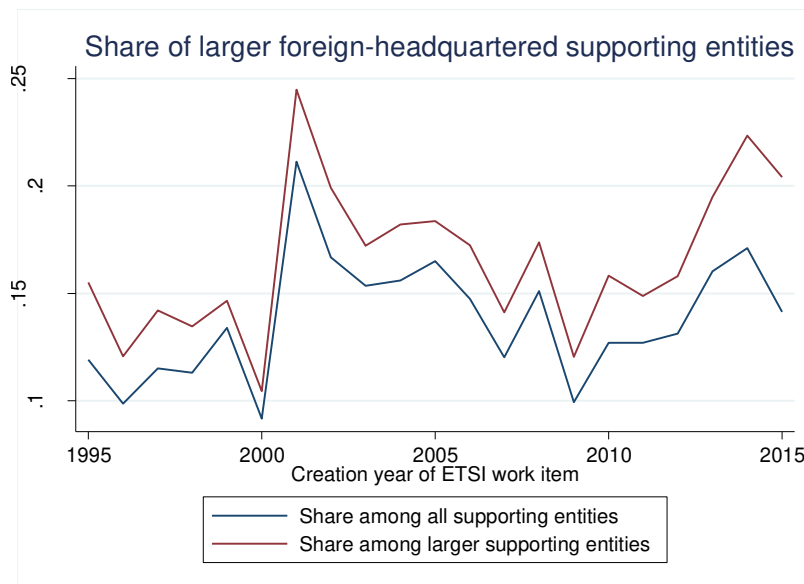


Associate Members can participate in ETSI's standardisation activities, participate through ETSI in 3GPP and OneM2M, and participate in votes on many ETSI decisions. Other ETSI decisions, notably the adoption and withdrawal of ENs and hENs, are reached by Weighted National Voting, however, which is reserved to the members of European national delegations. Overall, in spite of ETSI's openness to foreign participants, organisations established in Europe represent the large majority of ETSI membership, and they alone participate in decision-making on ENs and hENs.



ETSI rules do not distinguish, however, between corporate groups headquartered in Europe and other corporate groups with subsidiaries established in one or multiple CEPT member countries. Foreign-headquartered corporate groups may thus participate as full members in ETSI through their European subsidiaries. Poland, Hungary, Ireland, and Romania offer examples of ETSI national delegations in which subsidiaries of foreign-headquartered corporate groups play a larger role. In total, 7 of the 12 Polish ETSI members (Apple Poland Sp. z o.o., Intel Technology Poland SP Zoo, LG Electronics Polska, Motorola Solutions Poland, Nokia Poland, Samsung Electronics Polska, T-Mobile Polska S.A.) are subsidiaries of foreign-based corporations (five of which are based outside Europe).¹²⁵

In addition to participating in voting, ETSI members may influence ETSI standardisation through their technical contributions. One indication of a stakeholder's active participation in the development is being listed as a "supporting organization" on the ETSI work programme. We have tracked supporting organisations of ETSI work items created from 1994 to 2015.¹²⁶ The 44 subsidiaries of foreign-headquartered companies that we identified accounted for 14.1% of listed supporting organisations; and 22% of the frequent supporters. From 1995 to 2015, there was no clear time trend in the share of ETSI work items supported by foreign-headquartered stakeholders, as different peaks in the share were associated with different individual stakeholders.



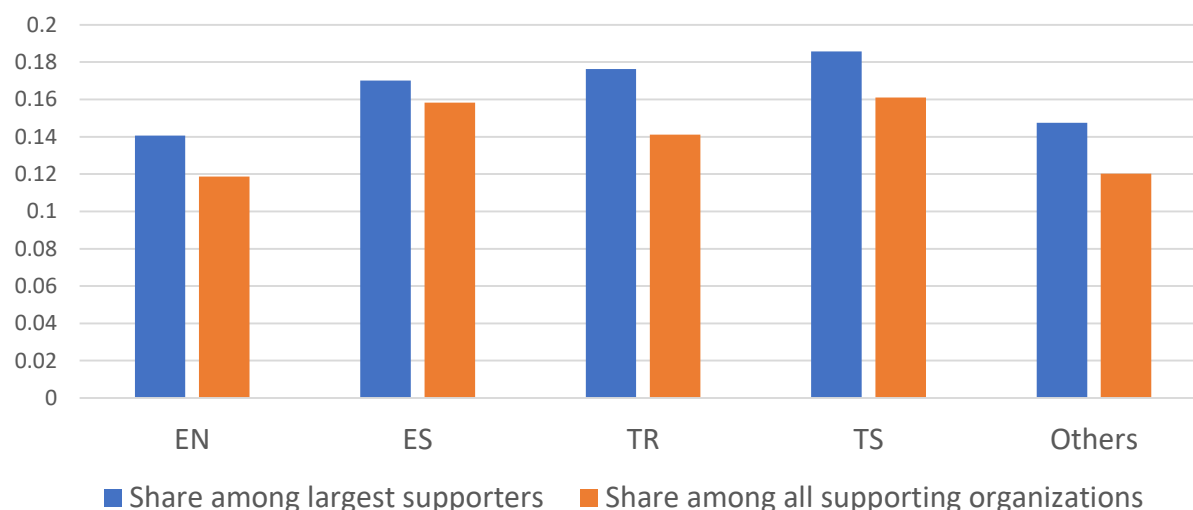
Over the observation period of 20 years, foreign-headquartered ETSI members have supported 3,771 different ETSI work items from all categories of ETSI deliverables. The share of foreign-based support is somewhat lower for ENs than TS and TR, but the difference is not very pronounced, and there certainly has been significant foreign-based support for the development of ENs at ETSI.

¹²⁵ Note that the distribution of voting rights follows from the members' respective UoCs, not the number of members.

¹²⁶ Supporting organisations are listed with countless variations in names, requiring thorough name standardisation to make the data usable. As a first step, we have manually standardised entity names among the most frequently listed supporting organisations (supporting more than 25 work items in total). This resulted in 271 standardised entity names; for which we manually established whether they were subsidiaries of foreign-headquartered companies.



Share of larger foreign-headquartered organizations among supporters of ETSI work items



Through their subsidiaries established in European countries, foreign-based corporations may thus participate in all major aspects of ETSI decision-making, and the governance processes of ETSI make no distinction between the European subsidiaries of foreign-headquartered corporations and other companies established in Europe.

More recently, however, the Commission has tried to draw a line amongst the stakeholders. The Strategy mentions a concern that ETSI, in particular, “allow[s] an uneven voting power to certain corporate interests: some multinationals have acquired more votes than the bodies that represent the entire stakeholder community”.¹²⁷ Here the line is drawn between “corporate interests” and “multinationals” and the other stakeholders. Later on, in the part on global standard-setting, the Commission advocates better co-ordination with “EU industry” and “EU stakeholders”.¹²⁸ Neither of these concepts is further defined in the Strategy.

Subsequently, however, the Commission introduced restrictions aimed at excluding “entities subject to control by a third country, acting either directly or by way of measures addressed to a third-country entity” from participation in the High-Level Forum on European Standardisation created in the wake of the Strategy.¹²⁹ Similarly, pursuant to a new version of the Call for Applications issued in 2022, industry representatives to the Expert Group on Radio Equipment must be employed by an entity controlled by EU interests.¹³⁰ In both cases, the Commission seems to be pointing to a criterion based on control, within

¹²⁷ Strategy, *supra* note 1 at 4.

¹²⁸ *Ibid.* at 5.

¹²⁹ Commission Decision setting up the group of experts ‘High-Level Forum on European Standardisation’ C(2022)6189 (1 September 2022), Rec. 5. Based on information provided by industry practitioners, we understand that the Commission eventually clarified that experts employed by non-EU headquartered companies could participate at least in the Sherpa subgroup.

¹³⁰ Call for Applications for the Selection of Members of the Expert Group on Radio Equipment (version of 3 May 2022), available at <https://ec.europa.eu/transparency/expert-groups-register/screen/expert-groups/>.



the meaning of competition law and economic regulation,¹³¹ namely decisive influence over the key functions of the firm. This implies that firms that are present in the EU, through personnel, resources, investment, sales, and so on, would not count as “European” if their controlling shareholders are non-European, irrespective of their EU footprint. In both cases, security reasons were invoked in support of these restrictions. While security might be an issue for some of the work done in these expert groups, industry representatives have questioned whether other motives might not be at play as well. The revision of the selection criteria for the Expert Group on Radio Equipment was criticised in a letter signed by six of the concerned industry associations.¹³²

The introduction of novel restrictions on the participation of the employees of “foreign-controlled” entities in certain Commission decisions related to standardisation highlights the Commission’s concern about potential undue influence by certain “foreign” companies. Significantly, there is a gradual shift away from the traditional definition of “foreign” or “European” companies according to their country of establishment, so that the European subsidiaries of foreign-headquartered firms, notwithstanding their establishment in Europe, under the laws of European states, are now increasingly excluded from the definition of “European” companies.

4.3. The governance of ESOs and societal interests

Another overarching concern in the Strategy is the level of representation of different societal interests. Concerns about the relative influence of different societal interests in standards development are a longstanding feature of EU standardisation policy.¹³³ Current EU standardisation law, as enshrined in Regulation 1025/2012, strongly emphasises the need for “representation” of societal interests.¹³⁴ The Strategy introduces two other concepts, absent from the text of Regulation 1025/2012, namely “inclusiveness”¹³⁵ and “balance”.¹³⁶ Three different, yet related, concerns are thus voiced with respect to the current functioning of ESOs: processes may provide for insufficient representation of relevant societal interests; be insufficiently inclusive or accessible to certain types of participants; and lack balance, in particular by awarding excessive influence over decision-making on EU policy and regulations to powerful stakeholders (such as “multinationals”). We will deal with each concern in turn.

4.3.1. Representation of relevant societal interests

As seen previously, *representation* of societal interests is a traditional cornerstone of EU standardisation policy. EU institutions have repeatedly sought greater representation of *societal interests* and *societal*

¹³¹ See the definition of control set out in Regulation 139/2004 (Merger Control Regulation) [2004] OJ L 24/1, Art. 3(2) and explained in the Consolidated Jurisdictional Notice [2008] OJ C95/1. It is interesting to note that the notion of control under the MCR is not used in connection with geography, contrary to what the Commission does in the context of standardisation. Rather, the geographical scope of the MCR depends on a form of effects doctrine, linked to yearly turnover in the EU.

¹³² <https://www.euractiv.com/section/digital/news/trade-groups-oppose-eus-removal-of-non-european-organisations-from-expert-group/>

¹³³ See Baron, Contreras and Larouche, *supra* note 96, for a historical survey.

¹³⁴ Regulation 1025/2012, *supra* note 26, Rec. 22-23 and Art. 5.

¹³⁵ Strategy, *supra* note 1 at 3-4. “As standards do not only regulate the technical aspect of a product, but can have an impact on people, workers and the environment, an inclusive and multi-stakeholder approach can bring important check and balances to standards-making.”

¹³⁶ “Through a balanced representation that includes societal stakeholders in national standardisation bodies, this will enhance the openness, transparency and inclusiveness of the process”. *Ibid.*, at III. In Regulation 1025/2012, ‘balance’ is only mentioned in Annex II, dealing with Technical Specifications developed by ICT consortia, but not with respect to the functioning of the organisations constituting the European Standardisation System.



stakeholders in standard development. In Regulation 1025/2012, this translates into a list of specifically defined societal interests and stakeholders – SMEs, consumers, environmental interests, employees – whose representation in ESO processes must be assured.¹³⁷ *Representation* in this context consists in the activities of specifically defined representative associations for one of these groups or interests.¹³⁸ Regulation 1025/2012 ensures the right of such associations to participate in relevant processes, and provides for EU funding to support their participation in standardisation. Annex III of Regulation 1025/2012 defines the criteria for associations eligible to benefit from these provisions – so-called ‘Annex III organisations’.

Regulation 1025/2012 identifies four categories of societal interests: SMEs, consumers, environmental interests, and ‘social interests’ (for example trade unions). Nevertheless, in the practice of standardisation, there is a difference in nature between concerns about SMEs’ representation in standardisation, and representation of the other three societal interests. To be more specific, whereas consumer, environmental or labour interests are different subsets of the public interest, SMEs are both a societal interest category and a group of individual stakeholders with particular interests actively participating on their own behalf in standardisation.

Concern about the representation of societal interests in standardisation arose in the context of greater use of private industry standards in public regulation. Traditionally, this has been particularly relevant for safety, health, environmental and consumer (SHEC) standards. The use of standards developed by private standards organisations in regulation has often raised concerns about industry control over standard development processes, which may result in standards that are insufficiently protective of the public interests that the regulation seeks to protect. Moreover, consumers, workers, or environmental groups may also have better knowledge of the requirements that a standard may need to achieve. It would then be sensible to give them a voice at the table (in line with the original rationale of the 1990s). In addition, as was put forward at the turn of the century, it improves the legitimacy of the resulting standard if these stakeholders have been involved in its development; especially if such standards become tools for the implementation of mandatory regulation.

On the basis of these considerations, standards organisation and standardisation policies in different countries have sought to involve consumers, labour, and environmental groups in standards development. Nevertheless, unlike other SDO stakeholders, which are generally eager and capable of defending their particular interests in standardisation, individual consumers, workers, or citizens concerned about the environment lack the means and incentives to participate in standardisation to directly represent their interests. In the EU, Regulation 1025/2012 thus provides a mechanism for the selection of representative associations, which may receive EU funding to participate in standards development, and whose right to participate ESOs and NSBs must be safeguarded.

Representation of different societal interests through different representative associations, each uniquely responsible for representing a certain set of considerations in standards development, is certainly not the

¹³⁷ Regulation 1025/2012, *supra* note 26, Art. 5.

¹³⁸ *Ibid.*, Art. 16.



only possible way of ensuring that the standardisation process protects consumers, workers, and the environment.¹³⁹ There are at least three distinct channels for these objectives to be pursued in the course of standard development:

1. *Directly by the original participants.* As set out above,¹⁴⁰ there is a long-standing, well-documented shared public-service ethos within the standardisation community. Individual participants in standard development, even if they are technical experts from industry, are members of society, and may individually share the concerns and values that are anchored in legislation and regulation.¹⁴¹ While this organic channel does not neutralise the influence of the particular interests that individual participants in standardisation are expected to represent as part of their employment with industry stakeholders, it cannot be dismissed out of hand. It offers one huge advantage: public policy concerns are internalised by the experts, so there are no transaction costs and inefficiencies arising from heavier procedure or information asymmetries among participants.

In addition, individual SDO participants are most often professional engineers. The norms of the profession hold these individuals to certain standards of objectivity. Independently of their personal values, engineers may feel a professional obligation to develop standards that are objectively capable of achieving their aims and requirements. Their own professional ethos may be complemented by their concern for their professional reputation and status in a community of peers to ensure that standardisation follows a general ethos of objectivity.

2. *Within the standard development process, through procedural rules* on membership, participation, balance or even voting. The second channel is to design the procedural rules such as to ensure certain levels of participation and influence of representatives who (through selection and through mandate) can be trusted to defend the public interest in the course of standard development. Within that second channel, two variants are possible: the representatives can come from either specific interest groups associated with one particular set of public interests, or from public authorities acting in the general interest.¹⁴² This second channel has been a workhorse of EU standardisation policy, so much so that the trade-offs are well known by now. Whether they are interest groups or public authorities, the additional representatives usually suffer from information asymmetries: they simply do not hold all the information that the industry experts possess. They are often also resource-constrained, even with public funding as

¹³⁹ To be complete, one should also add that the interest-group theory has also been criticised for assuming that the sum-total of the actions of specific interest groups will approximate the general interest.

¹⁴⁰ *Supra*, Heading 2.2.2.

¹⁴¹ For a recent and germane example, see the work of IEEE-SA regarding AI standards, *supra* note 75.

¹⁴² Consumer, environmental, and labor concerns are not particular interests, each held by a distinct group of stakeholders, but different facets of the public interest of society at large. Individual members of society differ in the value they assign to each of these concerns; but each member of society partakes in each of these interests to some extent. Whereas Annex III organisations are specifically tasked with focusing exclusively on representing one particular set of concerns, public authorities participating in standardisation represent a certain arbitration between different, potentially competing, public-interest considerations. In the EU context, public authorities include both the Member States and the EU institutions. Such trade-offs between public interest considerations of different nature (such as weighing the interests of consumers and workers) are inherently political in nature, and hence require the involvement of democratically legitimised public authorities. Regulation 1025/2012 actually makes use of both variants.



per Regulation 1025/2012: they can only muster a few qualified people, spread over too many standardisation procedures.¹⁴³ This will tend to lead to delay and inefficiencies in the procedure, so as to allow for the additional representatives to participate fully. Despite all the good faith efforts that were put into this channel in the EU over the past 30 years, no satisfactory solution has yet been found.¹⁴⁴

3. *Upstream or downstream of standardisation.* A third channel for public interests to be brought to bear takes place outside of the standardisation process as such. Upstream of the process (*ex ante*), public authorities can set boundaries or objectives for standard development, so as to push it in the desired direction. Downstream of the process (*ex post*), the resulting standard can be reviewed for conformity with the public policy objectives at stake. This channel is present in Regulation 1025/2012 for European standards, since the Commission issues a specific standardisation request for ESOs, which defines the objectives and requirements to be achieved through standardisation, and subsequently reviews the resulting standard.¹⁴⁵ Public authorities are typically in charge here, and they are free to consult interest groups in the course of deciding upon their course of action. Because this channel is external to standard development as such, it could allow for a better focus on public policy objectives, free from extraneous considerations. At the same time, the information asymmetry remains, and it could even be exacerbated by the disconnect from the expertise found within the SDOs. Hence the potential for delays remains here as well.

It is necessary to cast the issue of the representation of societal interests in that broader perspective, so as to avoid fixating on representation of consumer, environmental or labour interests through their representative associations at the expense of the other channels whereby public interests can be brought to bear in standardisation.

4.3.2. Inclusion of SMEs

Among the four societal interests whose representation is protected in Regulation 1025/2012, SMEs hold a special position. Indeed here the objective is different: it centres on industrial policy and competitiveness, as opposed to non-economic policy objectives. It essentially conflates with the private interest of SMEs to be at the table. Unlike consumer, worker, or environmental interests, which are different public interest considerations susceptible of being shared (to different extents) by all members of society, the interests of SMEs are the particular interests of a clearly defined (albeit very large) group of stakeholders. From that perspective, it cannot readily be expected that the shared ethos of standardisation participants will deliver.¹⁴⁶

¹⁴³ One could argue that public authorities might be better placed to deal with this challenge, since they can probably mobilise more resources than interest groups and, because they monitor more processes, they can more effectively decide where and how to deploy these resources.

¹⁴⁴ Baron et al, *supra* note 29 at 57-58.

¹⁴⁵ Regulation 1025/2012, *supra* note 26, Art. 10 and 11 respectively.

¹⁴⁶ Employees of large companies participating in standardisation cannot be expected to be individually motivated to represent the interests of SMEs (with whom their employer may be competing). Relying on that shared ethos could even be harmful, inasmuch as it would open up the potential for standardisation to be used for anti-competitive agreements regarding SMEs (in their favour or against them): see Baron, Contreras and Larouche, *supra* note 96.



The interest of SMEs in standardisation is essentially twofold: on one hand, SMEs are susceptible of being impacted by standards, but may individually lack the means and incentives to participate in standards development. This dimension of SME interests may be taken into account through the representation of SMEs by representative associations. Individual SMEs may however also hold an interest to be able to directly participate in the process, so that they can bring their technological input to the table and acquire the kind of technological knowledge and expertise that is required to work with the standard. Ensuring that the standardisation process is open to the direct participation of SMEs thus promotes objectives that representation of SMEs through a representative association is incapable of producing, nor can intervention upstream or downstream of standard development really help.

In the end, we would propose to separate the analysis between representation of “societal interests”, for example, the involvement of representative associations tasked with representing consumer, environmental, and labour interests with a view to ensuring that public policy objectives are fulfilled, and those concerning the representation and participation of SMEs, where the ultimate end is industrial policy and competitiveness. This is also reflected in the mandate of Annex III organisations representing SMEs, which differs from the mandate of other Annex III organisations. While all organisations share the task to represent the interests of their respective stakeholder group in the standardisation process at European level, only the organisation representing SMEs has the additional task “to raise [SMEs’] awareness for standardisation and to motivate them to become involved in the standardisation process”.¹⁴⁷

The different ESOs have a variety of procedures and tools to promote the participation of SMEs. ETSI’s membership rules, for example, distinguish between organisations of different sizes. Among the 900 current ETSI members are 81 “micro-enterprises” and 127 small and medium enterprises.¹⁴⁸ While smaller organisations benefit from lower ETSI membership fees; ETSI’s decision-making processes also limit their influence within ETSI, at least with respect to decisions made by *weighted individual voting* (for example, excluding decision-making on ENs and hENs, as well as other EU policy matters decided by weighted national voting). Weighted national voting calls for all voices within a national delegation to be heard, and provides for a national consultation to assess the national consensus. It is the responsibility of the head of the national delegation to ensure that these principles are followed when casting the national vote. By contrast, weighted individual voting allocates most voting rights to companies with the largest volume of sales within Europe. There is thus a significant distinction between processes oriented towards balance among different societal constituencies (in all matters related to EU policy) and processes in which larger companies have most influence (most other standardisation decisions).

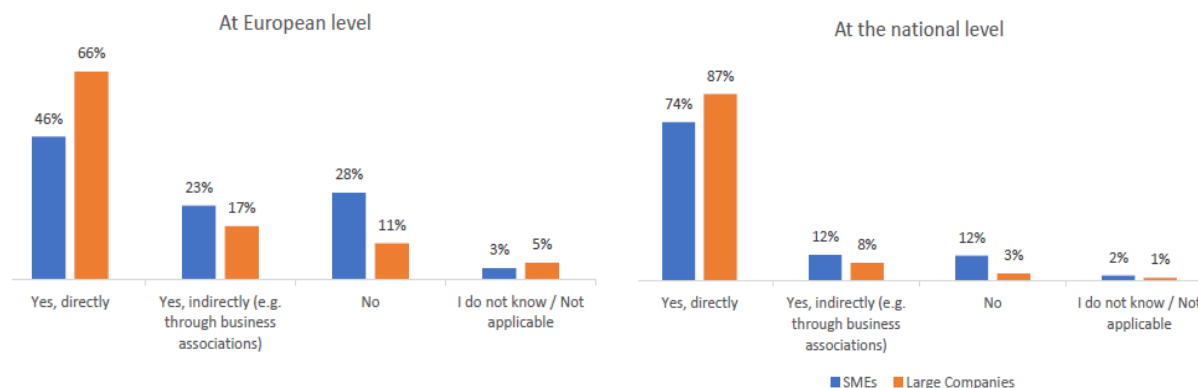
At CEN and CENELEC, membership consists of National Standardisation Bodies, which are responsible for assessing the national consensus and casting the national vote on ENs. Stakeholders may more directly participate in the decision-making on some other deliverables, such as CEN Workshop Agreements. One

¹⁴⁷ Regulation 1025/2012, supra note 26, Annex III, paragraph 1

¹⁴⁸ Information collected from <https://www.etsi.org/membership>; using the filters for “Micro-Enterprises (ME)” or “Small and Medium Enterprises (SME)” to identify and count the number of ETSI members in the respective categories. ETSI uses EU definitions for SMEs (businesses with 250 employees or less, and annual turnover not exceeding €50 million) and MEs (fewer than 10 employees and an annual turnover or balance sheet below €2 million). Under the EU definition, subsidiaries of large corporations (where the parent corporation holds more than 50% of the shares of the company) are excluded from the group of SMEs or MEs.



potential justification for the indirect representation of stakeholders at CEN and CENELEC is the concern that larger stakeholders may more easily afford the cost of participating in standards development at European or international level. Direct representation of stakeholders in European standardisation may thus underrepresent less powerful stakeholders, such as SMEs, which are more likely to participate at national level. This is reflected, among others, in the results of a survey conducted for DG GROW:¹⁴⁹ while both large and small companies are more likely to directly participate in standardisation at the national level than at the European level, the difference is more pronounced for smaller companies.



Source: “Study on the Functions and Effects of European Standards and Standardisation in the EU and EFTA Member States”; pp. 153-154

Nevertheless, while participation in an NSB may be relatively more affordable to SMEs and other smaller stakeholders than direct participation at the European level, this participation at the national level may offer SMEs little influence over standardisation at the European level. Since in CEN and CENELEC stakeholders are represented at European level indirectly via the NSBs, similar sets of stakeholders are susceptible to shaping the national consensus within each NSB, so that the concerns of smaller stakeholders or minority viewpoints are not assured to be represented at the European level. For these reasons, in earlier policy cycles, the European Commission had highlighted the advantages of direct stakeholder representation at European level, and expressed concern with the indirect representation model of CEN and CENELEC.¹⁵⁰

The Strategy references the tools already available under Regulation 1025/2012 to provide for more “SME-friendly conditions”,¹⁵¹ but calls on ESOs to make proposals to “modernise” their governance in view of achieving further progress. The Strategy provides little details on the “modernisations” expected from the ESOs, and blurs the distinction between representation of societal interests and openness to the direct participation of smaller stakeholders. Overall, the Strategy indicates that the Commission has limited trust

¹⁴⁹ *Supra* note 62.

¹⁵⁰ *Supra*, note 11 and accompanying text.

¹⁵¹ Strategy, *supra* note 1 at 4. This includes free access to draft standards, access to the activities of national standardisation bodies, applying special rates to standards, and so on.



in the ability of ESOs to achieve SME inclusiveness in standardisation at the European level, whereas indirect stakeholder representation through NSBs is presented as ensuring a balanced representation that includes societal stakeholders.¹⁵²

4.3.3. Balance among stakeholder categories

4.3.3.1. Interest categories in ESOs

Representation of societal interests (for example the involvement of representative associations tasked with representing certain public interest considerations) and inclusiveness (such as openness of the standardisation process to allow also smaller stakeholders to partake in the benefits of direct participation) are distinct from the issue of *balance*, which is about parity in the relative influence and decision-making power of different stakeholder categories. While the representation of societal interests through representative associations eligible for public funding is a unique feature of the European Standardisation System, balance among different categories of particular interest stakeholders is a traditional feature of many SDOs.

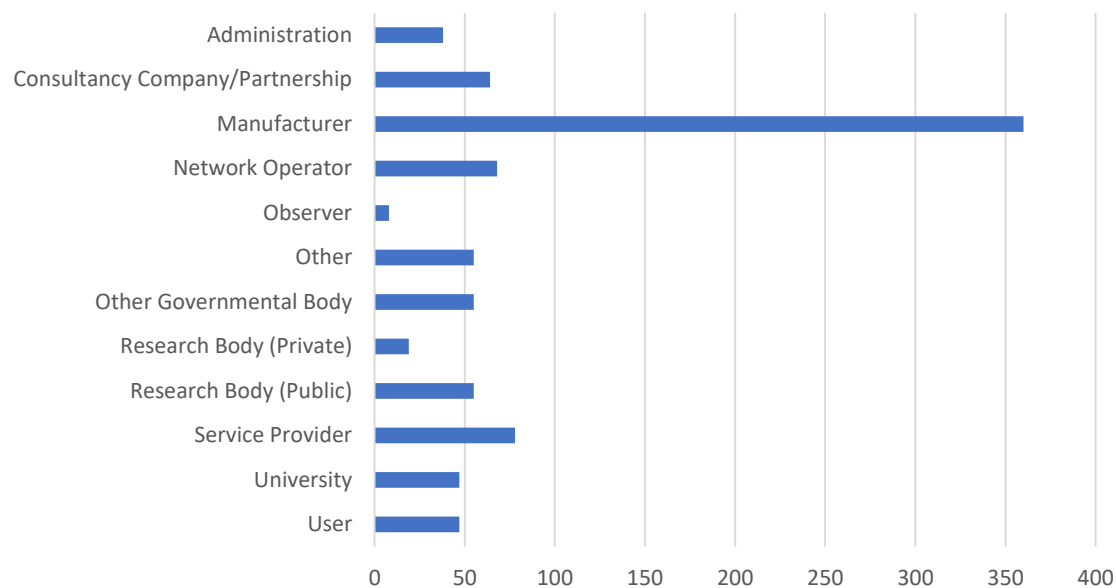
ESOs recognise different categories of stakeholders. ETSI, where stakeholders participate directly, categorises its members by type of interest, including for example, administrations, universities, and different types of companies (including manufacturers, network operators, service provider). There are some limited provisions in ETSI's governance structure seeking to balance the influence of these different constituencies in specific decision-making processes at ETSI.¹⁵³ Companies account for the majority of ETSI members; and among companies, manufacturers are particularly strongly represented.

¹⁵² Ibid: "[...] to be eligible for standardisation requests from the Commission, the delegates of the national standardisation bodies of the EU and the EEA must be the ones with the decision-making power in each stage of the development of a standard requested by the Commission. Through a balanced representation that includes societal stakeholders in national standardisation bodies, this will enhance the openness, transparency and inclusiveness of the process."

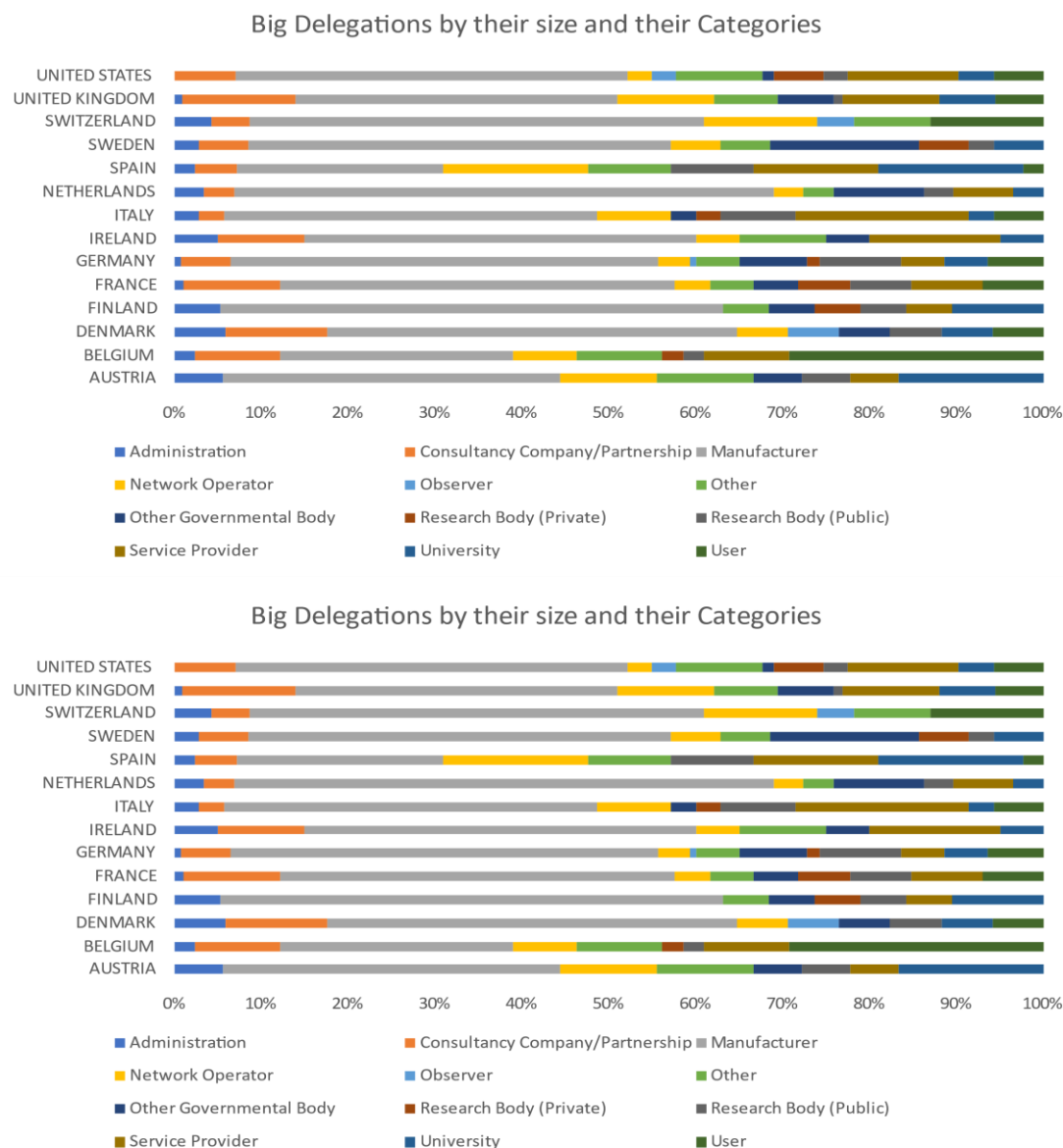
¹⁵³ Baron, Contreras and Larouche, *supra* note 96.



Count of members per category 2022



While the composition especially of smaller national delegations differs, the larger delegations have a similar make-up; and manufacturers are generally the largest interest group within each of the larger delegations.

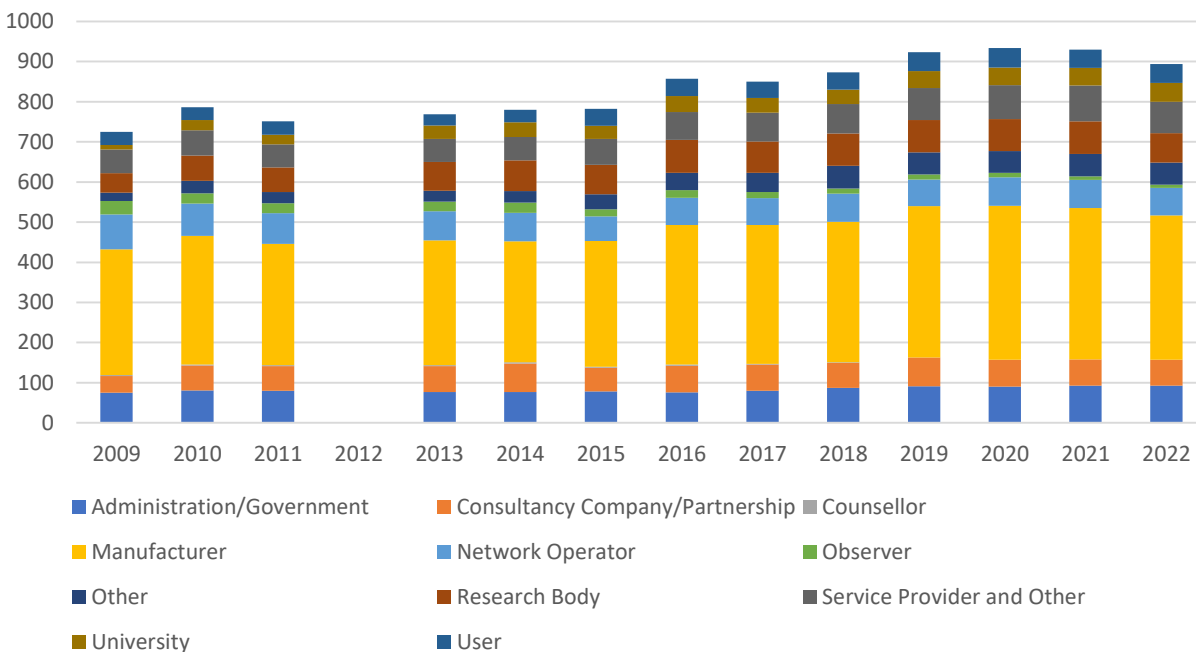


The composition of ETSI membership has also been fairly constant over time – over the last thirteen years, the balance between the major interest groups (such as network operators and manufacturers) has not changed significantly. Among the smaller constituencies, there has been an increase in the number of universities and service providers; and fewer stakeholders have chosen the role of observer.¹⁵⁴

¹⁵⁴ Data compiled from archived versions of ETSI membership lists, using the Internet Archive (archive.org).



ETSI Membership by Category, over time



4.3.3.2. The influence of ‘multinationals’

In its Standardisation Strategy, the Commission, however, expressed concerns about the perceived lack of balance in ETSI decision-making, stating, as set out earlier, that “some multinationals have acquired more votes than the bodies that represent the entire stakeholder community”.

The voting rights of both public and private stakeholders are proportional to their contributions to ETSI’s budget, which range from 1 to 45 ‘Units of Contribution’ (UoC). Whereas the voting rights of national public administrations and national standards bodies are proportional to the GDP of the country they represent, companies’ UoC are based on their *worldwide* Electronic Communications Related Turnover (ECRT). Public and private stakeholders’ UoC are assessed on different scales – a company and a public authority receive the same number of UoCs when the company’s worldwide ECRT is equal to a tenth of the GDP of the country represented by the public authority.

“Multinational companies”, i.e. corporate groups that are established (or own and control subsidiaries that are established) in multiple countries at a time, may also participate in multiple national delegations within ETSI. ETSI Rules of Procedure allow corporate groups to choose between unique and multiple memberships. A corporate group opting for unique membership must contribute to the ETSI budget according to its worldwide ECRT, excluding trade between companies of the same group. If a group opts for multiple memberships, different subsidiaries of the corporate group established in different European countries may become ETSI members and participate in their respective national delegations. In this case, it is the responsibility of the Corporate Group to determine the UoC to be paid by each of these entities of the Corporate Group. ETSI Rules of Procedure ensure that Corporate Groups do not participate via their subsidiaries in order to reduce the financial contribution they are required to make to the ETSI’s budget,



but do not preclude that a corporate group opting for multiple memberships may acquire a greater number of UoCs (and hence votes) than the number that would be allocated to the group based on its worldwide ECRT under individual membership.¹⁵⁵ Corporate groups opting for multiple memberships may thus pay a higher contribution to the ETSI budget in exchange for greater voting rights – an outcome sometimes called “pay to play”.¹⁵⁶

In addition to allowing larger corporate groups to acquire larger amounts of UoC than those available to any public authority, there is a geographic element to the Commission criticism of the influence of “multinationals”. When the Strategy criticises ESOs for letting their processes be unduly influenced by “multinationals”, it may imply a veiled complaint that firms and other stakeholders not primarily based in the EU would have too much sway over ESO processes, as we saw earlier by reference to recent Commission decisions.

4.4. The use of European standards in pursuit of EU policy goals

Another overarching theme of the Strategy is the use of European standards in support of EU policy goals. As we have seen, one function of the ESS is to produce the ENs that support EU policy and regulation. The Strategy confirms that standardisation is an important tool to achieve the overall policy goals of the EU, such as “to deliver on the twin green and digital transition and support the resilience of the single market”. As part of the regular interplay between the European Commission and the ESOs in the European Standardisation System, the Commission reflects the current policy priorities of the EU in an annual Union Work Programme on Standardisation. In the Strategy, the Commission identifies urgent standardisation needs, and announces that it will reflect these needs in the work programme; work with the ESOs, stakeholders and other partners to immediately address those needs; and review existing standards to identify further need for revisions or development of new standards. All of these actions are traditional exercises of the Commission role and competences within the established European Standardisation System.

Beyond that, the Strategy also identifies problems with the existing processes for developing standards in support of EU policy, in particular hENs. On one hand, the Strategy promises “concrete solutions and targets to accelerate the development and adoption of standards, implementing concrete solutions to achieve higher consistency of standards offered for publication by reference in the Official Journal of the European Union” (OJ). On the other hand, and more generally, the Strategy stresses that the “special status” of ESOs – for example, their status as the only organisations that are eligible to work on standardisation requests issued by the Commission – comes with responsibilities, which the Commission evidently considers not to be met. In particular, ESO standards must “incorporate core EU democratic

¹⁵⁵ Paragraph 2.2.2.1. of the Rules of Procedure state that “The sum of UoCs contributed by all the members of a Corporate Group shall be equal to or greater than the number of UoCs determined using the worldwide ECRT generated by the entire Group of Companies excluding the ECRT relating to transactions between companies of the same group (sometimes known as intracompany trading).” Under Individual Membership, an ETSI member’s UoCs are capped at 45 for companies whose ECRT exceeds 8bn Euro. The ECRT of very large corporate groups with a large share of their turnover in Electronic Communications may significantly exceed that threshold. A corporate group with three affiliates with 3bn Euro ECRT each may thus be responsible for 72 UoCs under Multiple Membership.

¹⁵⁶ See for example, Imir Rashid & Seamus Simpson (2019): The struggle for co-existence: communication policy by private technical standards making and its limits in unlicensed spectrum, Information, Communication & Society, DOI: 10.1080/1369118X.2019.1662072: “[ETSI] is a ‘pay to play’ organisation with a stratified membership where members buy voting rights and weight through subscription (authors’ interview, 2017; ETSI, 2018)”



values and interests, as well as green and social principles”, and the European standardisation system must promote “EU interests and values”. While the Strategy hereby refers to standards developed by ESOs more generally, it views these aspects to be “particularly important as regards harmonised standards”, citing to the CJEU decision in *James Elliott Construction* for support.

4.4.1. James Elliott Construction and its fallout

As recognised by the CJEU in *James Elliott Construction*,¹⁵⁷ hENs that are linked to EU law, in that they may be relied upon for a presumption of conformity with EU legislation, have the status of implementing measures of EU law. There is thus an increased burden upon EU policy makers (including the European Commission) to ensure that these hENs are compatible with the corresponding EU legislation.

Beyond that, the broader implications of *James Elliott Construction* are still debated. Shortly after that judgment, the CJEU seemed to further expand *James Elliott Construction* when it interpreted a harmonised standard – in the light of the underlying Commission mandate – to ascertain whether a specific product fell within its scope or not.¹⁵⁸

In more recent cases, however, European courts have been more prudent.¹⁵⁹ In *Germany v. Commission*, the CJEU confirmed the institutional setup of the New Approach (now Regulation 1025/2012) and insisted on a clear division of work between the ESOs, the Commission, and the Member States.¹⁶⁰ In relation to hENs, the ESOs have “sole power to determine or revise the content of the standard in the light of the relevant mandate”.¹⁶¹ The Commission, in turn, is empowered to assess whether the standard satisfies the mandate requirements, and then decide whether and to what extent to publish the standard (with or without restrictions). This is an up-or-down decision; the Commission cannot change the content of the standard.¹⁶² Member States can request the Commission to verify that the standard satisfies the mandate requirements, but they cannot either add to the standard.¹⁶³ The more expansive readings of *James Elliott Construction* have been dismissed by the courts: for instance, the General Court has refused to read *James Elliott Construction* as implying that harmonised standards must be publicly available free of charge.¹⁶⁴

Undoubtedly, further case-law will be needed before the legal implications of *James Elliott Construction* are fully and authoritatively worked out. In practice, that judgment was issued at a time when the

¹⁵⁷ *Supra* note 49.

¹⁵⁸ CJEU, 14 December 2017, Case C-630/16, *Anstar Oy v. Tukes* ECLI:EU:C:2017:971.

¹⁵⁹ See for instance CJEU, 22 February 2018, Case C-185/17 *Mitnitsa Varna v. SAKSA* ECLI:EU:C:2018:108.

¹⁶⁰ CJEU, 17 December 2020, Cases C-475/19P and C-688/19P, *Germany v. Commission* ECLI:EU:C:2020:1036. This judgment seems to address the worry raised by some commentators (see for instance Arnaud van Waeyenberge and David Restrepo Amariles, “*James Elliot Construction*: A ‘New(ish) Approach’ to Judicial Review of Standardisation” (2017) 42 E.L. Rev. 882 at 889-890) that, when combined with whatever is left of the old *Meroni* line of case-law, *James Elliott Construction* could lead to a reshuffling of tasks between the Commission and the ESOs, leaving the latter with far fewer discretion in the course of standard development.

¹⁶¹ *Ibid.*, Rec. 61,

¹⁶² *Ibid.*, Rec. 60-63.

¹⁶³ *Ibid.*, Rec. 65-68.

¹⁶⁴ General Court, 14 July 2021, Case T-185/19, *Public.Resource.Org v. European Commission* ECLI:EU:T:2021:445 (now under appeal to the CJEU, Case C-588/21P). CEN/CENELEC relies on the sale of its standards for a significant part of its revenues.



Commission was already taking steps to tighten its supervision over harmonised standards, and it gave further impetus to the Commission efforts.¹⁶⁵

4.4.2. The introduction of HAS consultants and the assessment of technical content

Indeed in 2018 the Commission reformed the exercise of its power to assess harmonised standards submitted by ESOs, pursuant to Article 10(5) of Regulation 2015/2012. In practice, the Commission relied on consultants to analyse the submitted standards and prepare its Article 10(5) decisions. Dissatisfied with the operation of a consultancy system until then, the Commission took over its management. The experts that are hired to assist the Commission with the technical aspects of hEN assessment are now called “HAS (Harmonised Standard) consultants”. Concretely, the Commission has awarded a framework contract to a business consultancy,¹⁶⁶ whereby that consultancy is in charge of finding HAS consultants for the assessment of individual hENs on behalf of the Commission.

The assessment framework used by HAS consultants has been developed by the Commission over the years. It is now found in an Assessment Report template, which itself is derived from a 2015 Vademecum.¹⁶⁷ A short summary of the assessment (labelled “verification procedure”) can be found in a 2016 document issued by DG GROW, which will be used as the basis for the following overview.¹⁶⁸ The verification procedure comprises three steps.

The first step includes a series of “*procedural formalities*” relating to the relationship with the work programme, availability in all EU languages, transparency and inclusiveness in the development phase and proper handling of normative references. One would expect that, to the extent that there were any difficulties at that step, ESOs have learned in the meantime to avoid procedural mishaps.

The second step is presented as a “*quantitative verification*”. It involves checking that the essential requirements of EU legislation that are meant to be covered in the hEN are clearly and transparently identified, and that the standard does not include normative elements outside the scope of these essential requirements as identified in the Commission mandate. Here as well, one would expect that ESOs have gone through a learning phase and now can comply with these checks.

The third step is the “*qualitative assessment*”. Here HAS consultants have to go into more difficult issues around the relationship between the realm of standardisation wherein the ESO evolves, and the realm of EU law. The thrust of this third step is to ensure that the ESO stayed within the boundaries of its realm. The third step includes a long list of specific questions for the HAS consultant to answer, some of which seem to derive from past experience in troublesome cases:

- (i) For instance, the assessment should detect whether the standard is linked to legal requirements outside of the purview of the mandate or whether it aims to provide

¹⁶⁵ See European Commission, “Harmonised standards: Enhancing transparency and legal certainty for a fully functioning Single Market” COM (2018)764 (22 November 2018), where the Commission explains how *James Elliott Construction* bolsters its analysis.

¹⁶⁶ Ernst & Young.

¹⁶⁷ European Commission, *Vademecum on European standardisation in support of Union legislation and policies* SWD(2015)205 (27 October 2015).

¹⁶⁸ European Commission, DG GROW, *Verification of conditions for the publication of reference of harmonised standards in the Official Journal*, Ares(2016)6548298 (22 November 2016).



interpretations of EU law outside the scope of the request. In such cases, the ESO could be overreaching into EU law.

- (ii) Next to these cases, the standard should not either privilege one economic operator over others, or give choices to economic operators in such a way that the essential requirements listed in the mandate can be circumvented. In such cases, the ESO could be undermining EU law.

While instances of overreaching into EU law or undermining EU law are conceivable, one would presume that ESOs would learn to police their activities and their members and avoid these pitfalls. Moreover, it is open to question whether HAS consultants are best placed to correctly detect and identify these problematic instances.

- (iii) Ultimately, going beyond cases of overreaching or undermining, the HAS consultant has to examine the content of the submitted standard and advise on whether it sufficiently satisfies the legal requirements set out in the mandate.

In 2018, when it reformed the consultancy system and introduced HAS consultants, the Commission stated that it needed to “pay particular attention to the content of the harmonised standards”,¹⁶⁹ with reference to *James Elliott Construction*. In practice, this means that this third step - the “qualitative assessment” – gained in significance. These changes were and remain controversial.¹⁷⁰ Indeed they run against established Commission practice, whereby the technical content of harmonised standards was expressly left to ESOs to decide upon (the procedural approach set out above)¹⁷¹. That practice was a core element of the New Approach, and it can be argued that it was enshrined in EU law through Regulation 1025/2012.¹⁷² By extending scrutiny ever further in the technical content of harmonised standards, the Commission is thus affecting the very foundation of the ESS.

In addition to these deep issues of principle, using HAS consultants to delve into the content of proposed harmonised standards raises some practical problems.

To begin with, if one assumes that translating the Commission mandate into a harmonised standard is a non-trivial task, there is no reason to believe that the opinion of the HAS consultant on the adequacy of the standard is necessarily to be preferred to the collective view of the experts gathered in the ESO technical working group and its decision-making bodies.

Furthermore, at the time when the mandate is issued, the technical content of a potential harmonised standard is unknown or at least undetermined: this is the very reason why an expert organisation like an ESO is needed and why it takes time for the ESO to develop the standard. For a consultant to opine a

¹⁶⁹ *Supra*, note 165 at 3.

¹⁷⁰ Leaving aside that, as set out above under Heading 3.4.1., European courts have not read *James Elliott Construction* so broadly in subsequent case-law.

¹⁷¹ *Supra*, Heading 2.2.1.

¹⁷² See the detailed analysis made in a Legal Opinion on the European System of Harmonised Standards prepared for the German Federal Ministry for Economic Affairs and Energy (August 2020) at 25-42, available at www.bmwk.de.



posteriori that the proposed harmonised standard does not satisfy the requirements of the mandate can amount to mere second-guessing as to the meaning and interpretation of the mandate in the light of information that was simply not available *a priori*.

Finally, public choice theory would suggest that HAS consultants could be captured by participants in the standard development process in order to re-open debates that took place during that process, or alternatively that HAS consultants could have the incentive to find issues with proposed harmonised standards in order to justify their role under the HAS consultancy system.

In the absence of access to case-by-case empirical data, it is impossible to verify these theoretical suggestions. Only with such data could one test whether there is a significant loss in efficiency in the development and production of hENs due to the current Article 10(5) review process, and whether any such loss is adequately compensated by any improvement in the “correctness” of hENs with respect to the standardisation mandate.

In order to try to improve the efficiency of the process, a practice has emerged whereby the HAS consultant is involved at all stages of standard development, from the beginning to the end.¹⁷³ However, in practice this means that the ESO decision-making process is altered, with the HAS consultant gaining a voice – if not a veto – throughout the process. Whilst the Commission indicates that it is careful to ensure that HAS consultants do not overstep their role, the line between “assessing” and “contributing” can be fine, especially if the HAS consultant is involved throughout. This goes to the heart of the procedural model underpinning the ESS. Indeed the participation of the HAS consultant could affect both representativeness and consensus decision-making within the ESO. Paradoxically, the 2018 Commission Communication that introduced the current system of reliance on HAS consultants mentioned the need to verify that the “development process has been inclusive” as one element that justified closer monitoring of harmonised standards.¹⁷⁴

4.4.3. Delays and failures to cite hENs in the OJ - Empirical evidence

In the absence of insight into the assessment of individual hENs, it is difficult to reach a firm conclusion on the effects of the review process, and even more difficult to make a normative pronouncement.

The aggregate evidence put forward by the Commission in its recent Report on the Implementation of Regulation 1025/2012 shows that the accumulated backlog in the Article 10(5) procedure has begun to recede.¹⁷⁵ In particular, the Commission was able to significantly reduce the median and average time between the delivery of hENs to the Commission and their citation in the OJ, from 238 and 298 days, respectively, in 2018, to 108 and 121 days, respectively, in 2021.¹⁷⁶

¹⁷³ See the CEN guidance on the HAS assessment process, available at https://boss.cen.eu/developingdeliverables/pages/en/pages/has_assessment_process/.

¹⁷⁴ *Supra* note 165 at 3.

¹⁷⁵ *Supra* note 115 at 6 and ff.

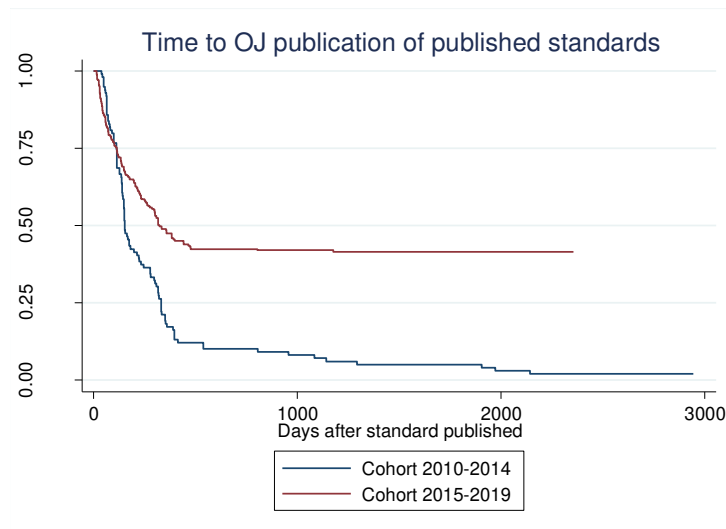
¹⁷⁶ *Ibid.* at 8.



The one piece of aggregate evidence that stands out in the Report, however, is the persistently low level of positive HAS assessments, namely 27,58%.¹⁷⁷ The Report does not provide much explanation for that figure, but it invokes this low approval rate to highlight the need for further work on the “development process of standards within the ESOs”.¹⁷⁸

Besides the aggregated data given in the Report, we have been able to produce and analyse detailed empirical data only for ETSI, which accounts for a few hENs (although they are significant ones, relating as they do to communications). Unlike the figures from the Commission’s report, which document how the pace of OJ citations has evolved over time during the period after the creation of the HAS consultants process, our data also allow us to make comparisons with earlier cohorts of standards, whose suitability for citation in the OJ was assessed using different processes.

Comparing ETSI hENs initiated after 2015 with those initiated in previous years, we can see that while earlier standards had been approved and published in the OJ at a rate of almost 100% within a few years after the publication of the standard by ETSI, this rate dropped to only somewhat more than 50%. In order to rule out that these differences are driven by censoring (for example more recent standards have a lower current OJ publication rate because many of them have yet to be published), we analyse the difference between standards cohorts using survival analysis. More recent standards were published in the OJ at a significantly slower rate; and after approximately 1.5 years after publication by ETSI, the chance for a yet unpublished hEN to still be published in the OJ becomes very low. The differences in OJ publication rates between more and less recent standards cohorts are thus not driven by censoring, but by a fairly dramatic drop in the rate at which the Commission approves hENs developed by ETSI.

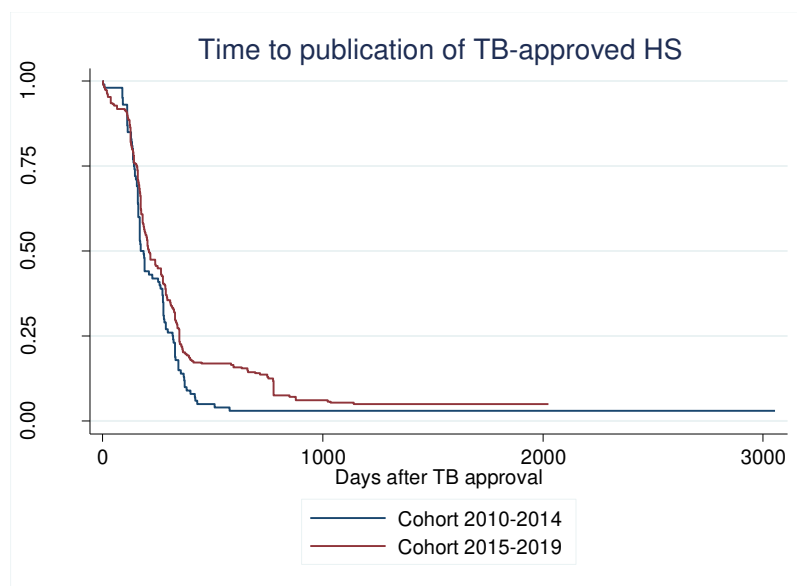


¹⁷⁷ Ibid. at 7.

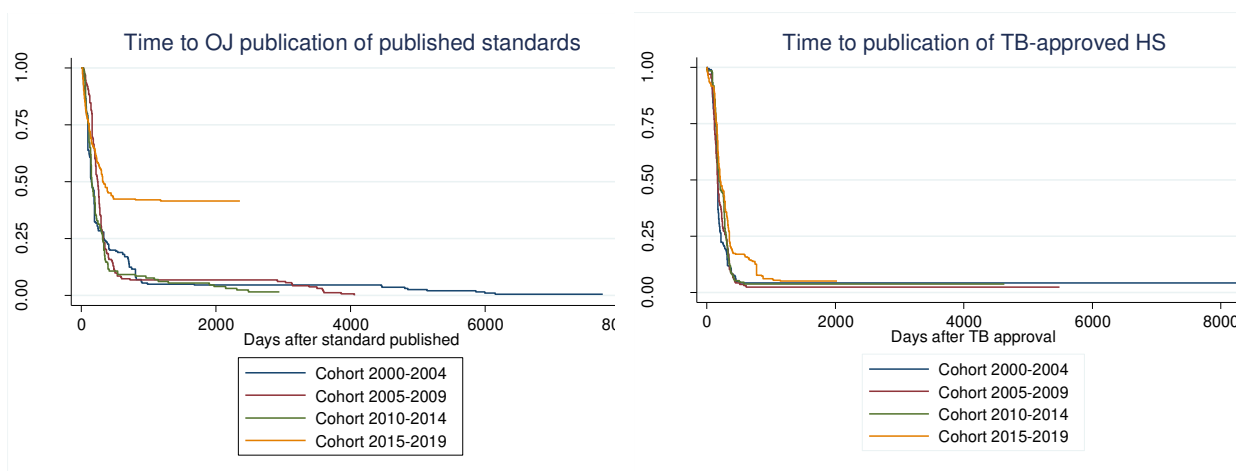
¹⁷⁸ Ibid.



In addition, there is some evidence that a share of ETSI hEN work items initiated more recently has taken more time than previous standards from approval of the work item by the ETSI TB (for example formal beginning of the standardisation activity by ETSI) to completion (publication of the EN by ETSI); nevertheless, these differences are considerably less dramatic than the differences in the rates at which ETSI hENs are approved by the Commission and published in the OJ.



Even over longer time periods of up to 20 years, these changes in the process of developing and approving hENs developed by ETSI are unique, and unprecedented. All previous TB-approved hEN work item cohorts at ETSI have been developed and published in the OJ at very similar rates; only the most recent cohort stands out by the longer time-to-develop, and lower rates of publication in the OJ.





Overall, at least at ETSI, it is thus clear that the process for the review, approval and OJ citation of ETSI hENs has become considerably less smooth in recent years.

In the absence of empirical data on individual cases, we cannot investigate these observations further. In addition, we do not have comparable data for CEN and CENELEC, which respectively account for significantly larger numbers of standards offered for OJ citation.

4.5. Strategic significance of European standardisation and global geopolitics

4.5.1. European standardisation as global strategy

When it comes to its global dimension, the Strategy is also characterised by a blend of non-economic public policy objectives with industrial policy and competitiveness.

As far as non-economic public policy objectives are concerned, the Strategy advocates greater co-ordination between Member States, ESOs, and the “EU industry”, in defence of European values, in international standardisation. At first sight, this runs against the grain of the dual nature of standardisation, as set out above: public authorities take a hands-off, self-regulatory approach to standardisation, voluntarily leaving some autonomy to private actors (which include the ESOs as private associations). On their side, private actors take part in a global community of stakeholders sharing a common ethos, which also contributes to creating some distance from the public authorities of the various jurisdictions where these actors operate. The Strategy calls for an alignment that would put pressure on the standardisation ecosystem. In practice, since Member States, ESOs, and EU industry are not used to co-ordinating their actions, this co-ordination would therefore come at a significant price and not without some delay.

Next to the non-economic public policy dimension, there is a second strategic dimension to European standardisation at the global level, relating to industrial policy and competitiveness, particularly in the digital economy.¹⁷⁹ It is less clearly explained in EU documents, but it emerges from a contextual reading of the Strategy,¹⁸⁰ together with other instruments such as the DMA, the DSA, the AI Act, and the Data Act. Looking back at EU policy in the digital sector over the past 30 years, it is apparent that industrial policy very much relied on the application of basic market economy principles in the liberalisation phase of the 1990s and the early 2000s. When the digital sector began to consolidate in the 2000s, the EU was by and large betting on markets to do the work, with a stable of large homegrown telecom firms that could morph into global players (former incumbents like Orange or Telekom, or more recent firms like Vodafone). The rise of the giant US platform firms that dominate the sector today was not foreseen by

¹⁷⁹ For an overview of the evolution of European industrial policy and its contemporary form and content, see Jacques Pelkmans, “European industrial policy”, in Patrizio Bianchi and Sandrine Labory, eds. *International Handbook on Industrial Policy* (Cheltenham: Edward Elgar, 2006) 45-78.

¹⁸⁰ The insistence on coupling R&D&I efforts with standardisation makes perfect sense against the backdrop of the industrial policy sketched out in this paragraph.



the EU, and to some extent, the initial reaction was to hope for similar application-level firms to emerge in Europe.¹⁸¹

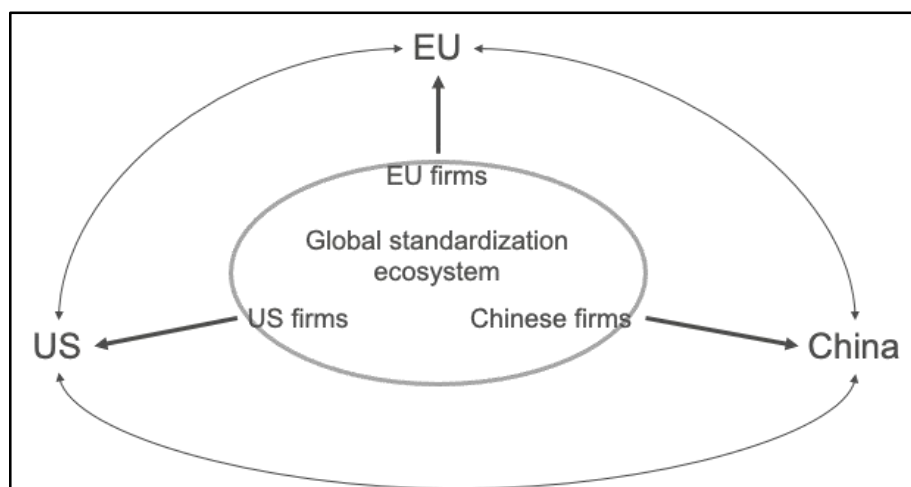
Now, more than a decade later, with the new “platform law”, as exemplified by the DMA and DSA, EU industrial policy is entering a new phase: hopes have been dashed for EU platform giants on the US model to ever emerge. It is more likely that the EU digital industry will be made up of firms in the SME and even large corporate range (but not global behemoths). This is where standardisation becomes strategically important, since it is a tool whereby an industrial ecosystem can be constructed and implemented, wherein European firms can find their place and prosper.¹⁸² Standardisation could then be seen as a spearhead for EU industrial policy and competitiveness, used to create the conditions for EU firms to flourish.

4.5.2. The geopolitical debates

At the global level, as mentioned earlier, we have a picture whereby each of the three major trading blocs – the EU, US, and China – is assessing the global dimension of its standardisation policy in the light of what the other two blocs are doing, or perceived to be doing.

In the middle of all this, there is the global standardisation stakeholder community, the private side of the standardisation ecosystem, which is by and large one and the same across the globe, as explained previously.¹⁸³

The geopolitical game involves policy makers within each of the three blocs trying to exert some pull over the global community. This is shown at the centre of the figure below, where the global standardisation ecosystem is subject to centrifugal forces coming from the three trading blocs and exerted on “their” respective firms.



¹⁸¹ The enactment of EU network neutrality legislation (Regulation 2015/2120 laying down measures concerning open internet access [2015] L 310/1) signalled a loss of faith in the ability of European network operators to become global behemoths, but paradoxically for the EU it comforted the position of the US-based platform giants (with a massive wealth transfer).

¹⁸² See how the ever-present concern of scalability is now addressed in European Commission, *A European Strategy for Data* COM(2020)66 (19 February 2020) at 15 et s.

¹⁸³ See *supra*, heading 2.2.2.



Policy makers may act on the global standardisation system through a variety of instruments. For instance, within the bounds set by international trade law, they may define which standards are eligible for reference in public procurement, or select individual standards for certain purposes (e.g. spectrum regulation), hereby explicitly or implicitly giving preference to standards developed by certain SDOs. These instruments rely on the “pull factor”, i.e. the possible influence of policy makers on demand for the standard and for standard-compliant products within their specific region, to create incentives shaping the processes of global standardisation. Policy makers may also rely on the “push factor”, for example directing representatives of national agencies to participate in certain SDOs, or providing financial support for the participation of academic researchers in these SDOs.

Nonetheless, policy makers have limited direct influence over the global standardisation ecosystem directly (in keeping with the prevailing self-regulatory model), when compared to the most active stakeholders, namely firms (especially larger multinational corporations). Governments may thus seek to steer the global standardisation ecosystem indirectly via “their” firms, along the following lines. There may be some correlation between the objectives of national or regional policy makers and those of companies perceived as “belonging” to their respective country or region. Relying on this correlation, policy makers may seek to bolster participation by “their” firms in international standardisation, limit participation by “foreign” stakeholders in their own domestic standardisation processes, or even seek to provide for some co-ordination between the standardisation strategies of “their” stakeholders.

As a preliminary remark, we used quotation marks liberally in the previous paragraph because the nature of the link between policy makers and “their” respective firms is not clear. As we saw earlier, amongst the global stakeholder community, the origin of firms has been downplayed.¹⁸⁴ Furthermore, many firms are truly global: their head office might be in one region, but they have research and production facilities across all three regions, as well as a substantial customer base in all regions as well.

Furthermore, the strength of this link between policy makers and firms varies significantly between regions, and between firms. Especially in Asia, many large corporations are directly State-controlled, or alternatively public authorities have significant influence over corporate decisions. The State may also assist firms with access to financing, or restrict foreign investments or acquisitions of domestic firms. These strategies may not only help to strengthen those domestic firms, but they also foster their dependency upon “their” respective national governments. In Europe, however, interdependencies between national and European policy makers and individual firms active in Europe are less marked. For one, EU institutions have few specific policy tools to influence corporate decision-making within individual firms active in Europe.

In order to exert influence on the global standardisation ecosystem via “its” firms, each bloc must therefore first induce firms to align themselves more closely with the public authorities of the bloc in question. Conversely, other firms will be branded “foreign” and will be kept at a distance. When carried out by three trading blocs in parallel, these dynamics have the potential to be highly disruptive, if not outright destructive, of the proper functioning of the global standardisation ecosystem. Even if not all

¹⁸⁴ *Supra*, Heading 2.2.2.



trading blocs try to effect a greater alignment between “their” respective firms and their public authorities, adverse consequences are still likely. In such a case, however, the bloc that is not playing this inducement game might find itself at a disadvantage, all the more if it is not in a position to offer comparable favours to bring firms to align with its positions.

In addition, trading blocs are interacting with one another, as reflected in the curved arrows in the above figure. Most commentary centres on the tensions between the US and China, of which standardisation is but one facet. Next to the US-China tension, commentators frame the rest of the puzzle as a simple matter of the US pressuring the EU to line up behind it and confront China. However, given the central place of the European public and private interests in the global standardisation ecosystem, a more nuanced analysis is warranted.

Indeed the three pairs of major blocs (EU-US, EU-China, US-China) evidence different patterns of convergence or divergence on four main issues surrounding the global standardisation system:

- Fundamental principles at a constitutional level, going beyond standardisation, having to do with the place and role of the State in society and the economy;
- The perspective on the global standardisation ecosystem. The US government has always remained at some distance from the global ecosystem, given the disconnect between the domestic organisation of standardisation (around mostly industry-driven SDOs) and the international level.¹⁸⁵ In contrast, the EU is fully invested in the global ecosystem. At first sight, China shares the EU commitment towards the ecosystem, yet it is also trying to steer it towards more alignment between public authorities and private stakeholders.
- Interplay between standardisation and public policy: there is some tension between the EU and the US, both in the policy values themselves and in the willingness to engage in public-sector intervention to secure them. As regards China, on paper, China continues to look to the EU for legislative and regulatory inspiration, certainly as regards the private sector. These non-economic values are not applied equally against the Chinese public authorities, however, in contrast with the EU.
- Industrial policy and competitiveness: the EU and the US are in tension, since US policy does not ascribe the same strategic significance to standardisation in this regard, and US authorities are likely to resist a kind of “standardisation as spearhead” industrial policy as outlined above. There is probably more convergence between the EU and China on this, but here as well some ambivalence remains, considering what the ultimate ends might be (creating an environment for EU firms to flourish or opening a path for Chinese behemoths to arise).

¹⁸⁵ See Walter Mattli and Tim Büthe, *The New Global Rulers – The Privatization of Regulation in the World Economy* (Princeton: Princeton University Press, 2011). This has never stopped US firms from taking part in standardisation processes globally and locally outside the US.



5. PATH FORWARD

As argued throughout this paper, the ESS is characterised by one set of institutions – the ESOs, the NSBs, and the standardisation community with its formal and informal rules and norms – with a dual public-private nature. From the public perspective, it is a largely self-regulatory system subject to a set of mostly procedural governance principles. From a private perspective, it is a co-operative endeavour to achieve a mutually advantageous result, where private stakeholders with their competing particular interests are represented by individual experts that form a community with shared professional norms.

Furthermore, the ESS carries out two different and equally important roles. On the one hand, European Standards support EU policy, not only directly – where voluntary European Standards are cited in EU regulations and/or used to presume conformity with EU law – but also indirectly and more generally, where European Standards also enshrine a set of values and objectives held by European policy makers and shared by the private actors. On the other hand, European standards are an important tool for European industry, in order to ensure product quality and interoperability and to promote the global competitiveness of European businesses and technology.

Historically, the ESS has carried out both of these roles successfully. The New Approach – now in Regulation 1025/2012 – and the established system for conformity assessment have resulted in the development of thousands of technical specifications that help protect European consumers and the environment from hazardous or otherwise non-conforming products, while keeping EU markets open for international trade – to the benefit of European consumers enjoying lower prices, and access to the latest technology. At the same time, it cannot be emphasised enough that European leadership in global industry-led standards development efforts has given competitive advantages to European firms, including in the ICT sector where Europe is otherwise not generally in a position of global leadership.

The two roles of the ESS are in tension and must be carefully balanced. The ESS role in support of EU policy calls for broad involvement of all relevant European societal interests, in order to ensure an adequate and legitimate translation of policy into technical specifications. At the same time, European leadership in a global competitive standardisation ecosystem is predicated on efficiency and technical performance, and requires consequent engagement and involvement of global technology leaders. The success of the ESS so far indicates that the New Approach found the right balance between legitimacy and adequacy, on the one hand, and efficiency and expertise, on the other.

In this section, we will assess the suitability of the recipes promoted by the Commission's Standardisation Strategy for improving the performance of the ESS with respect to its two different roles. We will first address the ability of the ESS to produce standards in support of EU policy goals, and then turn to the use of the ESS in support of the EU's broader strategic and industrial goals.



5.1. Reducing frictions in the use of European standards in support of EU regulation

In recent years, the implementation of European standards in EU regulations has become less smooth. As we have seen, the Commission has reinterpreted its role under the New Approach, and increased its oversight over the substance of European Standards. The more demanding *ex post* review of hENs by the Commission, assisted by HAS consultants, has resulted in numerous hENs ultimately not being cited in the OJ (or being subject to restrictions). The observed inconsistencies between the hENs and the original standardisation mandates now justify, in the eyes of the Commission, broader efforts to reform ESO processes for developing hENs. In addition to improving the adequacy of the substance of the resulting standards, these reforms are intended to promote the procedural legitimacy of ESO processes, by reflecting EU democratic values.

We will discuss, one by one, key elements of this reasoning and their weaknesses.

5.1.1. The Commission's revisited procedural approach

In general terms, the Strategy heeds the traditional 'procedural approach' to standardisation policy, whereby the role of the public authorities is to define and enforce general procedural and institutional principles for the development of certain standards. Subject to compliance with these principles, the public authorities defer questions of technical substance to the judgment of the expert technical community acting through the private standardisation bodies.¹⁸⁶

As noted above, closer review of the substance of hENs since 2018, by the Commission and with the support of HAS consultants, marks an evident departure from the Commission's traditional 'procedural approach'. The Strategy can be seen as an attempt to correct course and salvage the procedural approach: if hENs, as they emerge from the ESO, can be better aligned with EU policy requirements, the need for the Commission to review – and often reject – hENs on their technical substance would be reduced, if not obviated. In order to do so within the procedural approach, the Commission chooses to double down on the procedural requirements. In particular, the Commission urges ESOs to increase the inclusion of societal stakeholders and entrust NSBs with decision rights on issues related to EU standardisation requests.

Why would these heavier procedural requirements improve the alignment of hENs, as they emerge from ESO standardisation processes, with EU policy requirements? In principle, the standardisation community, working within the ESO, is able to handle policy issues. It is true that the community is traditionally associated with technical expertise, but as mentioned above, evidence points to a shared professional ethos that is responsive to social concerns. Indeed, the procedural approach has tested that shared ethos – as reflected in procedural principles – to safeguard objectivity in the decision-making on technical standards. Policy makers can thus rely on private bodies such as ESOs observing procedural principles to develop standards that objectively reflect the state of the art and the consensus of technical experts. Where, as is increasingly the case, the development of technical standards involves value judgments in

¹⁸⁶ As noted above, the CJEU endorsed the division of tasks under the New Approach in CJEU, 17 December 2020, Cases C-475/19P and C-688/19P, *Germany v. Commission* ECLI:EU:C:2020:1036.



implementing policy requirements, it is up to policy makers to specify these requirements as much as they can or wish to. Afterwards, policy makers can in principle rely on objective decision-making, in line with the shared ethos of the standardisation community, in order to embody these requirements in technical specifications. If necessary, *ex post* control can be used to catch the odd failure.

The Strategy appears to rest on the assumption that *ex post* control is pointing to a broader failure of ESO processes and thus to a need to question the traditional formulation of the procedural approach. Rather than rely on general procedural principles such as openness, impartiality, transparency and consensus, to ensure objective decision-making, the Commission seeks to promote more specific procedural provisions in order to foster the production of standards infused with “EU values”. There are two different aspects to this “revisited procedural approach”: a requirement for standardisation processes to be led by “European” stakeholders, and a procedure importing elements of democratic legitimacy that are characteristic of lawmaking. The combination of these two procedural elements – leadership of “European” stakeholders in the decision-making on standards, and democratic values such as representativity and inclusiveness, are thought to result in standards that promote “EU interests and values”. Each of these propositions – the definition of “European” and the exclusion of “foreign” stakeholders, the application of democratic principles to technical standardisation, and the unquestioning supposition that it is desirable for standardisation decisions to reflect a set of specifically European values – is problematic, and none of these propositions is defined or elaborated upon in the Strategy.

5.1.2. “European standards decided by European players”

Even more clearly than the Strategy itself, accompanying Commission materials reveal an intention to rid decision-making on strategically relevant standards of any “undue influence of actors from outside the EU and EEA”. Therein, the Commission states that “European standards, which support EU policy and legislation, must be decided by European players.”¹⁸⁷

5.1.2.1. Definition of “European” and “foreign” stakeholders

A first – and non-trivial – issue, is to specify exactly what it meant by “outside actors” or “European players”, so that the Commission’s intention can be operationalised and firms know on which side of the line they fall.

As a starting point, it is much more complicated to label firms or other legal entities as “European” or not, than it is for individuals.¹⁸⁸ A number of factors can be used to attribute a location to a legal entity, among others:

- The jurisdiction where the entity is legally created (place of incorporation);
- The location where the head office (headquarters) is physically situated;
- The location where major decisions are taken;

¹⁸⁷ « New approach to enable global leadership of EU standards promoting values and a resilient, green and digital Single Market », Press release of the European Commission of 2 February 2022. https://ec.europa.eu/commission/presscorner/detail/en/ip_22_661

¹⁸⁸ For which the EU Treaty already contains an operational definition of “EU citizenship” at Art. 20, relying on nationality.



- The location where substantial assets (buildings, facilities, intellectual property, and so on) or personnel are located;
- The location where contractual relationships are entered into;
- The location where business is made, which is often where customers are situated.

In all cases, locating a legal entity is made more difficult by the intricate corporate structures that are common today, where an economic unit can be made up of many distinct but interrelated legal entities. Furthermore, there is no horizontal rule on locating a legal entity: various legal fields (corporate law, tax law, competition law, private international law, and so on) use different factors from the list above (or other factors).

As pointed out above, Commission decisions issued after the Strategy put forward a definition of “European” that relies on the location of the ultimate controlling entity, to the exclusion of other factors listed above that are indicative of a footprint in Europe (subsidiaries, personnel, assets, sales, R&D activity, and so on). It appears that the Commission sought a relatively limitative criterion, in which case the place of incorporation or the location of the head office could have been chosen. Yet It is striking that the Commission, given the many existing criteria, developed a new one, which is furthermore not always easy to apply.¹⁸⁹ For the sake of argument, we will assume that this is the intended definition of “European” for the purposes of the Strategy.

For starters, this definition does not have much distinctive force. While firms controlled by an entity from outside Europe may be subject to foreign influence, this does not imply that European firms within the meaning of the Strategy are immune to such influence. European firms may need to abide by foreign laws, seek to make business with foreign firms and governments, and otherwise be receptive to foreign influence. The shareholding of public companies is usually distributed all over the world, and the individual directors and executives may often hold the citizenship of countries other than that where the company appears to be established. By and large, a “purity test” to determine that a company or organisation is free of foreign control is difficult to reconcile with the modern reality of large corporations.

Furthermore, that definition might lead to a conflict with WTO and other international trade law instruments, if it somehow leads to differentiated treatment between “European” and “non-European” firms in the application of trade-relevant legislation, such as would run afoul of the national treatment principle.¹⁹⁰

Leaving aside international trade law, as a matter of EU law and policy, the criterion of “Europeanness” arising from the Strategy also clashes with other major areas of EU law, where the law rather relies on some form of effects test to establish its scope of application. Such is the case with competition law at the

¹⁸⁹ This can turn into a nested process if the controlling shareholder is itself a legal entity. It can also lead to complications if there is more than one controlling shareholder and their geographical attachment differs.

¹⁹⁰ See GATT 1994, Art. III, as specified in the TBT Agreement, *supra* note 5 and GATS, Art. XVII.



EU and Member State level,¹⁹¹ with data protection law,¹⁹² all the way to the current set of new regulations in the digital sector.¹⁹³ Of course, the harmonisation directives and regulations that trigger the standardisation mandates are themselves also applicable to all products and services put in circulation within the EU, irrespective of where the producer is located. Broadly speaking, irrespective of the controlling entity or of the head office location or place of incorporation, all firms active in the EU are subject to these legal instruments by virtue of their commercial presence in the EU (even if it is simply a matter of conducting business with EU customers). Most of the firms that would be excluded from certain aspects of European standardisation because they are not “European” are otherwise commercially active in the EU and therefore subject to EU laws and regulations in the areas mentioned above. It is therefore odd for these firms to be subject to the obligational burden of EU laws and regulations throughout their operations in the EU, whilst being deprived of the opportunity to participate in a forum such as the ESOs, where the expertise of firms is brought to bear to develop technical specifications that flow into EU law.

It may perhaps even be counterproductive to do so, given the experience in other areas of EU law. Complex instruments such as the GDPR or the new Digital Markets Act impose new obligations on target firms, and therefore give rise to compliance and enforcement issues. Yet it is difficult to implement these instruments – for example, develop their content to the extent that they are applicable in practice – without some form of cooperation from the side of the targeted firms. The GDPR contains a number of provisions to that effect,¹⁹⁴ and similarly the DMA makes room for some participation from the targeted firms in specifying its content,¹⁹⁵ including via standardisation.¹⁹⁶ Experience shows that, even if firms will challenge enforcement actions, they eventually begin to internalise the policy concerns behind the legislation and even become active participants in implementation and compliance efforts. In a context where the Commission is fearful that “non-European” firms will unduly influence European standardisation processes, it might be preferable to emulate what is done elsewhere in EU law and try to bring these firms closer to EU policy aims, rather than shutting them out. This would have the added advantage of consistency in the approach towards non-European firms across EU law.

5.1.2.2. “Foreign influence” in the development of hENs

The notion that European standards should be free of foreign influence contrasts with the reality of European standardisation. For one, because of their agreements with ISO and IEC, and in line with TBT principles, CEN and CENELEC generally give preference to international standards over developing homegrown ENs, even for hENs: an increasing share of CEN’s ENs cited in the OJ of the EU are identical to ISO standards. This evolution is generally positive – allowing companies to rely on international standards for presumption of conformity with EU regulations reduces barriers to international trade between the

¹⁹¹ As confirmed by the CJEU, 6 September 2017, Case C-413/14 P, *Intel v. Commission* ECLI:EU:C:2017:632, Rec. 40 and ff. for Art. 101 and 102 TFEU. For merger control, see General Court, 25 March 1999, Case T-102/96, *Gencor v. Commission* [1999] ECR II-753. Member States generally follow similar approaches in their respective national competition laws.

¹⁹² GDPR, *supra* note 59, Art. 3.

¹⁹³ See the Digital Markets Act (DMA), *supra* note 77, Art. 1 and the Digital Services Act (DSA), *supra* note 78, Art. 2 (where the criterion is the place of establishment of the recipient of the service, coming close to an effects test); see also the proposed AI Act, *supra* note 71, Art. 2 and the proposed Data Act, *supra* note 80, Art. 1.

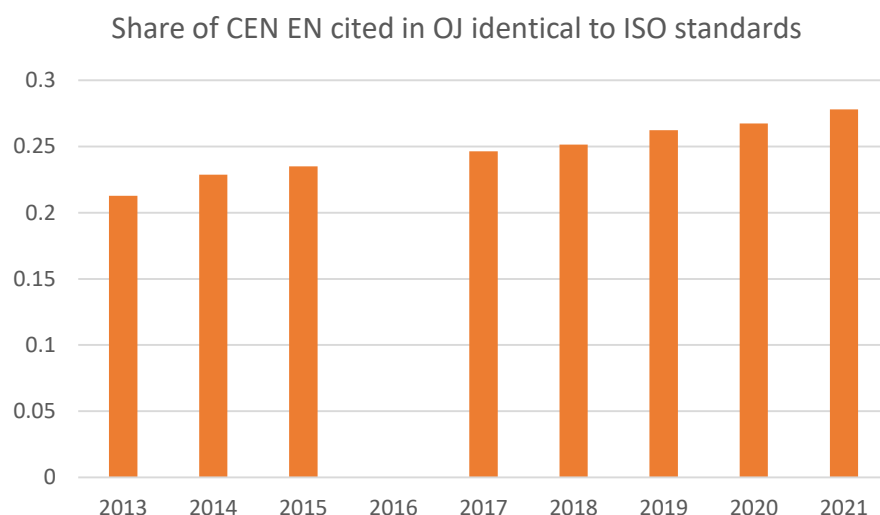
¹⁹⁴ GDPR, *supra* note 59, Art. 40 and ff.

¹⁹⁵ DMA, *supra* note 77, Art. 6 and 8.

¹⁹⁶ *Ibid.*, Art. 48.



EU and the Rest of the World. Nevertheless, it also implies that decision-making on these technical standards may be driven by “non-European” stakeholders.



At ETSI, as we have seen, decision-making on ENs is expected to be based on national delegations conducting public inquiries to assess the national consensus on standardisation decisions. Nevertheless, the delegations entrusted with leading this process are open to EU-based subsidiaries of multinational firms – and in some cases, such subsidiaries constitute the majority of delegation members.

In addition to participating in the decision-making on ENs through their subsidiaries in various national delegations, foreign firms (within the meaning of the Strategy) may “support” the relevant work items with their technical contributions. Intriguingly, the share of such organisations among the supporting organisations of hENs (as listed in the work programme) has been much larger than for other, non-harmonised ENs. The share of foreign organisations among the supporting organisations of Harmonised ENs is even higher than their share in other ETSI deliverables (including TS and TR). There is no statistically significant difference between harmonised and other non-EN standardisation deliverables (but the number of standardisation deliverables other than ENs listed as harmonised is very low).

		Harmonised	Others
EN	pct foreign-based	0.226	0.114
	N	2171	6943
Others	pct foreign-based	0.148	0.174
	N	81	26650



Overall, it is thus clear that current ESO processes offer foreign firms various opportunities to participate in the development of and decision-making on the standards used in EU regulations. There is no indication that the influence of foreign firms on ENs has led to less reliable or otherwise inadequate hENs. On the contrary, the evidence collected for the DG GROW study shows that stakeholders prefer hENs by far when it comes to assessing conformity with EU regulations, and ENs can and are widely used in EU regulations. While the Commission has recently deemed larger numbers of hENs to be inconsistent with the standardisation requests, no information has been made available that would allow the public to assess the nature of the Commission's concerns. We thus do not know to what extent the alleged defects of the rejected hENs may be attributed to foreign influence, nor whether the concerns of the Commission with the hENs developed by ESOs are widely shared by other stakeholders and the users of European standards.

5.1.2.3. Absence of equivalent rules in other countries

Other OECD countries do not entertain a rule that would require standardisation organisations to exclude foreign stakeholders from decision-making positions in order to make their standards eligible for use in government regulation. Notably in the USA, OMB Circular A-119 (2016) states that only standards developed by standards bodies complying with certain due process principles (such as consensus, balance, and openness) are eligible for use in federal regulation.¹⁹⁷ There is no requirement that decision-making rights are exclusively held by U.S. players, and the policy establishes no preference between national or international standards. Nevertheless, government agencies are explicitly encouraged to use international standards in regulations, in order to promote international trade.¹⁹⁸

The standards of numerous private SDOs have been incorporated by reference into US regulations. Many of these SDOs have a significant international presence, and non-US stakeholders play significant roles in these organisations and their leadership.

5.1.2.4. Impact on ESO ability to compete at the global level

Excluding “non-European” stakeholders from decision-making on hENs may also affect ESO ability to attract and retain the participation of these stakeholders in their general standardisation activities. Losing the technical and financial contributions of these often large and technologically leading stakeholders may significantly impact the capacity of ESOs to produce standards that can compete with those from other SDOs at the international level. As we have seen, the openness of ESOs to all firms worldwide, as shown for instance in their choice of ETSI membership to participate in 3GPP, has also strengthened the ESO position in international alliances.

The Commission argues that it in no way intends to close European standardisation to *global participation*, but only to preclude the influence of “non-European” actors on standardisation *decisions*. Nevertheless, offering “non-European” firms the opportunity to pay membership dues and make costly technical contributions without having a voice in decision-making does not seem like a winning proposition. These

¹⁹⁷ OMB Circular A-119, *supra* note 92.

¹⁹⁸ “This policy does not establish a preference between domestic and international voluntary consensus standards. However, in the interests of promoting trade and implementing the provisions of international treaty agreements, your agency should consider international standards in procurement and regulatory applications.” <https://www.whitehouse.gov/wp-content/uploads/2017/11/Circular-119-1.pdf>



firms could perhaps withdraw from participating in the development of hENs, thus depriving hENs – of all standards, those that are most relevant to the EU – of a significant share of the technical contributions, yet continue participating in other ESO standardisation activities. Given that hENs and other standardisation deliverables are developed by the same working groups, such an on/off participation might prove unsustainable for the firms and the ESO, or conversely, this would perhaps still leave them with too much influence over the overall functioning of ESOs in the eyes of the Commission. “Non-European” firms may well decide that under these conditions, membership and/or participation in the ESOs no longer justifies the significant costs of membership dues and technical contribution.

At the very least, therefore, it would be advisable for the EU to bear in mind its own geopolitical aims when pushing to make the processes of developing hENs more “European”. Considering its current position in the global standardisation ecosystem, one would expect the EU, of all trading blocs, to put up the most resistance against any attempt to fragment the global standardisation stakeholder community, since it has the most to lose therefrom. This is why it is surprising to see plans to split the stakeholder community between European and non-European categories.

5.1.3. Representation and democracy in the development of European standards

In addition to “undue influence” by “non-European” actors, the Commission perceives that the standardisation processes of ESOs may be undermined by a lack of “integrity”, “due process”, or respect for democratic values. As discussed, there are at least three dimensions to this “democratic” quality of standardisation processes: balance between different stakeholder categories with their respective private interests, representation of public interests through public authorities or associations tasked with uniquely representing one set of public interest considerations, and inclusion of smaller stakeholders to allow them to reap the benefits of direct participation.

5.1.3.1. Limits and problems of representation

On a narrow reading, the Strategy appears to conflate and confuse these different considerations. For instance, where the Commission calls for the “inclusion of civil society” – clearly, all standardisation participants are members of the civil society; and all individual participants are also consumers and workers, and share a concern (to varying degrees) for their environment. The Commission’s actual goal is not to populate standardisation processes with more actual consumers or employees, but to increase the influence of a certain set of specifically designated organisations whose mandate is to exclusively represent these concerns – “societal stakeholders”, for example, Annex III and other non-profit organisations.

The representation of different public interest considerations by different designated representative associations is certainly not the only possible way to defend the public interest. The representation of a heterogeneous class such as “consumers” raises many complex issues: while some consumers may have a preference for stricter standards to ensure the highest quality, other consumers may root for laxer standards to open the market to cheaper alternatives. Some consumers may have a preference for large networks of compatible devices, whereas other consumers prefer having the choice between different technologies. Consumers do not have homogeneous preferences, and often may not even know the



implications of different standardisation decisions. While representative associations may make their best efforts to ascertain the preferences of their constituency, there remains a fundamental difference between the heterogeneous interests of citizens in their capacity as consumers, and the position adopted by the associations tasked with the representation of these interests. The same goes as regards workers or the environment.

In light of the significant weight that the Commission places on the inclusion of “civil society” in standardisation, there is surprisingly little attention to the actual practice of representation of different societal interests, such as the extent to which actual consumers or workers identify with the positions of the associations tasked with their representation. In the absence of political competition for the right to represent a large and diffuse class of interests, Annex III organisations have considerable latitude in the interpretation of their mandate. As it is the Commission that ultimately selects Annex III organisations and provides the funding for their participation in standardisation, the Commission may also exercise significant influence.

The representation of societal interests through specifically identified representative associations is an established feature of the ESS at least since Regulation 1025/2012, and so are the fundamental challenges that it poses. The Strategy builds on a decades-old tradition of Commission communications deploring the current state of limited societal stakeholder representation in European standardisation, and calling upon ESOs to make greater efforts in that direction.

Yet the most concrete element in the Strategy, the amendment to Regulation 1025/2012 in order to give voting rights on European standards to NSBs, represents an about-face from precedent trends. In previous policy rounds, the NSBs were criticised at least as much as ESOs, for lagging behind in ensuring the representation of underrepresented stakeholder groups. Since the 1990s, the Commission has advocated greater participation of these stakeholder groups directly at the EU level, within the ESOs,¹⁹⁹ as a remedy for the shortcomings of the NSBs. It is surprising to read in the Strategy that the NSBs are now seen as guarantors of balanced representation for European standard development.

5.1.3.2. Evolving goals of representation

More broadly, stakeholder representation is usually seen as instrumental to an ulterior objective. By way of background, guidance on this point can be sought in social science literature, where interest group theory is fairly well developed.²⁰⁰ the literature observes that interest group activity can fulfil a number of different purposes, and there is no consensus on whether it succeeds in doing so. At the normative level, it follows that interest group involvement has both downsides and upsides, that need to be carefully weighed against one another.

¹⁹⁹ As reflected in Regulation 1025/2012, *supra* note 26.

²⁰⁰ See among others the contributions of Madeleine O. Hosli et al. and B. Guy Peters in Andreas Warntjen and Arndt Wonka, eds., *Governance in Europe – The role of Interests Groups* (Baden-Baden : Nomos, 2004) and the overview of US literature in Andrew McFarland, “Interest Group Theory”, in L. Sandy Maisel et al., eds. *The Oxford Handbook of American Political Parties and Interest Groups* (Oxford: OUP, 2010) 37-56.



Throughout the evolution of EU standardisation policy, the rationale for stakeholder group involvement in standard development has never been expressed in much detail. In the earliest discussions, in the 1990s, the rationale was still framed in “private” terms: standardisation is a service, and consumers, workers, and so on, are customers of that service – just as much as producing firms. It follows that these customers should have a say in the provision of standardisation services.²⁰¹ This rationale implies that stakeholders are defending their own interests and that their involvement serves no greater public objective.

Around the turn of the century, the rationale for stakeholder group involvement took a more “public” dimension, however, centred on the need for involvement in order to ensure that standard development is accountable and legitimate.²⁰² Here stakeholder involvement serves the greater good, although not necessarily on the substance of the standard. Rather, such involvement would endow the resulting standard, whatever it may be, with greater legitimacy in the eyes of public authorities and the general public. This rationale is defensible; it must be pointed out, however, that such legitimacy and accountability can come at a cost, in terms of the efficiency of the process.²⁰³

Twenty years later, in the new Strategy, the rationale has evolved further: the Commission presents stakeholder involvement as a matter of “inclusiveness”,²⁰⁴ which would imply that it is a value in and of itself: standardisation processes should be open to let more stakeholders partake in the benefits of direct participation. Alternatively, it can be seen as a way to counter-balance corporate interests to ensure that the ESS “promotes EU interests and values”.²⁰⁵ Both rationales have weaknesses. If inclusiveness is a value in and of itself, it is not immediately apparent why it should prevail over fundamental values such as legitimacy or efficiency. If stakeholder participation is linked to achieving a desired substantive outcome, in line with EU interests and values, the empirical evidence is wanting. A strand of theoretical and empirical literature would rather predict that the general interest is not necessarily served by the combined action of specific interest groups.²⁰⁶

5.1.3.3. Misguided application of democratic principles to standardisation

In addition to “balance” and “inclusiveness”, the Strategy introduces one additional concept to the vocabulary of European standardisation policy, namely democracy (and “democratic values”).

Balance and openness are traditional procedural principles of standardisation. They ensure that standardisation is not driven by a coalition of narrow particular interests, but rather pursues an objective

²⁰¹ European Commission, *Green Paper on the development of European standardization action for faster technological integration in Europe*, *supra* note 11 at 35-36.

²⁰² See for instance the synthesis made in the Commission report *Efficiency and Accountability in European Standardization under the New Approach*, *supra* note 21 at 4, as endorsed by the Council in its Resolution of 28 October 1999 on the role of standardization in Europe, *supra* note 22.

²⁰³ The title of the Commission report, *ibid.*, shows that policy-makers were well aware of that trade-off.

²⁰⁴ Briefly mentioned in the Strategy, *supra* note 1 at 4 and elaborated in more detail in the Implementation Report on Regulation 1025/2012 accompanying the Strategy, *supra* note 113 at 4-5.

²⁰⁵ Strategy, *ibid.*

²⁰⁶ See the political science theory of “interest group liberalism” (around Theodore Lowi) and the corresponding economic theory of collective action (around Mancur Olson), which had their heyday in the 1970s and were incorporated into more complex theories in the following decades. These theories consider that interest groups are able to control certain activities and hijack them to serve their own goals, rather than those of the general public. Tweaking the balance between these groups might change the outcome, without necessarily bringing it more in line with the general interest.



technical consensus. Consensus in standardisation is to be clearly distinguished from compromises between the represented particular interests, as well as from the majority principle that is characteristic of democratic processes. Consensus in standardisation represents a situation in which all relevant considerations have been heard and addressed. Consensus means wide (but not necessarily unanimous) agreement among relevant subject-matter experts. The consensus emerging from standardisation expresses the viewpoint of experts on the objectively best technical solution to a given problem, in light of the current state of technology.

Representation of societal interests has long been added to the procedural principles of standardisation. Nevertheless, representation in this context is very different from political representation in a representative democracy. The primary function of representation in standardisation is epistemic – ensuring that consumer, worker, or environmental viewpoints are also heard and addressed in deliberations on technical standards. The value of this representation is not related to a specific number of votes, or other metric of power – just like any other considerations, the contributions made by the associations representing societal interests are reflected in a standard if they garner the consensus of experts. This point is well acknowledged in Regulation 1025/2012 itself, which states that participation of representative associations “does not entail any voting rights”.²⁰⁷

When complaining that individual firms have acquired more votes than the organisations representing the entire stakeholder community, the Commission breaks with Regulation 1025/2012, and uses a fundamentally different notion of representation, drawn from representative democracy theory, where representation is a matter of voting rights. Yet ESOs are not representative democratic bodies and were never conceived as such. It is true that ETSI, for one, entertains a system of voting, especially for ENs, where participants receive weighted votes according to formulae that differ depending on the matter at hand. CEN- and CENELEC also use weighted voting for ENs. Nevertheless, empirical evidence points to few formal votes being taken, in line with the general principle that standardisation is carried out on a consensus basis.²⁰⁸

5.1.4. Towards a decoupling of harmonised standards?

Against the backdrop of the preceding paragraphs, two potential responses are contemplated in the Standardisation Strategy: consecrating the departure from the procedural approach by expanding the Commission-led development of Common Specifications as an alternative to hENs for use in EU regulation; and, doubling down on the procedural requirements for the development of hENs, thereby also creating a significant impetus for more fundamental structural reforms within the ESOs.

Both responses would bring about a decoupling between the development of technical specifications for the purposes of EU law, on the one hand, and standards development within the global standardisation ecosystem, on the other hand. This is immediately obvious in the case of the first response – common

²⁰⁷ Regulation 1025/2012, *supra* note 26, Rec. 23.

²⁰⁸ It could also be the case that the formal voting rules have been internalised by the participants, so that power relationships are clear and formal votes become superfluous, along the lines of what can be observed in many instances under EU law.



specifications instead of hENs – which would mark a return to pre-New Approach times, where EU institutions themselves delved into the intricacies of technical specifications.

In the case of the second response – increasing the weight of requirements arising from EU law upon ESOs – the effect would come about more subtly. As reflected in recent studies commissioned or carried out by the Commission,²⁰⁹ stakeholders are already worried about the delays induced by compliance with the procedures of Regulation 1025/2012, in a context where standard development on the same topics is often also taking place outside of the EU and at the global level. In such cases, either global standard development is aligned with the EU timeline, which appears unlikely, or European standards under Regulation 1025/2012 are produced later than comparable standards elsewhere. In that latter case, the process of elaborating European standards under Regulation 1025/2012 will be decoupled from global standard development in the long run, with the risk that the ESO becomes a sideshow. In addition, trade law issues might arise if a later European standard differs from comparable standards. In the particular case where the comparable standard is an ISO/IEC standard that was developed faster than the European standard, specific obligations in the Vienna and Frankfurt agreements kick in, whereby the European standard should normally be aligned with the international standard.

By continuing to heighten the scrutiny of standardisation processes conducted under the aegis of Art. 10 of Regulation 1025/2012, in particular as regards harmonised standards, the Commission therefore risks to provoke a decoupling between European and global standardisation development, thereby undermining the very foundations of the successes of the ESS over the past generation, since the New Approach.

5.2. Leveraging the ESS to promote EU strategic goals globally

These EU-internal issues arise at a time of considerable stress for the international standardisation ecosystem. While standardisation has always been ripe with rivalries and contentions between competing industry interests, the rapid rise of Chinese stakeholders to positions of international leadership has raised the notion of a more systemic competition between different approaches to standardisation (and, more generally, to economic policy), with the USA, the EU, and China emerging as the main actors in this geopolitical game. At the same time as they increasingly recognise the potential role that standardisation may play in support of their own policy objectives, each of these actors accuses others of undue interference with the work of international, consensus-driven, and stakeholder-led standards organisations. Against that background, the technical objectivity of standardisation decisions may suffer, and ultimately, the very existence of a globally integrated standardisation ecosystem may be in jeopardy.

The Strategy sees potential in leveraging the ESS in order to promote EU strategic goals globally, in two crucial respects: firstly, projecting EU policy values to increase their global appeal and secondly, supporting European industry on the international scene.

²⁰⁹ See the Implementation Report on Regulation 1025/2012, *supra* note 113 and the earlier Ernest&Young study, *supra* note 62.



5.2.1. Global projection of European policy values

Given the global nature of the standardisation community, relying on the EU industry to fight for EU public policy priorities globally appears both to overreach and to underreach. It overreaches in that it would force the EU industry to incur political costs outside of the EU. It underreaches when it ignores or dismisses the fact that non-EU industry can also take EU public policies to heart (for various reasons) and contribute to furthering them in the course of standard development. This is all the worse if EU industry is defined too narrowly, as discussed above.²¹⁰

In addition, there is a trade-off between the attainment of public policy objectives on paper and the effectiveness of the standard in practice. One of the reasons why the Strategy sees such strategic potential for European participation in international standardisation comes from the “Brussels effect” recently experienced with the GDPR.²¹¹ The GDPR shows that if the EU can manage to agree reasonably early on a sufficiently strong instrument valid across the EU, the very existence of that instrument makes it attractive to non-EU jurisdictions, who will then be inclined to emulate it in their own domestic law. However, the “Brussels effect” of the GDPR cannot readily be transposed in the standardisation context. Indeed the leading study on the topic identifies the following five necessary conditions for the “Brussels effect” to work to the benefit of EU law and regulation:²¹²

1. The *market size* of the EU is sufficient to ensure that its legal or regulatory solutions matter and are taken seriously;
2. The EU holds the necessary resources and institutions to exert its regulatory power and is committed to using them (*regulatory capacity*);
3. There is an EU preference for more *stringent regulation*;
4. The regulatory targets are *inelastic*, in that they cannot easily escape the reach of the EU;
5. The regulatory targets *cannot divide* – for legal, technical or economic reasons – their production or conduct across different markets, for instance through having two production lines, one for EU markets and one for non-EU markets.

Given the dual nature of standardisation, as set out earlier, the “Brussels effect” cannot be expected to operate in the same way when the EU chooses the co-regulatory route of the ESS. And if it did, this would probably only concern a subset of European standards, depending on their content. More specifically, with reference to the five necessary conditions set out above, conditions 2., 3. and 5. are unlikely to play out like they do when the EU directly exerts its normative powers. As regards condition 2., the ESS – and the broader global standardisation ecosystem of which it is part – is not conceived as a mechanism for the deployment of regulatory power. Rather, as outlined earlier, it remains a privately-driven effort to provide voluntary solutions to technical co-ordination problems, which also serves in furtherance of public policy goals through self- or co-regulation. The standardisation ecosystem certainly does not involve a deliberate

²¹⁰ *Supra*, Heading 4.1.2.1.

²¹¹ See Anu Bradford, *The Brussels Effect – How the European Union Rules the World* (Oxford: OUP, 2020).

²¹² Bradford, *ibid.*, Chapter 2.



regulatory programme, nor does it include any implementation or enforcement institutions. As regards condition 3., it is true that the global standardisation ecosystem is characterised by a shared ethos of public service. This does not imply a preference for stringent regulation, however, that would compare to the commitment found in the TFEU and throughout basic instruments of EU law. Finally, condition 5. does not obtain across the board: for many European standards, it might be possible to “wall off” the EU from the rest of the world, if the cost of complying with EU standards worldwide is too high when compared to the inconvenience of introducing a divide.

More fundamentally, the “Brussels effect” is not the appropriate frame to look at standardisation. Indeed, as Bradford points out, the “Brussels effect” operates as a *de facto* alternative to more legal means of exerting global influence, such as treaty-making or extraterritorial jurisdictional claims, in situations where such legal means are either non-existent or ineffective.²¹³ Indeed, when it comes to the GDPR as a prime example of the “Brussels effect”, there is actually no global forum to discuss these matters. To a certain extent, the “Brussels effect” is the only mechanism for interaction between public authorities in their respective jurisdictions.²¹⁴ The global standardisation ecosystem provides the very forum through which private actors can exchange and interact with a view to reaching a consensus solution. For the “Brussels effect” as described above to be observed in the context of standardisation would be tantamount to a finding that the global standardisation ecosystem is breaking down.

A European standard that would have no traction within the global stakeholder community, because it has been elaborated by a European subset of that community as a means to sway the whole community, is unlikely to travel well globally. Accordingly, the best strategy for European standards to serve as a vector for European public policy objectives worldwide would be to ride on the global stakeholder community, for example ensure that European standards have as global a base for support as possible within the private stakeholder community, and hope that this momentum will carry through when other jurisdictions decide on whether and if so, which standard to rely on. Conceivably, reaching out to as large a stakeholder base as possible could then imply a trade-off between the “purity” of the standard from the abstract perspective of EU public policy objectives, and its practical effectiveness.

5.2.2. Global dimension of European industrial policy

It has been argued above that the Strategy, when seen in a broader context, signals a willingness to use standardisation as an industry policy spearhead at the global level. If true, this has a number of consequences for the EU Standardisation Strategy.

First of all, pushing the representation of European SMEs in international SDOs becomes more crucial than ever, since a standardisation-centred strategy is aimed to benefit them first and foremost by creating an ecosystem of niches, where they can flourish. Here as well, there is a divergence between the urgency of SME representation and of societal stakeholder (consumer, environment, union groups) representation. The global industrial policy dimension of the Strategy will only work if SMEs are involved in standardisation

²¹³ Ibid, chapter 3.

²¹⁴ As Bradford *supra* explains, the “Brussels effect” can work in any direction. Currently, all the conditions are met for the EU to benefit from that effect in a number of policy domains, but this is not set in stone.



efforts, so that they can immediately gear their plans to the resulting standards and implement them in their production.

Secondly, the value of international consensus becomes even greater, since the industrial policy and competitiveness objectives depend less on the “purity” of the standard than on the presence of an international standard in the development of which European firms played an important role.

5.2.3. Global implications of internal EU issues

In an expansive reading, the Strategy and the various policy elements reflect the Commission’s increased awareness of the potential of standardisation to shape the future of globalised technology. Building on the institutions of Regulation 1025/2012 as the strongest leverage it holds over the ESOs, the Commission seeks to enlist the private actors of the ESS in an effort to promote perceived European values and policy choices globally and domestically.

In this reading, the European standardisation strategy is the European answer to Chinese and US attempts at asserting a role of international standards leadership. In this perspective, rather than smoothing the path of European standards from ESOs to OJ citation, the new institutions created to align public policy and industry practice may thus also – or even primarily - serve to assert European control over private standardisation organisations; and, excluding “non-European” stakeholders from certain decision-making processes is a geopolitical strategy, as much as – or even more than - an effort to preserve societal balance in a process that is ancillary to legislation.

Beyond the general tone of the Strategy document, and its insistence on under-defined “European values”, the expansive reading is largely based on context. While the Standardisation Strategy is not limited to any field of technology, its impacts are most immediately felt in the realm of ICT. As such, the Standardisation Strategy is one of many recent Commission initiatives related to digital technologies (also including the DMA, DSA, AI Act, Data Act, Cyber Resilience Act, and so on). Taken together, these initiatives present a clear picture of a significantly more assertive EU policy in the digital realm; where the Commission shows itself pre-occupied with a general notion of European “digital sovereignty”, encompassing both the ability of Europe to determine the rules under which Europeans engage in the global digital space, and the democratic sovereignty of European citizens and their elected representatives to regulate “Big Tech”.

This expansive reading – if correct – would clearly be cause for significant concern. Closing European standardisation processes to foreign participation and influence, while seeking to assert a leading role for Europe in international standardisation, is a non-cooperative strategy, that is bound to exacerbate tensions in the global standardisation ecosystem, and to push the system closer to the tipping point of technological splintering and institutional fragmentation. Furthermore, Europe might lose its leadership position globally, forcing it to play catch up in international fora that would then be led by stakeholders that might be less receptive to European values.

Given the risk of disruption to the global standardisation ecosystem, if not outright fragmentation, it seems to us that decoupling, if it cannot be avoided, needs to be managed carefully.



The Strategy advocates a substantial effort to push ESOs to reform their standardisation processes in order to reduce “non-European” influence and improve societal “inclusiveness”. Part of such reform was already accomplished independently of the ESOs through the amendments to Regulation 1025/2012. We showed above that this option does not necessarily rest on a solid foundation, and may fail to deliver. Seen in a global perspective, this is perhaps the riskiest option, since the decoupling would take place from within the global ecosystem: ESOs will suffer from managing two increasingly different processes, one for ENs and one for their other activities. ESOs might become inefficient in comparison to other fora, thereby decreasing their attractiveness and perhaps ultimately sidelining them.

Another option, alluded to in the Strategy, would be to leave ESOs as they are and instead develop new institutions and procedures to carry out hEN development, to ensure that hENs reflect European values. One possibility is for the Commission to take charge of the process, under the guise of common specifications. Developing separate institutions and procedures would have the advantage of preventing harm to the global standardisation ecosystem and preserving the advantageous European positioning in that system. However, the separate institutions might fail to attract sufficient expertise to carry out their tasks. In this case, decoupling would take place outside of the institutions of the global ecosystem, but it would be most striking, since hENs would be developed in what could become a kind of parallel universe, detached from other standardisation activities, and presumably working at a different speed and producing different or even conflicting results. This option also creates a risk under international trade law.

A variant of the second option would involve diverging paths between the ESOs, with CEN and /CENELEC primarily tasked with EN development and ETSI increasingly being left out of it, presumably to preserve its position in the global ecosystem. This does not appear very advisable, yet this appears to be the path chosen for the upcoming standardisation efforts concerning AI.

A third option, which the Strategy also hints at, would be to leave ESOs as they are and leave them also in charge of EN development, and instead work on the monitoring procedures of Articles 10 and 11 of Regulation 1025/2012. In other words, if there are difficulties with the adequacy of ENs in the light of European policy values, then it is for the Commission to deal with these issues, and not for the ESOs to change. Despite the commotion initially caused by *James Elliott Construction*, subsequent case-law has indicated that the division of labour set out in the New Approach still holds: the EU institutions (primarily the Commission) are democratically legitimated and therefore responsible for policy matters, and the ESOs deal with technical matters.²¹⁵ Of course, in the contemporary context, standardisation is no longer neatly confined to technical matters, and ESOs are also able to heed EU policy choices. Nonetheless, the ultimate responsibility for policy matters rests with the Commission. Perceived difficulties with ENs should be addressed by improving the Article 10 procedure – we outlined many issues surrounding the use of HAS consultants – and not by shovelling the Commission’s responsibilities on the ESOs. In the end, this option will locate the decoupling at the Commission/ESO interface, and the need to minimise the adverse effect of decoupling on ENs development should push the Commission to streamline the Article 10

²¹⁵ *Supra*, Heading 3.4.1.



procedure to reach the appropriate balance between the two roles of the ESS. This could be the better option overall.

Finally, a fourth option, somewhat more daring in the European context, would involve expanding the range of eligible SDOs in the hope that, on substance, one of them delivers a standard that sufficiently reflects EU public policy values to be acceptable as an implementing tool of EU legislation. It is true that, contrary to the USA, the European approach to standardisation has always rested on the presence of recognised organisations (ESOs and NSBs, with their matching partners at international level) with a special legal status whereby the requirements of the procedural approach are imposed. Yet the global standardisation ecosystem includes many other SDOs that would easily meet those requirements,²¹⁶ ranging from well-established associations and consortia (in ICT and elsewhere) to the global community-like organisations such as IEEE-SA and IETF.

²¹⁶ As acknowledged through the regime of ICT technical specifications under Regulation 1025/2012.



6. CONCLUSION

In this report, we have assessed the European Commission Standardisation Strategy of February 2022 against the background of the history and traditional functioning of the European Standardisation System. We argue that, historically, the European Standardisation System had to balance the requirements of its two different roles: a private role, corresponding to the private nature of the ESOs and most of their members and stakeholders; and a public role, reflected in the unique and privileged role that Regulation 1025/2012 assigns to the ESOs, NSBs, and other organisations forming the European Standardisation System.

As one set of institutions serving two different functions, the European Standardisation System is not – and maybe cannot be – perfectly designed for either role. In their private functions, the ESOs and NSBs face competition from other, more agile entities in the development of technical specifications. In their role serving the public interest, the ESOs and NSBs have – for many decades – faced enduring criticism regarding the preponderant role of industry (and particularly large firms) in standardisation activities. This tension is inherent to the nature of standardisation in Europe. Across different cycles and phases, European standardisation policy has consistently been characterised by two objectives: (1) increase the international competitiveness of European industry by promoting the swift development of cutting-edge technical standards, and (2) increase the public legitimacy of European standardisation by promoting broad-based participation, in particular from societal stakeholder constituencies such as consumers, labor, and environmental interests, in addition to SMEs. While there has been a longstanding consensus regarding the importance of both objectives, there have been variations in emphasis in different organisations, and in different phases in EU standardisation policy, on one objective or the other.

Certain recent macro-trends in global technology and standards development have given new urgency to these traditional themes of European standardisation policy. The *James Elliott* decision and the high rate at which ENs offered for OJ citation are found non-compliant by the Commission have highlighted the importance of ensuring the adequacy and legitimacy of European standards supporting EU legislation. Furthermore, rapid development in sensitive technologies such as AI has raised broad awareness of the societal implications of technology, giving more prominence to the public interest dimension of standardisation. Last but not least, aggressive competition between the US and China for international technology leadership has created significant tensions in the international standardisation ecosystem, and increased pressure on Europe to assert its own claims to international standards leadership.

The combination of these recent themes has logically led the Commission to adopt a more “strategic” approach to standardisation. Appropriately, the Commission calls for better co-ordination of different policy activities related to standardisation within the Commission, more regular exchanges between industry and policy makers on standardisation objectives, and steps to bring the strategic relevance of standardisation to the attention of leading decision-makers. At the same time, the “strategic” approach also entails an explicit agenda to promote European leadership, and “European values”, in the development of European standards. Furthermore, in an attempt to garner broad-based societal consensus, the strategy seeks to strengthen the role of NSBs and societal stakeholder organisations to counter the predominant role of “multinationals”.



Most immediately, this is about the process for developing the standards that may be used to support EU legislation. As a first tangible result of the Strategy, all decision-making regarding European standards that support EU legislation is now placed in the hands of the NSBs. This legislative change is presented as a step to increase the democratic legitimacy of standardisation, as only NSBs are believed capable of representing broad societal consensus. Nevertheless, placing decision-making exclusively in the hands of NSBs also had the effect of curbing the influence of the various non-EU members of ESOs.

We have taken a critical view of these proposals to reform the decision-making process on hENs. There indeed seems to be room for improvement in the ability of the European Standardisation System to produce standards that fulfil the requirements set out in the harmonisation mandate issued by the Commission – one indication being the low approval rate of ENs offered for citation in the OJ. Nevertheless, it is not clear that changes to the process of developing hENs will address any potential substantive issues with these standards. Superiority of broad, but indirect representation over direct participation by interested stakeholders is debatable – indeed, the Commission had long touted the merits of direct stakeholder representation at European level.

More fundamentally, we are sceptical about the suggestion that the nature of standardisation has become more “value-laden”, and that strengthening the effective decision making power of societal stakeholders (either through NSBs, or through their representative Annex III organisations) is thus necessary to ensure that standards reflect “European values”, presumably understood as the values of a broad cross-section of European society. The ultimate aim would be to bestow standardisation processes with democratic attributes, such as representativity. It is not clear this can work: indirect representation of stakeholders through NSBs and Annex III organisations lacks many attributes of properly democratic processes. It is also not clear that this is necessary: internationally, there are many examples of standardisation organisations that deliberately shun politics, even though they openly embrace the increasingly salient ethical and societal dimensions of their work. This model provides an appealing alternative to attempts to increase or check the influence of certain organisations based on the interests they represent – or purport to represent. It is incumbent on public authorities to state public policy goals and values with enough clarity to avoid that societal and political debates move to standardisation fora. Once that is accomplished, these expert fora can and should be able to translate public policy and values appropriately into technical specifications.

Of course, a more strategic approach to standardisation also means that the EU makes a more assertive bid for global standards leadership. It can be seen as the European answer to China-US rivalry. Participating in this rivalry, at the real risk of fostering fragmentation of the global standardisation ecosystem, is not in the European interest. European individuals and stakeholders are currently well represented in that ecosystem. First, any alternative to the existing global ecosystem that may emerge out of fragmentation would most likely confine European actors to a much smaller role. Second, European leadership in the global ecosystem is largely a consequence of the strength of the current European Standardisation System in the eyes of stakeholders worldwide.



Over more than a century, the global standardisation ecosystem has existed as a private-sector-led, consensus-oriented community of technical subject-matter experts. Rather than a tool of policy making, this system has existed to produce and reveal expert and stakeholder consensus on technical matters. The ability of the system to produce objectively justified standardisation decisions has never rested on a perfectly engineered representation of relevant interests, nor a perfect alignment between the values and norms of the standardisers and society at large. This ability has allowed also the ESS to serve its multiple roles – promoting EU policy objectives, while also developing cutting-edge technical specifications.

While the Commission has rightly identified certain weaknesses and frictions in the process of developing European standards to promote EU policy, the Strategy laid out an ambitious agenda with a potential for overreach. Partnership with EU institutions is not the only reason for the existence of ESOs; any push from the EU to reform the ESS must be mindful of the system's various functions. More importantly, the Commission must be careful to avoid any impression that it is participating in a spiral of increasingly aggressive bids for standards leadership. The global standardisation ecosystem has served Europe well, precisely because it is a neutral and apolitical venue.



International		European Union		American	
TBT Agreement	ISO/IEC Guide 59	Reg. 1025/2012	Horizontal guidelines	ANSI essential requirements	OMB A-119
<i>Co-ordination with other SDOs</i>					
Coherence	Coherence	Coherence*		Co-ordination and harmonisation	
<i>Features of standard</i>					
Voluntariness		Voluntariness	Voluntariness		Voluntariness
Effectiveness and relevance	Effectiveness and relevance	Efficiency*			**
		Accessibility*	Accessibility	Accessibility	
<i>Membership and participation</i>					
Openness	Openness	Openness*	Unrestricted participation	Openness	Openness
Impartiality	Impartiality	Independence from special interests	Non-discrimination	Lack of dominance	
		Stakeholder representation		Balance	Balance
<i>Procedure</i>					
Transparency	Transparency	Transparency*	Transparency	Notifications	Due process
				Written procedure	
				Consideration of views and objections	



	Appeals process			Appeals process	Appeals process
<i>Decision-making</i>					
Consensus	Consensus	Consensus*		Consensus	Consensus
<i>Developing countries</i>					
Development dimension	Development dimension				

* Indicates a principle that also figures on the list of requirements for SDOs whose ICT technical specifications would be recognised under Regulation 1025/2012, Art. 13 and Annex II.

** The various specific elements included under the broad “effectiveness and relevance” principles under WTO law are present yet dispersed throughout OMB A-119.

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