



European standardization in flux: Navigating delegation and control in AI governance

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Abstract: The EU confronts a dilemma in AI governance: on the one hand, it faces strong incentives to delegate detailed, technical rulemaking to private authorities. On the other hand, the political charge of these detailed rules makes it imperative to retain control over them. We investigate how the EU navigates this dilemma, and which tactics are available to it to control delegated governance in the case of AI standardization. Building on theories of global governance (Bernstein, 2010; Ruggie, 2014), we reveal the hard and soft mechanisms the European Commission can use to influence both the operation and the output of standards development organizations (SDOs). We argue that the EU's control tactics depend on (1) its relationship with the SDO in question and (2) whether standard setters serve through delegation with granted authority or orchestration with enlisted authority. The EU is often portrayed as lagging rival superpowers, not only in AI development but also in ICT standardization. As our analysis demonstrates, however, the EU has a range of robust tactics to interfere in technical standard-setting, but in opting to deploy these tactics, might risk the overall integrity and legitimacy of European standardization more broadly.

Keywords: standard setting, standardization, artificial intelligence, AI governance, AI Act, orchestration, delegation

Highlights:

1. Against the perceived view that the EU lags rival superpowers in ICT standardization, we demonstrate that the EU has a range of hard and soft control mechanisms to influence both ESO and SDO operations and standards outputs.
2. These tactics lie on a continuum from hard, legal control over regulatory agents to soft, informal influence through persuasion, negotiation or various kinds of support with intermediaries whose authority has been enlisted.
3. Which tactics can be deployed depends on the character of the relationship between the EU and its agents and intermediaries.
4. In AI policy the EU, by its own admission, has interfered in standards development in exceptional ways actively participating in working group discussions, especially concerning thorny fundamental rights issues.
5. The interactions between the EU and standard setters are dynamic, responding not least to the heightened geopolitical and geoeconomic charge of AI policy.

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Submitted: 01-09-2025
Revised: 04-12-2025, 27-01-2026
Accepted: 28-01-2026
Published: 03-06-2026
Peer review: double blind

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DOI:
<https://doi.org/10.59490/jos.2026.8346>

ISSN: 2772-9249

How to cite: Hennessy, O., Mügge, D. (2026). European standardization in flux: Navigating delegation and control in AI governance. *Journal of Standardisation*, 5. <https://doi.org/10.59490/jos.2026.8346>

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1 Introduction

In Europe, the need to regulate Artificial Intelligence (AI) systems is hardly a new concern. It was first raised over forty years ago when Yvonne Theobald-Paoli, a Member of the European Parliament, enquired what “legal and technical measures” the Commission might take to prevent malfeasance by users of “intelligent computers.”¹ The 2024 AI Act (AIA) has been the EU’s answer to her question. It classifies AI systems into four categories of risk, and those in the “high-risk” category must comply with (yet to be detailed) technical standards.² It is a transnational regulation and applies to all providers who put high-risk AI systems into service in the EU, regardless of whether they are based in the EU or in a third country. It aims to ensure that AI systems respect the safety, health and fundamental rights of individuals and to address the risks of very powerful AI models, while also supporting innovation.³

The AIA is a binding product-legislation under the EU’s New Legislative Framework (NLF)⁴ and in fact has a “dual soul” (Almada & De Gregorio, 2025): in a departure from traditional product-safety-led legislative approach it also seeks to address threats to fundamental rights and democracy. While passing sweeping legislation with the AIA, the EU’s chosen governance approach delegates much detailed rulemaking to private actors – technical standard-setters such as the European Committee for Standardization (CEN) and European Committee for Electrotechnical Standardization (CENELEC) – together known as CEN-CENELEC – or the European Telecommunications Standards Institute (ETSI). These European Standardization Organizations (ESOs), in turn, develop their standards in coordination with international standards development organizations (SDOs), including the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC), and the International Telecommunications Union (ITU), amongst others.

In theory, technical standards can be thought of as banal, functional documents. They can include rules for language, customs, traditions, social norms, business practices, industry conventions, laws, and government regulations (Baron & Spulber, 2018). They generally aim to drive industrial development and promote commerce through connectivity and interoperability; however, they also cover safety, quality and, more recently, socio-technical issues (McFadden et al., 2021). SDOs are made up of technical experts from companies, individuals or representatives of member countries from all over the world who form technical committees and negotiate all aspects of the standard, including its scope, key definitions and content. Their use in supporting government legislation is an approach that is premised on a neat division between the political and technical dimensions of rule setting. But standards can carry heavy political implications, for example, when concepts like automated discrimination or system safety are operationalized. And because standards influence what is produced, where,

¹ First known question on intelligent computers (AI) in the European parliament. Official Journal of the European Communities, (1984, February 23). Written Question No. 1098/83 by Mrs Yvonne Theobald-Paoli to the Commission of the European Communities. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:C:1984:052:FULL&qid=1730298142708> With thanks to Leevi Saari for sharing this discovery with the authors.

² Article 40 of the EU AI Act <https://artificialintelligenceact.eu/the-act/>

³ Article 1 of the Act.

⁴ The European Union's "New Legislative Framework" (NLF) is a common framework for the marketing of products and sets out the requirements for accreditation and the market surveillance of products. It was adopted in 2008 to modernize the existing framework for the regulation of products sold in the EU market. For a full overview of the NLF see, the European Commission (n.d.), The New Legislative Framework https://single-market-economy.ec.europa.eu/single-market/goods/new-legislative-framework_en.

and on which terms, they have a direct bearing on geopolitical competition, in this case in the AI field.

Moreover, theories of global governance tell us that the division of labor between public and private actors can be anything but neat (Ruggie, 2014; Roger & Dauvergne, 2016). With the rise of globalization, transnational corporations and complex global value chains, the global governance sphere is densely populated by a host of public, private and hybrid actors, each competing and cooperating to shape behavior towards shared public goals (Bernstein, 2010; Ruggie, 2014). In this sphere, regulatory capacity is dispersed, and no one can unilaterally determine outcomes (Verbruggen, 2016). This forces those with governance ambitions to employ modes of “indirect governance” and enlist intermediaries to carry out defined governance tasks on their behalf (Abbott et al., 2021c). Such delegation may provide technical expertise that traditional policymakers lack. But to compensate for the loss of direct rulemaking control, governors must resort to a host of alternative measures – both hard and soft (Abbott & Snidal, 2021a) and competitive and complementary (Cashore et al., 2021) –to steer their intermediaries and achieve their goals.

For that reason, we argue, the EU faces a delegation dilemma (cf. Abbott et al., 2021c).⁵ On the one hand, it has strong incentives to delegate rulemaking; on the other hand, it will also want to retain control over it. In this contribution, we investigate how that dilemma plays out in AI governance specifically, which options the EU has for navigating it—squaring the circle of delegation and control—and which attempts to retain control we observe in practice. Utilizing theories of global governance literature that examine public interventions in private rulemaking (Meyer, 2012; Renckens, 2020; Cashore et al., 2021; Renckens, 2021; Abbott et al., 2021c) — or the “publicization” of private governance (Arcuri, 2015) —we show that the EU can wield hard and soft control tactics to influence ESOs and SDOs to different degrees, shaping their organizational governance structures and standards outputs. The carrots and sticks available include rescinding authority, providing or reducing material support, along with agenda-setting or other forms of ideational support. We argue that the tactics of control that the EU deploys depend on the relationship between the EU as governor and standard setters as intermediaries. Through our analysis, we demonstrate that the EU has a range of robust tactics to interfere in technical standard-setting, but in opting to deploy these tactics, it might jeopardize the overall integrity and legitimacy of European standardization more broadly.

We undertake a comparative case study focusing on the three influential organizations crafting technical standards in support of the AIA – CEN-CENELEC, ETSI & ISO-IEC. We rely on a broad range of sources: policy documents as well as secondary sources, but also webinars and observations in other, more accessible settings, for example, conferences about AI standard setting. We have also talked to many Brussels policymakers and lobbyists, including in ten research interviews. Given how politically sensitive the topics are, most interlocutors only felt comfortable speaking freely in off-the-record, unrecorded conversations. That inevitably limits our ability to reference some of our claims to specific sources. But through triangulation of material, as well as due caution in how we use the insights gleaned, we can still construct a comprehensive analysis of dynamics in the field.

The rest of this contribution is structured as follows: we first review the literature about theories of global governance, specifically focusing on public interference in private rulemaking. That

⁵ For this article we use the term “delegation,” in the context in which it is used in global governance literature (discussed in section two below) in the sense that it is a broad delegation of rulemaking authority, usually from public to private actors. We note the distinction with EU law where there are specific legal criteria for delegating rulemaking authority which are captured in “delegated acts,” which are codified under Article 290 of The Treaty of the Functioning of the European Union (TFEU).

section also outlines our theoretical framework, clarifies concepts and provides a brief overview of data and methods. Next, we move to the empirical background, drawing attention to the fraught geopolitical environment in which AI governance unfolds and mapping the landscape of private standard setters involved. Section four investigates to what degree tactics of interference are available or not in the case of EU standardization through our analysis of AI technical committees and working groups, and explores to what degree we find public authorities using them in practice. Section five concludes.

2 Private governance and the shadow of public interference

We characterize standardization as a mode of transnational private governance (Graz & Nölke, 2012; Graz, 2019) in which non-state actors define and develop border-spanning rules in support of public ends (Bernstein, 2010; Ruggie, 2014). Our specific concern here is public interference in private governance and particularly how – having relinquished direct control of rulemaking – public actors might go about shaping both private rulemaking institutions and ultimately their outcomes. The literature has paid substantial attention to why public actors might delegate rulemaking (Strange, 1996; Genschel, 1997; Cutler, 2003; Green, 2014; Renckens, 2020). In standardization, for example, standard-setters can provide the technical expertise that lawmakers lack, particularly in highly complex domains. Legislators also appreciate the regulatory flexibility that standards offer, where standards can be continually updated, while legislation itself can be much more cumbersome to amend. Especially with issues that are highly sensitive, policymakers may appreciate how SDOs can resolve them, with their rather technical approach, away from public interrogation (Mattli, 2001).

In contrast, scholars have given less attention to states’ post-delegation strategies to retain some control over private actors’ activities. Existing literature often describes state involvement as “orchestration” (Abbott et al., 2021b; Hale & Roger, 2014; Meyer, 2012; Schleifer, 2013): global governance is indirect, undertaken through intermediaries, and builds on both hard and soft measures to influence the latter (Abbott et al., 2021b). Cashore et al. (2021) have systematized the different pathways available for public interventions; they have explored to which degree public and private governance remain independent or whether these interactions are complementary, competitive or a mix of the two (Cashore et al., 2021). Yet other scholars have explored the granular strategies public actors employ to influence outcomes. These strategies could be likened to what regulation scholars have called regulatory capacity (Black, 2003), regulatory capabilities (Cafaggi & Pistor, 2015), or an actor’s governance capabilities (Abbott et al., 2021a).

2.1 Theoretical framework

To investigate the tactics of control available to the EU⁶ in AI standardization, this contribution uses orchestrator-intermediary theory (Abbott et al., 2021b), which supplements delegation models premised on principal-agent theory. Governance is indirect as the governor is not issuing rules on the regulatory target but enlisting an intermediary to do so. In the typical conceptualization of delegation, a principal (governor) conditionally grants authority to an

⁶ When referring to “the EU” we typically mean the Commission as the branch with overall responsibility for standardization. Within the Commission, the Directorate-Generals (DGs) involved are DG Grow (Internal Market, Industry, Entrepreneurship, and SMEs) and DG CNECT (Communications Networks, Content and Technology). The newly created AI office falls under the latter and is responsible for monitoring compliance with the AIA, conducting evaluations of general-purpose AI models, and coordinating with national governance bodies to ensure uniform application of AI regulations throughout the EU. Where known, we explicitly state which entity is involved in the related standards activities.

agent to carry out defined governance tasks on its behalf, according to its instructions, and subject to its hierarchical control. Here, we understand governors as having authority “when relevant audiences perceive them as appropriately engaged in governance and their rules and decisions as worthy of respect” (Wood et al., 2019, p. 263).

According to Abbott et al. (2021b) the agent’s authority is formally granted by the principal and can also be withdrawn. In contrast, an orchestrator (governor) enlists an intermediary, on a voluntary basis, in pursuit of shared governance goals. Orchestration is typically conceptualized as non-hierarchical: the intermediary neither owes its authority to the orchestrator nor risks losing it. The orchestrator, therefore, can only exert control through inducements, which can be both positive and negative (Abbott et al., 2021b).

In a departure from the rational choice conceptualizations of delegation, we find that the line between agent and intermediary is often blurry. For example, the EU’s relationship with key SDOs is replete with interdependencies that such binary approaches typically fail to capture. Across the governance sphere, there are hundreds of SDOs, whose engagement with the EU varies considerably. Modes of indirect governance thus depend on the actor involved and should be viewed along a continuum (Figure 1).

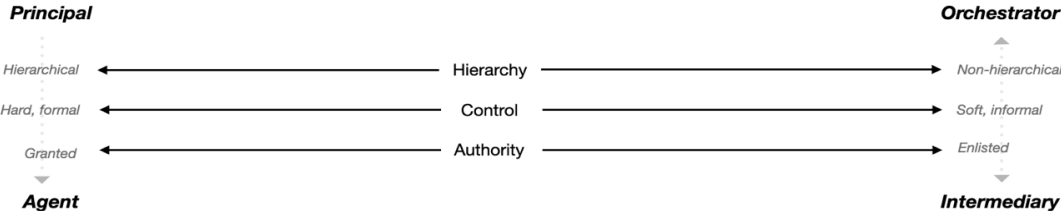


Figure 1: Continuum of indirect governance

To do justice to this more complex and ex ante blurry setting, we concentrate on the different levers the EU may have to influence delegated standard setting, rather than only the formal arrangements. The literature suggests various strategies. Abbott et al. (2021b) provide a list of measures to steer private rulemaking. Hard (directive) orchestration includes using legal, binding conditions, while softer “facilitative” orchestration involves measures of persuasion, including (but not limited to) “convening, facilitating, legitimating, negotiating, publicizing, ratifying, supervising and partnering” (Abbott & Snidal, 2021, p.13). Cashore et al. (2021) identify several pathways including complementary strategies they designate as *collaboration*, or *coordination* (through communication) *isomorphism* (where the form of public and private governance is similar even in the absence of communication) and *collusion*. They also provide instances of competitive pathways: in *substitution*, public regulation is replaced (or challenged) with a less strict type of private governance; in co-optation public governance overtakes private rulemaking (Renckens, 2021). Taking a slightly different angle, Meyer (2012) has differentiated between hierarchical (or “hard”) interventions, pitting them against soft “entrepreneurial” interventions.

The common theme in this literature is the distinction between “hard” and “soft” measures, “competitive” and “complementary” ones, “coordination” or “coercion” — ultimately, between the carrots and sticks public policymakers have to direct regulatory intermediaries’ behavior. We follow this characterization of positive and negative interactions into hard and soft measures and drill down into the types of inducements available to the EU and the real-life tactics with which they interfere in standard-setting (detailed in Table 2, section 4). We define “inducement” as an idea intended to modify behavior, to persuade or lead someone to do something, while the tactics are the actions or strategies used to this end.

Given the relative novelty of EU involvement in AI standard setting, this research has an explorative and inductive component. For the six inducement categories, we take inspiration from existing studies (Abbott et al., 2021b) across policy fields (Black, 2003), complementing them with categories derived from our data and familiarity with the topic. Positive inducements can include methods of persuasion and negotiation to shape goals and solve problems of divergence. Such methods can be undertaken directly, for example, through agenda-setting (Kingdon, 1984), meetings of involved individuals, or indirectly through rhetoric in the governors' official statements or documents. Governors can provide material support in the form of funding or personnel. They can also offer ideational support by endorsing SDO's standards or synchronizing their own standards' activities to maximize intermediaries' standards impacts (Abbott et al., 2021a).

Governors can also use negative inducements by withdrawing support, placing strict conditions on ongoing support, or through casting doubt on an intermediary's legitimacy – for example, through disparaging comments in the media (Abbott et al., 2021b). Finally, we contend that governors may apply a blend of tactics, employing positive and negative inducements, which can vary in degree, and fall at different points on the continuum of indirect governance.

In a governance sphere which is densely populated by actors with varying degrees of authority and resources, policymakers face the challenges of aligning goals around a specific shared problem (Cashore et al., 2021). At the same time, private governance takes place against the “shadow of hierarchy” whereby the threat of public intervention always lingers over private rulemaking (Héritier & Lehmkuhl, 2008; Steurer, 2013; Renckens, 2020). In this respect, AI governance is no different than many other policy fields.

2.2 Case selection, data and methods

CEN-CENELEC, ETSI and ISO-IEC – the three cases studied here – are not necessarily the biggest SDOs working on international AI standards. The Institute of Electrical and Electronics Engineers for example has a longer history working on AI standards; the International Telecommunications Union has a higher standards output. But CEN-CENELEC and ETSI are formally recognized ESOs under EU Regulation 1025/ 2012 as the organizations responsible for developing European Harmonised Standards (hENs). Furthermore, ISO and IEC individually are recognized under additional international agreements that prioritize them both in the development of hENs. This makes these three entities strategically critical to the European NLF, and the EU relies heavily on their output and expertise in the production of product-safety laws. They are therefore central to the investigation of indirect private governance and public interference in it.

The data for this comparative case study combines primary source document analysis and interviews. For our document analysis, we examined more than fifty primary sources, including legislative instruments, policy documents and public reports, and statements. The sources chosen primarily focused on the EU's approach to AI governance, particularly the utilization of standards under the NLF and documents outlining how the EU interacts with private standard-setters. Most sources are written from the perspective of European public bodies (the Commission, the Council, the publications office or the new European AI office). But they also include sources from those on the receiving end of these interactions: CEN-CENELEC, ETSI and ISO-IEC. Furthermore, we reviewed ten years of annual reports from CEN-CENELEC and ETSI alongside multi-media sources such as webinars, video presentations, and slide decks (all publicly sourced).

We conducted off-the-record interviews with ten individuals throughout October 2024-March 2025, combined with private conversations at public events such as the Brussels Conference in

January 2025 and the AI Standards Hub Global Summit in March 2025 (see Appendix A). However, standard setting is typically a confidential affair, and in the field of AI at least, its high political charge has only heightened participants' hesitation to discuss details, therefore our selection of participants largely relied on convenience sampling. While detailed notes were taken during these meetings, the policymakers, standard setters and civil society actors with whom we discussed AI standard setting only felt comfortable talking freely when conversations were completely off the record. This inevitably limits other researchers' ability to corroborate our findings. Given the scarcity of data, however, we have judged this to be a defensible trade-off, and we have triangulated interlocutors' observations with our primary source data wherever possible. Where appropriate, we explicate that arguments build on a limited number of sources.

Data was collected between July 2024 and March 2025. The scope of analysis begins in 2018 with the EU's Declaration for Cooperation on AI, and runs until the present (autumn 2025). Furthermore, the analysis primarily focuses on the politicization of standardization and therefore prioritizes political actors over, for example, legal and judicial actors, or civil society actors.⁷ While we recognize the limitations of the available data, we are confident that it allows us to depict governance dynamics fairly, including by indicating instances in which our data warrants only careful conclusions.

3 The geopoliticization of AI governance

In AI governance the line between the political and the technical is blurry as the development and deployment of AI has become enormously contested in global politics (Lee, 2018): witness a rising China, resurgent tech nationalisms, American assertiveness in the field, and ongoing trade and military conflicts—for example, American tech export controls to slow Chinese AI advances (Miller, 2022; Mueller, 2024). The stakes for “successful” AI regulation are high, with states and firms keen to capitalize on lofty promises of increased productivity, economic growth and the creation of new markets—although this unbound economic optimism has recently begun to wane (Mügge et al., 2026). Critics note its destructive potential, increasing mis- and dis-information online and its destabilizing effects on democracy and politics (Robins-Early, 2023). Widespread AI adoption may disrupt workforces through automation (Kellogg et al., 2020), not to mention potentially catastrophic military consequences of rogue algorithms derailing wartime decision-making or spurring the advent of autonomous warfare (Bremmer and Suleyman, 2023).

Geopolitically, there is limited agreement as to what constitutes the AI “governance problem,” and even fewer coordinated approaches towards meaningful transnational governance cooperation (Roberts et al., 2024). At the time of writing (autumn 2025), the United States remains the dominant force in AI with over half (n=435) of known large-scale models developed there. A quarter were built in China (a share that is growing rapidly), while the European Union and UK trail with 30 and 29 models, respectively.⁸ From a US perspective, the governance goal is to maintain this technological dominance and “win” the AI race (The White House, 2025). In practice, the Trump administration rejects “onerous” regulation that would slow technological progress either domestically (Shepardson, 2025) or internationally (Vance,

⁷ In recent years, after a spate of legal cases related to standardization, there is discussion of the “juridification of standards” (Kanevskaia, 2025). This highlights the role that other institutions (beyond simply the Commission) and particularly the European Court of Justice (CJEU) play in impacting SDOs and their operations. For our analysis, the CJEU and its rulings remain beyond the scope of discussion, but we note, in the future, our analytical framework could be useful in analyzing its role and impact on standardization.

⁸ Large-scale models are defined as those with training compute over 10^{23} floating point operations (FLOP). (Epoch AI, 2025).

2025), in the latter case slowing down or withdrawing from international initiatives (Brzozowski et al., 2025). However, through domestic SDOs – the American National Standardization Institute (ANSI) and particularly through the Department of Commerce-led National Institute for Standards and Technology (NIST) – there is a commitment to strategic engagement in standardization and, in the vein of the “America-first” policy, the ambition to be a global leader in this field (NIST, 2024).

China is no less determined to advance its AI development and is investing continuously in AI R&D infrastructure and in attracting talent. Domestically, it was one of the first countries to implement binding regulations on select applications, including algorithm guidelines and content generation (Racicot & Simpson, 2025). Internationally, it seeks to participate in global AI governance initiatives, claiming to champion a “people-centered approach to governance” while respecting state sovereignty. This has included widespread participation in global governance forums and private standards institutions (CSET, 2021). In the latter, the Chinese government explicitly strives to become a rule-maker as opposed to a rule-taker (Lee et al., 2022).

The empirical literature has paid special attention to Chinese interference in standard setting (Cantero Gamito, 2021; Lee et al., 2022; Seaman, 2020), especially its growing representation in ISO and IEC (Fägersten and Rühlig, 2019). Geopolitical rivalries’ presence in technology standards setting has a longer history, however (Zúñiga et al., 2024), and states’ direct engagement in standardization has waxed and waned over time (Bartley, 2022). When governments did engage, they frequently tried to “weaponize” ICT standards, notably over mobile phone standards (GSM, CDMA, TD-SCDMA; cf. Seaman, 2020). Others have found larger European and North American influence in ICT standards (Baron & Kanevskaia Whitaker, 2021; ten Oever & Becker, 2024). But all around, public interference in standardization is growing.

Against this backdrop, the European Union opted for its “mixed approach” to AI governance, in which the AIA aims to balance product safety under the NLF with the protection of citizens’ fundamental rights (Almada & de Gregorio, 2025). This is a departure from other product safety legislation as the AIA emphasizes central normative principles of fundamental rights and democracy including protections against possible biases, discrimination and surveillance, which AI systems in the high-risk category need to satisfy.⁹ As Almada and De Gregorio (2025) argue, this approach presents regulatory complexities where “product safety regulations are based on technical compliance and standardized assessments, whereas the concerns related to fundamental rights and democracy are often context-dependent” (Almada & De Gregorio, 2025, p.1). This product safety approach – underpinned by technical standards – therefore aims to address both technical and constitutional concerns (*idem.*). The finer details of Europe’s “landmark” AI legislation will thus be negotiated and decided in private forums – SDOs – which include representatives from US Big Tech, Chinese conglomerates and a host of other competing interests.

The EU has some of the highest regulatory ambitions but a weak strategic position in global AI development. It is therefore forced to govern in competition and cooperation with powerful geopolitical actors. While it has passed sweeping legislation with the AIA, its chosen approach delegates much detailed rulemaking to standard-setters. Without more direct control over firms, regulation (and by extension, standards) is thus essential to align domestic AI deployment with public policy objectives. So how does the EU navigate the tension between the delegation of

⁹ Articles 5 & 10 of the Act.

authority and control, particularly given the intense geopolitical and geoeconomic competition, which also spills over into AI standard setting?

3.1 SDOs and varieties of (AI) standards

Before exploring the strategies available to the EU to influence private standard-setting, it is useful briefly to describe the standardization eco-system and SDOs tasked with crafting rules to support the AIA. In Europe, Regulation No 1025/2012, which governs European standardization, formally recognizes CEN, CENELEC and ETSI as the three ESOs responsible for developing European Standards.¹⁰ The relevant international SDOs – ISO and IEC – are also recognized and prioritized for international standards cooperation. ISO and IEC benefit from additional tie-ins to EU policy through the Vienna Agreement (between ISO and CEN) and the Frankfurt Agreement (between IEC and CENELEC).¹¹ Under the NLF, recognized SDOs develop harmonized standards following a standardization request (Sreq) from the European Commission. The Sreq outlines the legal requirements standards must meet and practical details like deadlines. The ESOs then coordinate the work of drafting standards through designated technical committees (High-Level Forum on European Standardisation, 2024a). The Commission finalized the AI Sreq in May 2023, hoping to have standards available when the legislation fully enters into force in 2027. The Sreq outlines ten critical areas (SRs 1-10) to ensure that AI systems operate safely, transparently, and in compliance with fundamental rights.¹² Once the standards requested by the Commission have been developed, they must be evaluated (most commonly by consultants known as Harmonized Standards (HAS) consultants) to ensure that they reflect the requirements of the legislation and can thus be cited in the Official Journal of the European Union (OJEU), providing presumption of conformity.

Like the EU’s own approach to standardization, many cross-border trade agreements recognize a “primacy of international standards.”¹³ Harmonized European standards can therefore be aligned with international standards in two ways. When the “homegrown” approach is applied,

¹⁰ REGULATION (EU) No 1025/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2012 on European standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Council Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council. <https://eur-lex.europa.eu/eli/reg/2012/1025/oj/eng>

¹¹ Originally known as the Lugano Agreement, subsequently amended in 1996 (the Dresden Agreement) and in 2016 (the current Frankfurt Agreement). These agreements aim to harmonize standards between the international and European levels, enabling closer collaboration and allowing standards to be approved simultaneously by both ISO/IEC and CEN/CENELEC.

¹² A key focus is risk management (SR1), requiring continuous assessment throughout the AI lifecycle to mitigate risks related to health, safety, and fundamental rights. SR1 is complemented by data governance and quality standards (SR2), ensuring that AI systems rely on high-quality, unbiased datasets for training, validation, and testing. SR3 and SR4 cover traceability, accountability and transparency. In addition, systems need human oversight measures (SR5), particularly for high-risk applications such as for example, remote biometric identification. The standards also define accuracy specifications (SR6), and robustness requirements (SR7) which must safeguard that AI systems can withstand operational inconsistencies, environmental variations, and potential errors. Cybersecurity (SR8) is also a key concern and to maintain ongoing compliance, AI providers must implement quality management systems (SR9) that integrate data governance, transparency, and security requirements into their operational frameworks. Finally, the request mandates conformity assessment procedures, outlining self-assessment and third-party evaluation mechanisms to verify AI compliance with established standards (SR10). See https://ec.europa.eu/growth/tools-databases/enorm/mandate/593_en

¹³ The WTO Agreement on Technical Barriers to Trade (TBT) firmly establishes that international standards, or their relevant parts, must be used as the basis for the adoption of technical regulations by WTO members. Article 2.4 of TBT. https://www.wto.org/english/docs_e/legal_e/tbt_e.htm

the standard is developed by CEN and/or CENELEC in response to a Commission Sreq and worked on at committee level. Should international standards covering similar requirements exist already, they can be the basis for (parts of) the European pendants (High-Level Forum on European Standardisation, 2024a). In contrast, when standards are fully developed by ISO and IEC, they can simply be adopted in Europe by CEN and CENELEC through the Vienna and Frankfurt agreements with or without amendments. Either way, standards must be evaluated to ensure they chime with the requisite European legislation.

In the case of AI, those with overall responsibility for standards involve CEN-CENELEC's Joint Technical Committee (JTC) 21 on AI and its five sub-working groups. JTC 21 is recognized as having CEN-CENELEC's largest technical committee membership with over 1,000 experts participating (Krog, 2025). Its governance model is based on membership of national SDOs and includes, academics, civil society and industry representatives including many from Big Tech. Relations amongst the members are not always harmonious, however, with civil society actors alleging the process lacks transparency and has been co-opted by Big Tech players. (European Ombudsman, 2025; Corporate Europe Observatory, 2025). Despite this, at the time of writing JTC 21 had 40 standards projects either published or under development, 31 of which are designated as hENS (see Table 1 below).

At ISO-IEC, AI standardization is overseen by JTC 1 and its sub-committee SC 42. It operates on a similar national membership model and consists of 51 participating members, 26 observing members, including national SDOs representatives from the US, China, Saudi Arabia, the Russian Federation, and other European countries.¹⁴ In terms of individuals there is also some overlap in members participating in both JTC 21 and SC 42. To date, SC 42 has 82 AI standards either published or under development; they cover a wide range of topics including foundational vocabulary and terminology, operational aspects, engineering aspects as well as governance and ethical issues. Approximately 20 of them overlap with CEN-CENELEC's workplan and are marked as contributing to hENS.

In ETSI, work on AI standardization is distributed across 15 sub-groups and coordinated by the Operational Coordination Group for AI (OCG AI). It operates on an open membership model whereby different types of entities can all participate, including private companies, research entities, academia, government and public bodies and civil society organizations. To date, ETSI has 56 standards related to AI either published or under development; most of them relate to telecoms, network standards and cyber-security. To the best of our knowledge, none of these standards have thus far been designated to become hENS under the Sreq.

¹⁴ See <https://www.iso.org/committee/6794475.html>. Accessed 1 November 2025.

Table 1: Focus areas of AI Standards. *number of standards at 1 November 2025.
(Source: Author's own¹⁵).

SDO	Sub-committee	# of AI standards*	Primary Focus Areas	Strategic Role in AI Standardization
CEN-CENELEC	JTC 21	40	Foundational & operational concepts, Ethics & Governance	Regulatory alignment with the EU AI Act
ETSI	15+ sub committees led by OCG AI	56	Cybersecurity, Infrastructure	Telecoms and network AI standards
ISO/IEC	JTC 1/ SC42	82	Foundational & operational concepts, Ethics & Governance	Terminology, interoperability, lifecycle management

From a European perspective this poses strategic difficulties. These organizations are private entities with their own organizational priorities and workplans, far beyond the AIA. CEN-CENELEC notes that of its 19,000 standards in total, about 20% are hENs. A large chunk of its output therefore is industry *self-regulation* – the 80% of standards which are voluntary – and only the remaining 20% are created to support European legislative priorities as a form of *co-regulation* (CEN-CENELEC, 2015). Abbott and Snidal (2021a) argue that many international standards emerge and operate through a blend of governance structures: either through private-market interactions, through formal organizations or perhaps privately created “but ratified and enforced by governments,” (Abbott & Snidal, 2021a, p. 10). They argue that this complex mix of governance approaches is due to the diverse problems governors seek to address such as technological externalities as opposed to legal or policy externalities.

The same is true in AI standardization, whereby there are a host of governance problems to be solved ranging from technical (more market-driven) problems such as technical vocabulary or terminology, to ethical and governance (more public-safety driven) problems. In the latter case, consider for example the standardization work on undesirable bias in machine learning (*JT02103; ISO/IEC TS12791- Information technology - Artificial intelligence - Treatment of unwanted bias in classification and regression machine learning tasks*) or concepts, measures and requirements for managing bias in AI systems (*JT021036 - Artificial Intelligence - Concepts, measures and requirements for managing bias in AI systems*). Bias is a normatively loaded concept, whose definition is not clearcut and whose understanding differs depending on context and personal perspective. How much residual algorithmic bias is acceptable? These are fundamental ethical issues beyond the technical expertise of SDOs. They also put a spotlight on the latter’s democratic legitimacy (cf. Hahn & Weidtmann, 2016; Ebers, 2022), which suffers as rulemaking is delegated to private actors (Cantero Gamito, 2021; Ebers, 2022) with

¹⁵ This breakdown of standards is based on information provided on SC 42’s website (<https://www.iso.org/committee/6794475.html>), on the current available workplan from JTC 21 (https://standards.cencenelec.eu/ords/f?p=205:22:::::FSP_ORG_ID,FSP_LANG_ID:2916257,25&cs=114251C6C0B684FBBC069923513BF6348) and this workplan was also cross-referenced with a detailed dashboard provided by the Chair of JTC 21 in late 2024 (see https://www.linkedin.com/posts/sebastianhallensleben_status-dashboard-jtc21-european-ai-standardisation-ugcPost-7235665871937970177-VuUG/). While ETSI standards were downloaded from ETSI’s open-source catalogue using the keyword “Artificial Intelligence,” (etsi.org/standards-search). All totals are approximations based on publicly available information and any errors are the authors own. A more detailed analysis & methodology will be available in Hennessy (forthcoming) “Varieties of (AI) Standards” available in 2026.

little democratic or judicial oversight or participation from affected stakeholders (Ebers, 2022; Cuccuru, 2019).

Having opted for a product-safety approach, the EU faces a profound governance dilemma. On the one hand, the AIA relies on harmonized standards as the operational backbone of its risk-based framework, making the timely production of high-quality, value-aligned standards an essential condition for the law's legitimacy and effectiveness. On the other hand, the EU depends on a standardization ecosystem that it neither fully governs nor fully controls: private, consensus-driven SDOs whose global memberships, market incentives and technical priorities often diverge from the Union's fundamental-rights-oriented regulatory vision. While the Commission can issue standardization requests it must navigate a private governance sphere populated by authoritative institutions that include powerful industry representatives. Moreover, the EU's long-standing commitment to the primacy of international standards, combined with extensive institutional linkages to ISO and IEC, limits its room for interference in international workstreams. The EU is therefore caught between its ambition to steer AI standardization toward public-interest objectives and the structural reality that much of this rulemaking takes place in transnational private institutions oriented primarily toward market coordination. It is against the background of this dilemma that we investigate which strategies the EU has to influence outcomes in its favor, which ones it uses in practice, and what their ramifications are for AI standardization and AI governance more broadly.

4 Empirical Analysis: Tactics of control in AI standard setting

Table 2 below offers an overview of the categories of inducements and tactics of control we observe the EU deploying in standardization with a specific emphasis on AI governance; it offers a summary of the findings that are discussed in more detail throughout this section. Building on the literature and concepts outlined in the theoretical framework above, we find six categories of inducements and eleven instances of what we call the “tactics of control” which characterize the interaction between EU bodies proper and the main SDOs involved in AI governance. This typology provides an overview of the EU's capacity to control AI standardization in pursuit of its governance goals. Which inducements and tactics the EU actually utilizes, we will argue, depends on the type of control which characterizes the relationship: whether it is hierarchical or non-hierarchical and the degree to which authority has been granted or enlisted.

Type of control	Category of inducement	Tactics	Empirical evidence	Granted authority		Enlisted authority
				CEN-CENELEC (JTC 21)	ETSI	
Hard	Formal oversight & authority	Formal, legal control	Granted authority in article 1025/2012	1	1	0
Hard	Formal oversight & authority	Legal control over activities	Regulation 2022/2480 - Amendment of Regulation (EU) No 1025/2012	1	1	0
Soft	Persuasion	Agenda-setting	Defining EU-wide standardization strategy + work program (documents)	1	1	0
Soft	Persuasion	Agenda-setting	Leaders' statements on standardization/goals (rhetoric)	1	1	1
Soft	Negotiation	Supervises its activities	EU stipulates organizational work programme requirements (Art.3, 1025/2012)	1	1	0
Soft	Negotiation	Supervises its activities	Standardization requests (draft, final, updated)	1	1	0
Soft	Material support	Financial	Contributions to organizational funding	1	1	0
Soft	Material support	Personnel	Leadership positions (organizational level) incl. revolving doors	0	0	0
Soft	Material support	Personnel	Leadership positions (committee level)	0	0	0
Soft	Material support	Personnel	Membership (committee level)	0	0	0
Soft	Material support	Personnel	Liaison membership	1	1	1
Soft	Ideational support	Convening	HLF on standardization	1	1	0
Soft	Ideational support	Coordination	Alliances of actors	0	0	0
Soft	Ideational support	Conferring legitimacy	Enlisted authority (but not control) in 1025/2012	0	0	1
Soft	Ideational support	Conferring legitimacy	Standards' endorsement	1	1	1
Soft	Negative inducements	Rescinding authority	Amendments to regulation 1025/2012 e.g. Regulation 2022/2480	0	1	0
Soft	Negative inducements	Co-opting authority	Interfering in technical committee operations	1	0	0
Soft	Negative inducements	Casting doubt on legitimacy	Negative press reports	0	1	0
0 = not observed						
1 = observed (demonstrated by empirical evidence)						

Table 2: Tactics of hard and soft control in AI standardization

4.1 Formal oversight and authority

4.1.1 Regulation No 1025/2012

Under Regulation No 1025/2012, CEN, CENELEC and ETSI are the three legally recognized ESOs responsible for developing European Standards. This regulation also sets ESOs' obligations, including the procedures to develop harmonized standards (Article 10), the requirement to involve of a diverse range of stakeholders (Article 5(1)), and cooperation with international bodies (ISO, IEC and ITU, Article (12)).

Through its legal recognition of CEN, CENELEC and ETSI, the EU has delegated, or granted, exclusive authority to these organizations to carry out the task of developing European harmonized standards. In principle, this authority has been granted by the EU as principal and thus could equally be withdrawn. In practice, however, EU control over the ESOs and their activities is also somewhat less clear-cut. These organizations are independent, private entities with long histories and (largely) their own funding and personnel. CEN, CENELEC and ETSI are organized as international non-profit organizations under Belgian and French law. The recognition and roles afforded to the ESOs under Regulation 1025/2012 are useful in ensuring these organizations carry out tasks in line with EU governance goals – but only to a certain point, as we outline below. The EU, therefore also relies on other mechanisms to influence both the organizations and standards outputs.

Regulation 1025/2012 also prioritizes ISO and IEC for international standards cooperation. Under the NLF, while there are legal recognition and agreements pertaining to ISO and IEC, the EU has merely enlisted their (pre-existing) authority to carry out mutually beneficial governance goals through orchestration. If the EU formally rescinded this recognition, ISO and IEC's ability to perform their standardization tasks would not be materially damaged. However, their credibility and perceived legitimacy amongst the relevant audiences would suffer. Recognition under 1025/2012 bolsters each organization's credibility and enhances its legitimacy amongst relevant audiences and is thus a source of leverage.

4.1.2 Regulation 2022/2480 – Amendment to Regulation No 1025/2012

An additional source of hard control is enshrined in Regulation 2022/2480 – an amendment of Regulation 1025/2012.¹⁶ It covers decision-making in the ESOs concerning standards requested by the European Commission. Decisions related to such standards should exclusively be made by representatives of national standardization bodies, thereby ensuring that Member States have a decisive role in the development of standards that support EU policies and legislation.

This amendment reflects a hardening geopolitical climate, as the EU has grown concerned about excessive influence of major multinationals or foreign nationals in the ESOs. In 2022, the Commission noted that it was

“concerned that today’s decision-making processes within the European standardisation organisations, in particular in ETSI, allow an uneven voting power to certain corporate interests: some multinationals have acquired more votes than the bodies that represent the entire stakeholder community. This is why the Commission believes that administrative and good governance principles need to be put in place when the European standardisation organisations act upon European standardisation requests and develop standards used to show

¹⁶ European Regulation, (2022). (EU) No 2022/2480 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 1025/2012 OJ L 323/1 19 December 2022. Official Journal of the European Union. <https://eur-lex.europa.eu/eli/reg/2022/2480/oj>

compliance with rules imposed in the interest of EU citizens.” (European Commission, 2022, p.4)

Indeed, the Commission included a vague but unmistakable threat should the requisite governance changes not be heeded: “if insufficient progress is made, the Commission will consider proposing a revision of Regulation (EU) No 1025/2012, as necessary” (*idem*).

At the time of writing, the revision of Regulation 1025/2012 is ongoing, taking into account the changing geopolitical conditions.¹⁷ While the aim of the review is not solely to exert more control over the ESOs, the review provides an opportunity to influence all the SDOs with which it engages, not only at the European level, but also at national and international levels.

4.2 Persuasion and agenda-setting

The recognition and rules set out in Regulation 1025/2012 stipulate measures of hard control. But the overarching law (and ongoing review) could also be viewed as a tactic of soft-control – as part of a wider approach of persuasion, agenda-setting and the shaping of shared goals. The AI governance regime is complex, and no single actor can unilaterally determine outcomes. That said, within this regime the EU can wield significant influence through its size, resources and capabilities (Bradford, 2020). Therefore, its official statements on standardization, both public and private, carry weight and can steer the direction of policy conversations and focus standard-setters’ attention to specific subjects or problems.

For example, through the AI High Level Expert Group (HLEG) the EU was the first and chief proponent of “trustworthy AI” in 2019 (Stix, 2022; High-Level Expert Group on Artificial Intelligence, 2019). Since then, this concept has become influential, featuring in other countries’ AI strategies and policy documents, in the OECD recommendations on AI¹⁸ and in official ISO communications and standards work including *ISO/IEC TR 24028:2020 Information technology – Artificial intelligence – Overview of trustworthiness in artificial intelligence*.¹⁹ The concept of trustworthiness also features heavily in ongoing CEN-CENELEC work in Working Group 4 (Foundational and Societal Aspects), including the *JT021008 Artificial Intelligence Trustworthiness Framework*, which extends across nearly all of the requested harmonized standards.

In practice, the degree to which the EU can influence its intermediaries through persuasion is highly contingent. Timing matters, for example through the degree to which other regulatory actors have already formed strong opinions or even written them into hard rules. On some issues, corporate lobbyists may have very clear views because of standards’ effects on their business models; on others, that is much less the case. Depending on the very specific issue at hand, the Commission may at times be seen as highly knowledgeable and competent, and less so at others. Frequently, influence wielded in working groups depends on the reputation and authority of individuals, who can be more or less respected by their peers or invest more or less to push a particular position. One policymaker at the Commission told us that in standard-setting, one wouldn’t win through political pressure. One would win, they claimed, by having the substance, the knowledge and the argument on your side (Interview 5, policymaker). Taken

¹⁷ European Standardisation evaluation. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13446-European-standardisation-evaluation_en

¹⁸ Stix (2022) notes, “Many EU member states have adopted the EU’s concept for use within their own AI strategies and policy documents. These member states include Czechia, Luxembourg, Malta, and the Netherlands, while the OECD Recommendations on AI, which were signed by over 35 countries, recognize that “the trustworthiness of AI systems,” (p. 6) is a key factor of AI diffusion,” (cf. Stix, 2022, pp.7-8).

¹⁹ See <https://www.iso.org/standard/77608.html>

together, while the EU clearly has the power to persuade in specific instances, it would be wrong to see this “persuasion power” as a generalizable resource, even in a single policy field such as AI. How much leverage it affords in any particular instance hangs on factors beyond the Commission’s control.

4.3 Negotiation

When actors come together to negotiate and to solve divergent goals, we may find more tangible evidence of Commission involvement in AI standard setting. As we have seen, Regulation 1025/2012 and the subsequent amendment allow for EU interference in the ESOs’ organizational and governance structures. But the EU also has discretion over several substantive aspects – primarily through CEN-CENELEC’s workplan, but also through the issuance of Standardization Requests (including drafts and reviews).

The AI Sreq stipulates three requirements related to CEN-CENELECs work program, which includes the date by which it must be submitted to the Commission, notification of any amendments to it, and each organization’s overall project plan.²⁰ Moreover, the Commission drafts the Sreq in close cooperation with the ESOs, the Annex III (civil society) organizations, and any other relevant stakeholders and Member States’ sectoral experts. In practice, there is significant negotiation over the specific standard setting process and the substantive parameters even before the actual Sreq is issued (Interview 5 policymaker, Interview 4 policymaker). Once that is drafted, the ESOs must accept the request, after which it is sent to the relevant technical committees to develop the requested deliverables (High-Level Forum on European Standardisation, 2024a).

The EU has significant input into ESO governance structures as well as some influence over content outputs through the Sreq – up to the moment it is issued. Once the mandate has been accepted by the ESOs, formally the Commission can interfere neither with an ESO’s internal decision-making procedures nor with standards’ content (European Commission, 2015; cf. Delimatsis & Verghese, 2024).

The risk of fundamental rights questions being decided by private stakeholders has changed this picture somewhat in practice. The Commission acknowledged that due to this “new challenge” it had taken additional measures. It inserted strong references in the Sreq to the inclusivity of the process and to the need to gather expertise in fundamental rights, and simply be more involved itself (Interview 5, policymaker). In a statement provided to the Corporate Europe Observatory, DG CNECT noted that

“[t]he Commission is also strongly involved in the standardisation process, much more than usual. We have several EU officials following discussions and monitoring the ongoing work, to ensure that the standardisation deliverables are aligned with the objectives of the AI Act.” (Corporate Europe Observatory, 2025)

While such soft control is evident for the ESOs, we do not observe it for their international counterparts. For instance, the EU obliges the ESOs to comply with principles of transparency and inclusiveness (Interview 3, policymaker). In practice, this means funding is provided for recognized Annex III organizations, and there appears to be a genuine effort to include civil society in negotiation processes and through convening and education initiatives (detailed in section 4.5 below). At the international level however, there is no such commitment and access to technical committees is much more carefully guarded. Work undertaken by the High-Level forum on Standardization recently noted that

²⁰ See note 13, above.

“[in] contrast to the European framework where the Annex III organisations are able to join a CEN-CENELEC TC and WG as of right (based on the Regulation 1025), in international TCs they are not guaranteed the participation automatically. Liaison organisation applications are considered on a case-by-case basis, and decisions are taken by a committee’s national members. [M]ore importantly, a possible rejection of a liaison request leads to the exclusion of the applicant. European Culture and Sport (ECOS), European Trade Union Confederation (ETUC), and Small Business Standards (SBS) have had their requests for liaison status rejected by some ISO and IEC Technical Committees (TCs), preventing them from contributing at the international level.” (High-Level Forum on European Standardisation, 2025, p.11)

The EU thus has no ability to supervise the day-to-day activities of international SDOs, including on issues related to inclusion or transparency. To remedy this the HLF report recommended more “proactive support” from the European representatives (from those representing national committees and standards bodies) in these committees (*idem.*) Such a proposal would require greater levels of coordination, which we discuss further in section 4.5.2 below.

4.4 Material support

Material support can be provided as direct financial contributions to ESOs and SDOs or through, for instance, providing personnel.

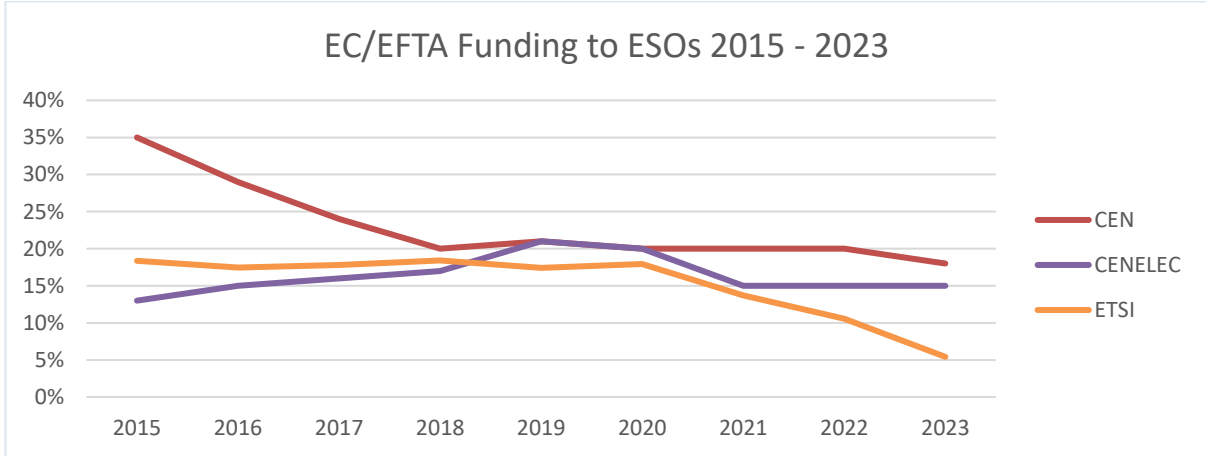


Figure 2: European Commission/European Free Trade Association (EC/EFTA) funding contributions to CEN, CENELEC and ESTI as a proportion of total income.

The three ESOs are co-funded by the European Commission and the four-country European Free Trade Association (EFTA).²¹ This EC/EFTA funding is declared in each organization’s annual report. CEN and CENELEC (which have published joint reports in recent years, albeit with separate account breakdowns) declare this funding as a proportion of their income; ETSI publishes the actual figure. For ease of comparison, we have reported ETSI’s income proportionately (as in Figure 2). Unfortunately, reports for CEN-CENELEC are (publicly) unavailable prior to 2017, and while they report the two preceding years, they do not explain

²¹ EFTA has supported European Standardization since 1984 and the basis for support is laid down in the General Guidelines for Co-operation between EFTA, the European Commission and the ESOs. These countries (Iceland, Liechtenstein Norway, Switzerland) also participate in European standardization through their national standardization bodies. See <https://www.efta.int/eca-relations-eu/policy-areas/free-movement-goods/standardisation>

CEN's significant drop in funding between 2015 – 2018.²² Perhaps more startling is ETSI's drop in funding, which more than halved between 2021 – 2023, down from just over €3m to just under €1.5m. In its Annual Report, ETSI did not specifically mention the reduction in overall funding, but noted that a new Framework Partnership Agreement was signed in 2021, and the years 2022 and 2023 were described as years of “consolidation, with regards to processes and working methods... of the new tri-partite relations between DG GROW, the newly created European Innovation Council and SMEs Executive Agency (EISMEA) and ETSI” (ETSI, 2022). This decrease in funding was not publicly explained, but regardless of the reason, the Commission's material support (by way of the EC/EFTA funding) remains a significant lever which can be deployed to either induce or deter the ESOs towards shared governance goals.

Empirical literature has paid much attention to personnel in ESOs and SDOs both at the organizational level (for example in leadership positions) (Baron & Kanevskaia Whitaker, 2021; Cantero Gamito, 2021) but also at the working group and technical committee level, in both group makeup and position holders (Corporate Observatory Europe, 2025). This is one area in which it is difficult to say with certainty how EU representatives conduct themselves during AI working group meetings. In theory, EU representatives should not have any direct interference in day to day working group activities because no Commission personnel holds active (voting) roles in any AI standardization committee.²³ However, in practice, we understand that Commission officials have weighed in on WG outputs in JTC 21 and SC 42 when they misalign with the AI Act (Interview 8, Standard setter (JTC 21), Interview 9 standard setter (JTC21), Corporate Europe Observatory, 2025). However, this analysis is based on limited sources and due to the confidential nature of standard setting is difficult to verify empirically.²⁴ Lastly, we have not found any indication of a “revolving door” at work in AI standardization, where European officials hold positions of influence in European or international standards bodies, aside from the European Commission holding a “Category A liaison membership” in SC 42.²⁵

4.5 Ideational support

4.5.1 Convening

The High-Level Forum on European Standardization (HLF), led by DG Grow, is another initiative with which the EU can drive standardization discourse and priorities. It was established by the European Commission in January 2023 as a direct response to the mandates outlined in the EU Strategy on Standardization. It is a multi-stakeholder platform, comprising 55 high-level representatives from EU and European Economic Area (EEA) member states,

²² However, 2015 – 2016 coincided with the launch of the Single Market Strategy, which included a big push to “modernise” the European standardisation system. It is possible that as part of these updates the contributions were reviewed, this also aligns with previous attempts to bolster efficiency and accountability during the overhaul to the preceding “New Approach” legislation in 1998 (cf. European Commission, n.d). Lastly, we found evidence to suggest that CEN was “financially dependent” on EC/EFTA funding and the changes throughout these years were to remedy that fact (CEN-CENELEC, 2019, p.4)

²³ Standards participants are represented by national representatives from national bodies in CEN-CENELEC, ISO-IEC.

²⁴ For these reasons, it is discussed here with caution and categorized as “not observed” in Table 2 under Personnel – Membership (committee level).

²⁵ Category A liaisons allow international and broadly based regional organizations to actively participate in the work of a committee. However, they do not have the right to vote in formal committee ballots. See https://www.iso.org/files/live/sites/isoorg/files/archive/pdf/en/my_iso_job.pdf

ESOs, industry leaders, civil society, and academic experts, although it does not specifically include international standard-setting entities.

The HLF has already begun to influence European standardization through its convening power. Throughout 2024, multiple workstreams released reports with recommendations across various topics. In December of that year, the report *Alignment between European and International Standards* recommended increased data collection, the establishment of a database of experts at the national level (to be used as the basis for monitoring of the expertise level in European standardization), and changes to the HAS consultancy process to speed up standards development. The HLF also issued a report recommending greater funding for European participation at international level, lamenting, “the lack of funding as one root cause of the insufficient EU participation and influence in international standardization fora” (High-Level Forum on European Standardisation, 2024b, p.1).

Due to its size and resources, the EU enjoys privileged access to standard-setters in Europe. In terms of the EU’s own tactics of soft control, this forum both empowers the intermediaries involved, provides increased opportunities for collaboration and negotiation, and enhances the EU’s own ability to “steer” standard-setters (Abbott et al., 2021a). While it is too early to gauge the impact of the HLF on AI standard setting, should even some of the recommendations be acted upon, it will certainly strengthen standardization at the national and European levels, which would have knock-on effects at the international level, as well. As one report issued by the HLF noted, “real influence comes through technical expertise (good delegates) as well as academic and industry engagement (many delegates) who can propose new work items, put forward technical proposals and can continuously influence the drafting of standards and surrounding discussions” (High-Level Forum on European Standardisation, 2024b, p.2).

4.5.2 Coordinating

One mechanism for soft control that the EU uses little is coordination of member states’ or its own internal activities. As the Commission finds,

“EU Member States, EU standardisation bodies and EU industries do not effectively coordinate and share resources in support of international standardisation processes and principles... This has led to a situation whereby in sensitive areas, like lithium batteries, facial recognition or the digital twin, other world regions are taking the lead in international technical committees promoting their technological solutions, which are often incompatible with the EU’s values, policies and regulatory framework. [...] Coordination between EU Member States, national standardisation bodies and EU stakeholders must be improved to strengthen the EU’s voice in global standardisation.” (European Commission, 2022, p.6)

The lack of coordination was also underlined in our interviews, during which participants suggested that the EU wants to respect the integrity and independence of the standardization system, and that it is wary of overt interference, which may raise the ire of non-European participants (Interview 5, policymaker, Interview 2, civil-society representative). Here, again, geopolitical considerations create a serious tension for the Commission and compromise its ability to influence regulatory outcomes. One civil society representative whom we interviewed in early January 2025 suggested that the lack of more pro-active coordination was in deference to the USA (Interview 2, civil-society representative). Whether the second Trump administration has only reinforced such deference or, in contrast, emboldened the EU in its own approach to standardization is too early to tell.

4.5.3 Endorsement

The EU has two modes of endorsement which it can avail of to empower its intermediaries. The first is through conferring legitimacy on the organization itself through legal endorsement (e.g. Regulation 1025/2012) or public cooperation or statements. At the content level, the EU also provides the final endorsement of harmonized standards for publication in the OJEU.

In AI standardization, there have been two reported instances in which international standards have been significantly misaligned with the AIA and European standard-setters pushed back in response. The first concerned *ISO/IEC 42001:2023, Information technology – Artificial intelligence – Management System*, which does not align with the AIA. ISO understands risk as operational risk, and not to health, safety and fundamental rights, as the AIA does. Representatives in JTC21 directly questioned ISO-IEC's risk definition and deemed it insufficient for use under the AIA (Interviews 8 & 9, standard-setters JTC 21). The second was related to the quality management system (which CEN-CENELEC currently denotes as *JT021039*, building on ISO/IEC 42001). ISO/IEC 42001 refers to an organization and its processes – whereas the AIA refers to products. Such discrepancies were deemed unsuitable, and work is currently underway to amend the international standard to ensure it aligns with the AIA (Interviews 8 & 9, standard-setters JTC 21, Corporate Europe Observatory, 2025).

On these points the Commission (in the statement provided to the Corporate Europe Observatory) has argued that,

“[it] is important to keep in mind that the standards delivered by CEN-CENELEC will be subject to an assessment by the European Commission and will be cited in the Official Journal only if they properly address the objectives of the AI Act and adequately reflect the requirements for high-risk AI systems. Additionally, a number of other safeguards exist to ensure some control over the process, such as the possibility for Member States and the European Parliament to object to harmonised standards, as per Article 11 of Regulation (EU) N°1025/2012” (Corporate Europe Observatory, 2025).

It is interesting to note here that the “assessment” undertaken by the European Commission is not the usual process. While the Commission is fully within its remit to do this, ordinarily this assessment is undertaken by independent consultants known as HAS consultants. Here is thus another tactic that the Commission has utilized to wield greater control over AI standardization, one that is only available in relation to standards that will become hENs. To ensure alignment with the AIA the European Commission has moved itself much closer to the standard-setting process than usual, having itself been insufficiently satisfied with indirect governance mechanisms. Endorsement, or potential lack of it, is clearly a strategy the EU acknowledges and appears willing to deploy if necessary

4.6 Negative inducements

Finally, the EU has “sticks” it can use to influence SDOs. Most obviously, it can rescind either the granted or enlisted authority of its intermediaries. Perhaps the most striking instance of interference is the recent announcement to “pause” the normal consensus process within JTC 21 and take “exceptional measures in order to accelerate key standards” as part of the AIA (CEN-CENELEC, 2025). In October 2025, CEN-CENELEC announced measures to create a “small drafting group” to finalize six of the most delayed drafts before their submission to regular Working Groups. It states that it took this decision in “consultation with its institutional partners and Annex III organizations.” Such measures are unprecedented and if taken based on pressure from the European Commission represent exceptional interference in CEN-CENELEC workstreams which go well beyond its designated remit and veer towards a co-optation of

authority. The fallout from such measures is still being felt with national bodies including the US and European members expressing their concerns (Bertuzzi, 2025).²⁶

That said, the Commission has embarked on negative tactics before. Here, its difficult interactions with ETSI in recent years stand out, which have cast increasing doubt on ETSI's legitimacy. As mentioned above, the Commission explicitly named ETSI as a problematic case in the Standardization Strategy and alluded to its potential capture (European Commission, 2022). Furthermore, in the AI Sreq, the Commission deliberately demoted ETSI to a secondary player behind CEN and CENELEC (Bertuzzi, 2022). Regulation 2022/2480 and its changes to ESO governance structures can also be viewed as a response to other state interference in ESO governance, and again particularly ETSI. In response ETSI has amended its governance directives –limiting participation in European Harmonised Standards development to national standards bodies– to appease the Commission (Delimatsis & Verghese, 2024).

Our analysis shows the spectrum of tactics available to the EU to interfere in technical standard-setting and demonstrates that it employs a range of strategies, which depend on the nature of its relationship with the SDO, whether that they work together through formal, granted authority or as enlisted intermediaries. These strategies span the continuum from complementary to competitive interactions, but more recently have moved towards a public takeover or co-optation of European standardization – a notable break with past practices. This rupture, we argue, stems from the inevitable political charge of technical standards in the AI field, both with regard to human rights and geopolitics. The EU finds itself in an intractable position in AI governance: having opted for a legislative approach which relies on private standard-setters, the actors within these forums are bullishly competing to shape outcomes in their favour, whether that is Big Tech, or other geopolitical actors. The EU is therefore employing all the strategies available to it, whether hard or soft, directive or facilitative to achieve its own regulatory ambitions.

It is too early to tell what effects this might have on private AI governance. While the tactics listed here might result in greater alignment with the AIA (and thus, in theory, more effectively achieve technical and constitutional goals), the question might be at what cost they do so? Moving towards co-optation and employing negative inducements is a risky strategy, given that “such practices are potentially detrimental to the EU’s role as a global technology actor but also to the legitimacy of European standardization” (Kanevskaia, 2024, p.1). News media has already reported on the erosion of trust in the parallel development of standards between ISO-IEC and CEN-CENELEC (Bertuzzi, 2025). From a European perspective, however, the EU continues to doggedly contest the AI governance sphere in the face of intense geopolitical and industry pressure. The AI case may not be generalizable to other sectors of standardization per se. But it is highly prominent, and it fits a dynamic in which state actors reassert their dominance, while support and trust in indirect and transnational governance is under pressure.

5 Conclusion

This article has explored the tactics available to the EU to navigate what we have called the delegation dilemma in AI governance: the EU has strong incentives both to outsource technical policymaking to other actors and to retain control over them. What can and does the EU do to square that circle?

²⁶ See also https://www.linkedin.com/posts/luca-bertuzzi-186729130_the-european-standard-setters-decision-to-activity-7388516524841508864-ve4v/

In contrast to the perceived view that the EU lags rival superpowers in ICT standardization activities, we have demonstrated that the EU as a governor has a range of hard and soft control mechanisms to influence both ESO and SDO operations and standards outputs. These tactics lie on a continuum from hard, legal control over regulatory agents to soft, informal tactics through persuasion, negotiation or various kinds of support with intermediaries whose authority has been enlisted. The latter is mostly observed in the relationship between the EU and international SDOs.

The character of the relationship between the EU and its agents and intermediaries shapes which tactics can be deployed. For instance, many of the interactions—such as responsibilities, funding and limits to interference—between the EU and ESOs are defined and mandated in legislative instruments. However, reality is more complex, for example when the EU can renege (or threaten to renege) on its legal responsibilities. Indeed, in AI policy the EU, by its own admission, has interfered in standards development in exceptional ways, actively participating in WG discussions, especially where thorny fundamental rights issues have been concerned. Our approach accommodates this blurriness by placing real-world relations on a continuum between delegation (hard authority) and orchestration (soft influence) rather than in two clearly delineated categories.

The interactions between the EU and standard setters are dynamic, responding not least to the heightened geopolitical and geoeconomic charge of AI policy. The complexity of the policy field means that no single actor can determine outcomes unilaterally; and necessitates that the EU must act in both competition and cooperation with other powerful actors, both public and private.

There are clear limits to our study. As researchers, we are not directly involved in day-to-day AI standardization and therefore must rely on second-hand accounts of what happens in those forums. Our analysis is not exhaustive, and we recognize it could be extended further. In AI standardization, it would be beneficial to analyze additional SDOs to the entities investigated here—IEEE, ITU or the IETF come immediately to mind. Equally, additional country perspectives could be added to understand, for instance, US or Chinese tactics of control. One particularly salient issue are disagreements about the degree to which social issues should become integral elements of standards setting. These are topics for future research.

Beyond its academic contribution, our study also has practical implications. We note that European coordination amongst national standards bodies in international standard setting is lower than detached observers might assume. Here, is room for improvement, especially in developing a less ad hoc and more coordinated strategy. Work already undertaken by the HLF on inclusiveness, outreach and education is a significant step in the right direction. Meanwhile, overt, more hostile public interference in ESO working groups, risks the overall integrity and legitimacy of European Standardization more broadly. Whether such tactics are confined to AI standardization or whether such interference will become the norm, remains to be seen.

Whether we like it or not, standard setting has increasingly become an arena of interest-driven politics. Safeguarding the legitimacy of standards that apply in Europe thus also means countering self-interested influence by other digital superpowers or unaccountable tech corporations. Our contribution might provoke policymakers to consider all available options to wield influence as appropriate. Europe's fundamental rights from labor laws to protection from discrimination to the right to privacy are on the line, and policymakers should have the necessary levers available to uphold them.

Funding (or Grant)

This research has been supported by the ReguAite project directed by Daniel Mügge and financed by the Dutch Research Council (NWO) through the Vici grant VI.C.211.032.

Contributor Statement

Orla Hennessy: conceptualization, data curation, investigation, methodology, project administration, visualization, writing - original draft, writing - review & editing.

Daniel Mügge: conceptualization, funding acquisition, supervision, validation, writing - original draft, writing - review & editing.

Use of AI

During the preparation of this work, the author(s) did not use AI tools or services in any way. All errors are the authors' own.

Acknowledgements (optional)

An early version of the manuscript was presented at the EURAS 2025 conference. The authors are grateful for the constructive and valuable feedback received at the conference and the journal review process resulting in significant changes to the manuscript. The authors would also like to thank Dr. Philip Schleifer and members of the ReguAite project team at the University of Amsterdam for their valuable comments on early drafts of this paper.

Conflict Of Interest (COI)

There is no conflict of interest.

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Appendix A List of interviews

	Description	Medium	Date
1	Policymaker	Personal meeting	8 October, 2024, 17:00pm
2	Civil Society representative	Personal meeting	28 January 2025, 10:00am
3	Policymaker	Personal meeting	28 January 2025, 12:30pm
4	Policymaker	Personal meeting	28 January, 2025 15:00pm
5	Policymaker	Personal meeting	29 January, 2025 16:00pm
6	Civil Society representative	Personal meeting	29 January, 2025 10:00am
7	Journalist	Online video call	5 February 2025, 16:00pm
8	Standard-setter (JTC 21)	Personal meeting	17 March, 2025 13:00pm
9	Standard-setter (JTC 21)	Personal meeting	17 March, 2025 15:00pm
10	Academic	Personal meeting	18 March 2025, 15:00pm