TU Delft OPEN Publishing

Research Article

Journal of Standardisation

Who influences standardisation processes? The example of risk management standards

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Abstract: The use of standards has permeated virtually all aspects of modern society. Standards should be seen as the combined result of the standardisers' expertise and the effects of the dynamics of the standardisation process itself. This article explores why some participants are more influential in standards development than others. Using an insider perspective, observations are gathered from almost a hundred activities and three hundred hours spent with international and national standardisation workgroups related to risk management. Discussing power relations, this study exposes the high influence of individuals in standardisation. By knowing and using the rules of the game, individual participants may significantly impact the process and the output. The empirical examples also show that people with high proficiency in English interact more in international standardisation activities than participants with a lower command of English. The challenges of inadequate participation, particularly from the risk science community, and unbalanced representation in standardisation activities are also discussed in the article.

Keywords: Standards, standardisation process, risk management, risk regulations, power, influence.

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Submitted: 19-09-2024
Revised: 16-01-25, 10-04-25
Accepted: 02-07-2025
Published: 11-08-2025
Peer review: double anonymous

DOI:
https://doi.org/10.59490/jos.2025.7827

ISSN: 2772-9249

How to cite: Ingvarson, J. (2025). Who influences standardisation processes? The example of risk management standards. *Journal of Standardisation, 4.* https://doi.org/10.59490/jos.2025.7827

Highlights:

1. There are ample opportunities for individuals to influence standardisation processes. Hence, participants must be attentive to power use to prevent undue impact.
2. Any participant may significantly impact the process and the output by knowing the rules of the game and playing the game, which indicates the need for an improved vetting process for participating in the work.
3. People with a high proficiency in English interact more in standardisation activities and are more influential than participants with a lower command of English.
4. The chair or convenor of groups is a highly influential role for which a particularly high competence profile should be sustained and monitored.
5. The toolkit available for standardisation leaders should be expanded to include practical methods and techniques to ensure the inclusion of participants and promote interaction. These tools would support transparent and fair risk management standardisation processes.

1 Introduction

In modern society, standards are used virtually everywhere, from making products and delivering services to designing control instruments and developing regulatory regimes. One area where the use of standards in regulations is debated is risk management (e.g., Aven & Ylönen, 2019; Ingvarson, 2021; Ingvarson & Hassel, 2023; Olsen, Juhl, Lindøe & Engen, 2020). The ubiquitousness of standards and the multidisciplinary nature of standardisation result in various definitions and categorisations (e.g., de Vries, 1997; Riillo, 2009) and standardisers, i.e. the actors behind the standards, are plentiful and varied. Even so, standardisation – in the meaning of the production of standards (Brunsson & Jacobsson, 2000) – is typically a similar process regardless of modes of standardisation (committee-based, market-based, and government-based (Wiegmann, de Vries & Blind, 2017)) or application area. Simplified, the standardisation process involves a group of subject matter experts who gather to share and discuss perspectives, opinions, and experiences on a specific topic before agreeing on a preferred way of doing things. Ultimately, standards are expert knowledge stored as rules (Jacobsson, 2000).

In practice, however, the standardisation process is complex and intricate. In this study, the dynamics of decision-making is at the core (referred to as the "process aspect" by Schmidt & Werle (1998)), rather than the structural and organisational aspects of standardisation and the standardisers (as explored by, e.g., Tamm Hallström (2000)), the output (i.e. the standard), or the effects of standardisation. Due to the potential economic benefits of influencing standardisation processes, many actors are likely to invest significant resources to "have it their way". Combined with the nature of standardisation, where individual standardisers impact standardisation, how individuals influence standardisation is of interest. Considering that subject matter expertise is a prerequisite for standardisers, what other qualities or characteristics of contributors and contributions influence the standardisation process? Many of these aspects have been extensively explored and discussed, from the economics of different interest groups' participation in standardisation (Swann, 2010) and the standardisation-related knowledge, skills, and competencies required in addition to technical expertise (Blind & Drechsler, 2020), to the role of national standardisation organisations as a contributor in standardisation (de Vries, 1999) and the social shaping of development and implementation of a standard (Gerst, Bunduchi & Williams, 2005). Langer (2023) performed a narrative literature review to explore how management and organisation research has shed light on the relationship between standards and power. The study findings indicate that current literature primarily covers "standard battles" between organisations (i.e. how organisations use standardisation as a tool to exert power over others) and, to some extent, how the adoption of standards affects power relations within organisations.

To complement these aspects of standardisation processes, this study uses empirical evidence to examine how power relations may impact individuals' influence. At the centre of the study are questions related to groups of standardisers: Who is most active, and who is listened to when developing standards? The novelty of this article is exploring power relations and their potential effects on standardisation process dynamics using empirical examples to help understand who is more influential in risk management standardisation processes and why. This paper aims to contribute to transparent and fair standardisation processes with the best available knowledge integrated into future standards by searching for factors that influence standard-setting activities and their outcome.

This study uses standardisation processes related to risk management standards as empirical examples for discussion. As a specific topic of study, risk management regulations suggest a focus on process standards rather than outcome standards (Brunsson, Rasche & Seidl, 2012). Consequently, participation in standardisation processes related to risk management processes

by being embedded in standard-setting body (SSB) workgroups and related activities forms the empirical basis for the study.

2 Analytical framework

In line with the objective of examining standardisation workgroup dynamics, this paper also utilises the concept of power to achieve deeper insights into the standardiser group dynamics in standardisation processes. Hence, the power theory discourse and intellectual frameworks of power forms and bases may help research group dynamics. Using a metaphor, parts of the extensive literature on power form the backdrop that helps interpret the drama played out in SSB workgroups. The ambition of this paper is, hence, not to push power theory frontiers, nor is it to provide a critical review of power perspectives. Instead, this section provides a non-exhaustive, high-level orientation of power theory, forming the analytical framework guiding the inductive analysis of the empirical examples of SSB workgroup participation.

2.1 Using the power perspective

The concept of power has been theorised for centuries, with significant contributions from early thinkers like Machiavelli (1469-1527) and Hobbes (1588-1679), via the influential 19th-century works of Marx to modern-day theorists such as Foucault, Flyvbjerg, and Bourdieu. Power is a multifaceted and somewhat controversial topic in the social and political sciences. The notion of power is suggested to be abandoned by some (Latour, 1984), while others consider understanding power to be essential since "how we think of power may serve to reproduce and reinforce power structures and relations, or alternatively, it may challenge and subvert them" (Lukes, 2021, p. 68). Considering the aim of this paper, power theory and theorists are consulted primarily for guidance to facilitate empirical data analysis and interpretation. Therefore, exploring the "definitional chaos" (Wrong, 1979, p. 65) of what the concept of power may encompass and various dimensions, modes, forms, and sources of power will help build the analytical framework. Acknowledging the critique of power studies often being centred around how power works in modern, western, capitalist, and liberal-democratic contexts (Hearn, 2012) is also an important aspect. A similar critique is raised in standardisation studies, e.g. highlighting that leadership in SSBs is often dominated by "males from Western countries" (Yates & Murphy, 2019, p. 337).

2.2 Definition of power

A legitimate starting point for the conceptual understanding of power is its definition. Wrong (1979) defines power as the capacity of some persons to produce intended and foreseen effects on others. Wrong's focus on interpersonal relations may not be sufficient when considering a broader power perspective since relationships may also be acted out through various organisational forms. Thus, Hearn (2012) regards power as the capacity of some agents (broadly defined) to achieve intended and foreseen effects on other agents and the world more generally.

The cooperative nature of SSB workgroups is essential when defining power. A fundamental distinction in the study of power is to distinguish between "power to" vs. "power over", i.e. seeing power as the capacity to realise ends or power as the control of some people over others (Hearn, 2012). The latter, the so-called "dominating power" perspective, sees power as the capacity to secure compliance with the interests of the powerful (Lukes, 2021).

Wolf (2001) argues that it is helpful to think of four different modes of power: 1) as the personal attribute of potency or capability, 2) as the ability to impose one's will on others in interpersonal relations, 3) what controls the settings in which people may exhibit their potentialities and interact with others ("organisational power"), and 4) "structural power" that shapes and orchestrates the social settings or domains.

Without subscribing to a specific of the above definitions of power, in this paper and in the context of SSB workgroup dynamics, power is considered the ability to influence others in the social relationship between actors.

2.3 Forms of power

Even if power in the current context is limited to the capacity to produce intended and foreseen effects on others, it comes in many forms. Wrong (1979) differentiates between the following distinct forms of power: 1) *force*, i.e. threat and actual application of physical force or the creation of obstacles restricting freedom of another; 2) *manipulation*, where the power holder conceals the intent from the power subject; 3) *persuasion*, i.e. the power subject accepts the power holder's arguments unconstrained by considerations of penalties, rewards, or perceived obligations; and 4) *authority*. Authority differs from persuasion in that it is the source of communication, i.e., the communicator's perceived status, resources, or personal attributes, which induces compliance rather than the content of communication. Similar to Wrong's power taxonomy is the categorisation or classification of power aspects by French & Raven (1959), who highlight five bases of power: 1) *reward power*; 2) *coercive power*; 3) *legitimate power*; 4) *referent power*; and 5) *expert power*.

Authority as a form of power includes a command-obedience relationship where the power subject may have different motivations for obeying the power holder. Wrong (1979) distinguishes the following subtypes: coercive, induced, legitimate, competent, and personal authority. *Coercive authority* (i.e. obtaining compliance using force or threat of force) can be seen as the counterpart to *induced authority* (i.e. offering rewards for compliance). In contrast, *legitimate authority* is a power relation between a power holder possessing an acknowledged right to command and a power subject with the obligation to obey. This social relationship may be highly intense (e.g. soldiers following orders even if their lives are at stake), but most relations of legitimate authority are less intense where a commanded action that falls outside of certain agreed limits is likely to be regarded as illegitimate and thus nullify the legitimate authority relation. On the other hand, *competent authority* is a power relation in which the power subject obeys out of the belief in the power holder's superior expertise. It can be contrasted with *personal authority*, where power subjects obey power holders because of their personal qualities.

3 Methods and materials

The primary research approach of the empirical data collection in this ethnographic field study is best characterised as participant observation (Davies, 2008). The author was embedded as a member in two international and two national SSBs: 1) ISO, 2) CEN, 3) the Swedish Institute for Standards (SIS), and 4) Svensk Elstandard (SEK), which is the Swedish representative in CENELEC. Participation in workgroups and activities included Technical Committees, Task Groups, Ad Hoc Groups, and Plenary Meetings. The activities feeding into the research material of this paper cover a broad spectrum from high-level plenary meetings discussing projects, business plans and other strategic matters to active participation in technical committees and different kinds of groups performing the donkey work of producing standards. Observations were made during almost a hundred SSB activities and three hundred hours spent with the workgroups from September 2020 to December 2023 (see Table 1 below for an overview).

It was essential to join several groups to capture potential differences in interaction and power dynamics between actors due to workgroup setup (size, participation, duration, etc.). Both international and national SSB workgroups were selected to go beyond potentially obvious aspects of language barriers or cultural differences. Furthermore, short-term and long-term group commitments from a handful of meetings to 36 months of regular meetings were chosen to study whether and how power dynamics are time-dependent.

The auto-ethnographic study approach involved an insider critically observing the process aspect of standardisation by actively participating in the standardisation process activities. To ensure an accurate representation of standardisation work, the other participants were introduced to the insider's dual roles as an active researcher and technical expert participating on a par with all other team members.

The research was undertaken during the peak and aftermath of the COVID-19 pandemic, resulting in all activities and engagements being digital using videoconferencing solutions. Online activities generate challenges ranging from practical matters, such as inadequate internet connection, to interactional issues, like the inability to read nonverbal cues due to inconsistent and delayed connectivity (Archibald, Ambagtsheer, Casey & Lawless, 2019). Most of these challenges are tackled by the pandemic's positive influence on videoconferencing usage, making participants well-experienced users of online meeting arrangements. An upside of online activities is, in addition to convenience and resource effectiveness, that they allow the insider to participate in more activities and join several groups with a large geographical spread. Another upside includes the use of live transcripts during video meetings as a hearing aid and language support tool.

From a methodological perspective, videoconferencing also challenges essential aspects of the participant observation research approach (e.g., DeWalt K.M. & DeWalt B.R., 2011; Emerson, Fretz & Shaw, 2011; Jorgensen, 1989). For example, the limiting format of online meetings results in fewer details being available, such as descriptions of the room and the participants, body language, simultaneous activities, etc. At the same time, limitations in the number of details may enhance the observer's cognitive ability to capture the few details available. The online format may reduce impressions, allowing the observer to focus on what is said and how it's said (tone of voice, word choice, etc.) as a basis for analysing formal and informal rules, power balances, and hierarchies. Due to the potential differences between online interactions and physical presence, the results and discussions on group dynamics and power balances should not automatically apply to standardisation processes where all meetings are physical.

The study's empirical material was collected using field notes after each session in all the SSB workgroup activities in which the insider participated. A summary of the activities for data collection is provided in Table 1. Note that one group had so few members that it was put on hold, and one technical committee did not arrange any meetings during the 40 months of study. The committee was active, but activities were restricted to email conversations only during this period.

Table 1: Summary of participation in SSB workgroup activities.

Group / activity	Group name	Participants	Meetings	Meetings attended	Countries represented
Task Group	ISO/TC 262/TG 5 "Study for the way forward in TC/262"	62	51	38	16
Plenary	ISO/TC 262 "Risk Management" Plenary Meeting 2021	75	2	2	34
Plenary	ISO/TC 262 "Risk Management" Plenary Meeting 2022	115	2	2	30
Plenary	ISO/TC 262 "Risk Management" Plenary Meeting 2023	128	2	2	27

Plenary	ISO/TC 292 "Security and Resilience" Plenary Meeting 2021	103	2	2	26
Plenary	CEN/TC 391 "Societal and Citizen Security" Plenary Meeting 2021	27	3	3	7
Ad Hoc Group	CEN/TC 391 "Societal and Citizen Security" Ad Hoc Group on the definition of safety	5	3	3	3
Ad Hoc Group	ISO/TC 292/AHG 2 "Ad Hoc Group on the concept of risk and associated terms and future direction of ISO Management System Standards"	8	5	4	4
Technical Committee	SIS/TK 494 "Societal safety"	23	18	14	1
Workgroup	SIS/TK 494/AG4 "Continuity Management and Resilience "	12	24	18	1
Workgroup	SIS/TK 494/AG 5 "Risk Management"	4	2	2	1
Technical Committee	SEK/TK 56 "Reliability"	5	0	0	1

Records were coded using the NVivo software to facilitate analysis of the empirical material available through field notes. Codes were developed deductively with guidance from the immense literature on power (e.g., French & Raven, 1959; Hearn, 2012; Latour, 1984; Lukes, 2021; Wolf, 2001; Wrong, 1979) and inductively using themes from the field notes. This approach to coding embraces the idea that data collection and analysis are rarely done in an intellectual vacuum. Instead, the researcher (in this case the author) interacts with the data and in doing so, ideas are brought to the data as well as derived from them (Atkinson, 2015).

In addition to the use of the qualitative ethnographic field study approach, quantitative data collection was used by recording the number of interactions or contributions by each participant during one specific SSB workgroup's meetings, namely ISO Technical Committee 262 Task Group 5 (ISO/TC 262/TG 5).

4 Results

The data is analysed using two complementary approaches: a qualitative analysis into which all the field notes from participating in all SSBs are fed (section 4.1) and a quantitative analysis of the data collected in ISO/TC 262/TG 5 (section 4.2).

4.1 Qualitative data from participating in standard-setting bodies

Due to the extensive data available, only the most significant information related to the research questions (who is more active and influential?) and relevant to several of the SSB workgroup activities is captured and categorised into a set of themes in this paper.

4.1.1 The role of the chair

SSBs, with their respective flora of committees and workgroups, rely on competent chairs and convenors to manage and lead the work efficiently toward the agreed objectives while reaching consensus. Even if the ISO dichotomy distinguishes between committee chairs and workgroup convenors, similar leadership skills, competencies, and attributes are required for both roles (ISO, 2019). Hence, the roles of chairs and convenors are used interchangeably in this paper unless specified explicitly.

The pivotal role of the chair is visible throughout the available data and demonstrated in many ways. Firstly, the activity level and the ability to involve and engage group participants are largely defined by the chair and vary significantly. Participation in one group only involved occasional non-committing email queries, whereas other groups involved regular meetings where all group members were actively engaged. Secondly, the chair "owns the agenda" and leads the discussions, resulting in significant opportunities for the chair to direct what is discussed and when discussions should cease. Thirdly, the chair's ability to ensure all participants are recognised and their positions and views are treated equally directly impacts group dynamics and the potential to reach an agreement.

Since the chair's role automatically and substantially impacts the standardisation process, a vital feature of the role is to remain impartial. This means that the chair should not represent the interests of a particular contributor. Also, the chair should be careful when expressing their thoughts and perspectives to avoid unduly steering discussions in the group. The approaches to managing this varied considerably across the SSBs in this study. Similarly, significant variations were found in the chairs' abilities to ensure that all viewpoints expressed are adequately summed up so that they are understood by all present.

4.1.2 Work structure

Simplified, SSBs gather voluntary experts to discuss and agree on specific topics through a series of meetings. Terms of reference are often, but not always, defined to outline the scope of work, mandate, and objective of the activities. At the end of the standardisation process, consensus or strong majorities in favour of the deliverables and decisions are expected or at least aimed for. Subgroups may be formed to prepare information and perform analyses presented to the larger group.

With this work structure, there are ample opportunities to influence the final decision. One is time management. With time being finite, it is a restricting factor in all work processes. Participants may, intentionally or unintentionally, spend considerable time discussing less central aspects of the subject matter, resulting in less time to discuss critical concerns. With the explicit ambition of standardisation that all voices should be heard, this is a common challenge across the SSB workgroup activities in this study. If time is pressing, discussions may be forced, and priority is given to participants who are to the point over elaborative and verisimilar participants, potentially resulting in an incomplete decision basis, inadequate reflections on the topic, aspects not raised, or participants not fully understanding elements of the discussion.

Another effect of the common work structure is that participants' influence is highly related to an individual's activity level. Participants may promote their perspectives by actively participating in meetings and in-between meetings (preparation of documents, subgroup discussions, etc.). The more active the participants are, the higher the chance of influence. Also linked is the importance of participating in the meeting discussion to promote one's ideas. Even

if there are opportunities for all participants to share opinions before and/or after meetings they cannot attend, there is a clear preference by participants to pay more attention to opinions presented personally in meetings than communicated by other means.

The work structure includes a combination of procedures and practices that build the rules of the game. Knowing these rules is naturally a prerequisite for playing the game. However, through the interactions in the SSBs of this study, it is evident that many participants are unfamiliar with the formal and informal rules. This unawareness ranges from a lack of knowledge about formalities (who makes what decisions and when, voting practices, in which order topics are discussed, etc.) to inadequate understanding of work procedures and insight into previous and ongoing work in other SSBs. An illustrative example from the data of how the latter may be used to influence ongoing activities is when participants claim that a topic has already been covered by another SSB, resulting in the discussion being closed – even if this statement is not entirely true. Experienced participants, therefore, have a strong advantage over less experienced SSB members. At best, inexperienced participants only slow the work by reiterating or resolving steps in the processes that all should know. At worst, inexperienced members are intentionally outplayed by more experienced participants.

4.1.3 Participation and representation

Most SSBs are open to experts typically nominated by a national standardisation body (NSB). Participation in NSBs/SSBs is voluntary, attracting a wide range of organisations, e.g., government agencies, universities, business organisations, non-profit organisations, and private companies of different sizes from various industries. Among the SSBs included in this study, participants' affiliation covered the full spectrum of organisation types, except for three groups being very limited in numbers (five or fewer members) and hence unable to include a broad representation. Notably, some groups were over-represented by small private companies (often consultancies). There was a clear tendency across most groups that a significant share of the participants were well-experienced, having participated in several standard-setting activities before.

During the discussions in some groups, concerns over the representativeness of participants (i.e. whether the participants possess relevant expertise and represent relevant stakeholders) were sometimes raised. In general, however, participants agreed that this would not be a major concern if they remained impartial and did not represent the interests of a particular stakeholder. Inadequate representation (i.e. few participants) resulted in a more or less constant search for new contributors to the SSB groups. The positive effect of increased participation was then counterbalanced by slowing down progression due to the onboarding of newcomers. A concrete solution to attract participants used in international SSB groups is rotating meeting schedules to adjust for participants' various time zones.

Among this study's SSB groups, many participants did not actively participate in the discussions. A tool some chairs/convenors used to deal with inactivity and encourage sharing opinions was to turn individually to participants asking for input. However, the responses of those involuntarily put in the spotlight were often not positive, showing clear signs of discomfort. The positive ambition of including all participants sometimes raised new perspectives, fuelling discussions. More often, though, there was no such effect. Since people were unprepared, they could respond by bringing up perspectives or questions unrelated to the topic, or their contributions were either lengthy and not to the point, or they said nothing or referred to previous speakers. Even so, the effect of chairs actively encouraging participation from all participants had a positive effect in terms of participants engaging more often in discussions than was the case in other groups.

A challenge revealed in this study is that several groups suffered from a lack of participation. With few members working on a topic, the workload for each participant increases while the

wealth of expertise available in the discussions decreases. In this study, this challenge is illustrated by a continuous struggle for many members to find enough time to contribute properly and many work tasks are performed during extended periods due to inadequate resources. Also, one group was put on hold due to a lack of participation, and two other groups have not been able to replace convenors/chairs who have resigned.

With limited resources for standard-setting activities, SSBs are exposed to the risk of distributing tasks to available volunteering members rather than based on suitability, competence, and experience. This study shows signs of this, such as situations where the main contributors to writing a guideline did not have the required writing skills, presenters of group work not possessing adequate presenting skills, and members sometimes showing up for discussions without the necessary preparations.

4.1.4 Inclusion and exclusion

Since standardisation relies on the voluntary contributions of stakeholders' expertise, it is vital that all participants feel welcome and are encouraged to participate in all aspects of SSB group work activities. A potentially significant threshold to the inclusion of new contributors to the world of standardisation, clearly visible in all groups in this study, is the commonly used "standardisation lingo" or jargon. A seemingly endless number of abbreviations are commonly used in discussions and documentation, making it difficult for inexperienced members to navigate and fully understand the content. Even if the use of jargon does not lead to the extreme of participants not joining or leaving, there is a risk of participants feeling excluded, which may harm their performance and willingness to contribute. For example, when a member of an SSB workgroup uses the term "dogs" without explaining what it is (in this case, "dogs" refers to standards that are not valuable, not required, not requested, or not known), participants who are not familiar with the expression may be less prone to participate in the discussion due to lack of confidence.

A potential downside of this threat to inclusion is that outsiders stay out and newcomers leave. In the quantitative material (see section 4.2), there are indications of this since the group of 49 participants potentially could include the 8 participants joining only one or two meetings and the 17 people signing up for participation but never joining.

To build a sense of inclusion, the groups' chairs in the study often used simple gestures of kindness and politeness, such as meeting participants being greeted as they entered the meeting and all contributions being positively recognised. When participants are seen and heard, their willingness to participate is positively affected. However, the absence of these simple gestures may cause the opposite effect. In the commonly occurring cases where the chair, intendedly or unintendedly, only greets some participants upon entry to the meeting (which may often be the case in larger groups), other participants may feel excluded. Equal treatment of all participants builds inclusion. In the data material, the inclusive leadership style was more common than the exclusive.

A link between inclusion and participation (as discussed in section 4.1.3) is demonstrated when workgroup chairs turn specifically to one person for their opinions to trigger discussions. Naturally, the chair often turns to people who have previously shown high engagement and contribution or with whom the chair has personal relations. While this is positive regarding participation, unfortunately, it may also cause a sense of exclusion from others. It may indicate that personal relations, personalities (e.g. being active and extrovert), and experiences may influence who is listened to and that some people's opinions are interpreted as more valuable than others.

4.1.5 Language barrier and personality

One of the cornerstones of standardisation is international cooperation and collaboration. Over time, English has grown as the lingua franca of international standardisation. In practice, this

means that many participants in standard-setting operate in a language other than their native language. The participants' varying English command is a profound obstacle to cooperation and shared understanding. Due to limited language skills, some participants in this study have obvious challenges explaining and promoting their views and fully understanding others. The study demonstrates that the decisive advantage for strong English speakers is particularly apparent in discussions on technically advanced topics and when discussions turn into debates. Since many decisions are made during meetings, participants facing a language barrier will be disadvantaged if decisions are made on short notice and using only verbal communication. The language barrier was significantly less apparent, and the active participation from all stakeholders was more widespread in the observation data from the national SSBs.

Many different ways to convey a message were observed in the SSB groups. Using direct or indirect language, different selections of words and phrasing were all displayed across the SSB groups of this study. Various personality traits, such as being outgoing, talkative, and energetic (often referred to as extroversion) or more reflective and reserved (introvert), were also observed in the various groups.

In the study, it was difficult to observe if different personalities would directly impact the standardisation work, i.e. to what extent certain personalities are more beneficial in influencing others. However, it was evident that some participants took up more space in the room, figuratively speaking, than others. The same participants repeatedly spoke up without being given the word, whereas others kept quiet, waiting for their turn. Therefore, more cautious participants were given less “air time” and sometimes even ignored (in cases of inattentive convenors/chairs) or restricted by the time when the meeting ended. Also, some participants used significantly more time to present opinions than others, no matter if the matter was unrelated to the issue being discussed. This way, it was demonstrated how easily individuals could hijack discussions at the expense of the larger group if not properly managed by the chair.

4.2 Quantitative data from participating in one standard-setting body

The data for quantitative analysis in this paper include the number of interactions or contributions by each participant during one specific SSB workgroup’s meetings, namely ISO Technical Committee 262 Task Group 5 (ISO/TC 262/TG 5). The group was established in December 2020 to assess the market acceptance challenges and next steps for the internationally well-recognised ISO 31000 risk management standard. The objective was to gather independent factual input from stakeholders and evaluate the need to revise the ISO 31000 standard. Disbanded in October 2023, 38 online meetings were held for approximately 1.5 hours each during the group’s lifetime. Meeting attendance varied between 15 and 28 participants, averaging 22.4. In addition, subteams were formed but are not part of the study. In total, the data set includes over 60 hours of meetings and 1200 hours of effort by the participants.

Due to the nature of SSB groups, members join and leave throughout the group's lifetime. Only active participants attending two or more meetings are included in the study (i.e. the official count in ISO records shows another number of group participants). The data set counts 49 participants from 15 countries: Argentina (2 participants), Australia (1), Canada (11), France (1), Germany (5), India (1), Ireland (2), Italy (2), Japan (3), Jordan (1), Netherland (1), South Africa (1), Sweden (1), United Kingdom (4), United States (13).

All verbal and written interactions (using the videoconferencing chat function) from each participant, except for greetings and salutations during meeting opening and closure, were recorded. The data set does not include contributions by the task group convenor and secretary, the insider, group polls, and invited guests to the meetings (e.g., ISO secretariat, committee managers, etc.). The data set is validated by comparing the insider’s records with the task group secretary's meeting attendance records to ensure data quality. To maintain the anonymity of participants, the details of the data used in the study are not displayed.

The key aspects selected for data analysis are gender, the official language in the country of the NSB nominating the participants, and the English proficiency of participants. The selection is motivated by the fact that these aspects are measurable and available to the researcher while complementing the perspectives discussed in the qualitative data analysis in section 4.1. English proficiency (labelled "English fluency" vs "Non-English fluency" in the data analysis below) was subjectively assessed by the study insider based on input provided during meetings. Potentially relevant aspects of the data that cannot be analysed include, for example, age, stakeholder category (i.e. participant's affiliation with the government, industry, academic/research body, etc.), experience, and personal qualities since this information was not confirmed on an individual level.

This study uses the number of interactions as an indicator of potential influence. Table 2 shows that one-third of the task group members are women, but only about a quarter of the total interactions come from female participants. Table 2 also shows that the average number of interactions per meeting is somewhat lower for women than men. The data show that out of the participants with a low level of interaction (<0.5 interactions/meeting), there are 4 women (27%) and 11 (73%) men. These numbers indicate that male participants are, on average, more active during meetings than female participants and that the group of men with a low level of interaction is larger than that of female participants. However, running an independent sample t-test demonstrates no statistical significance between the two groups in terms of interactions ($t(36) = .69$, $p = .50$) and interactions per meeting ($t(42) = .56$, $p = .58$). This means that it is not possible to determine if there is a difference or not.

Table 2: Interactions in relation to gender.

	Number		Interactions		Interactions per meeting (average)
Female	16	32.7%	467	26.2%	1.8
Male	33	67.3%	1317	73.8%	2.1
	Total: 49		Total: 1784		Average: 2.0

Looking at the link between language proficiency and engagement level, Table 3 shows that participants from English-speaking countries dominate the meetings. Even if two of three participants come from a country where English is the official language, they contribute to 77% of the interactions. However, running an independent sample t-test demonstrates no statistical significance between participants with English as their official language and those with other native languages in terms of interactions ($t(45) = 1.11$, $p = .27$) and interactions per meeting ($t(31) = .52$, $p = .61$).

Among the participants with a low level of interaction (<0.5 interactions/meeting), 11 of 15 come from English-speaking countries (Canada and the US), and 9 of them are men. A possible explanation is that during meetings, the chair often turns individually to participants, asking for input to encourage sharing opinions and prevent inactivity. In those situations, the chair often turns to participants from other countries than those engaged in the discussions to ensure a wide representation of ideas and input. The chair actively seeks representation from many countries and men/women, which results in an over-representation of English-speaking countries and male participants in the group of participants with a low level of interaction.

Table 3: Interactions in relation to English as the official language.

	Number		Interactions		Interactions per meeting (average)
English not official language	16	32.7%	416	23.3%	1.8

English official language	33	67.3%	1368	76.7%	2.1
	Total: 49		Total: 1784		Average: 2.0

The data in Table 4 further reinforces the dominance of participants with a high command of English. More than 90% of the interactions come from fluent English participants, although this group only constitutes 75% of the entire group. An independent sample t-test demonstrates statistical significance between the two groups of English proficiency level for both interactions ($t(45) = 2.76$, $p = .004$) and interactions per meeting ($t(47) = 2.84$, $p = .003$). This means that English fluency influences participants' activity during meetings and activities.

Table 4: Interactions in relation to English proficiency.

	Number		Interactions		Interactions per meeting (average)
Non-English fluency	12	24.5%	165	9.2%	1.0
English fluency	37	75.5%	1619	90.8%	2.4
	Total: 49		Total: 1784		Average: 2.0

The data reveal that relatively few members of a large group of 49 members make significant contributions. The number of interactions per participant is provided in Figure 1, and the cumulative proportion of interactions is illustrated in Figure 2. Out of the 1784 interactions, 1280 (72%) come from the top ten contributors, and 819 (46%) come from the five most active task group members. Only two participants, one of the top five and another one of the top ten, come from non-English-speaking countries, further underscoring the importance of English proficiency. Four of the top ten and one of the top five contributors are women. Considering that the female participant with the highest level of interaction was the spokesperson for a subgroup, which will naturally include a higher level of activity than the average participant, male participants are overrepresented among the significant contributors.

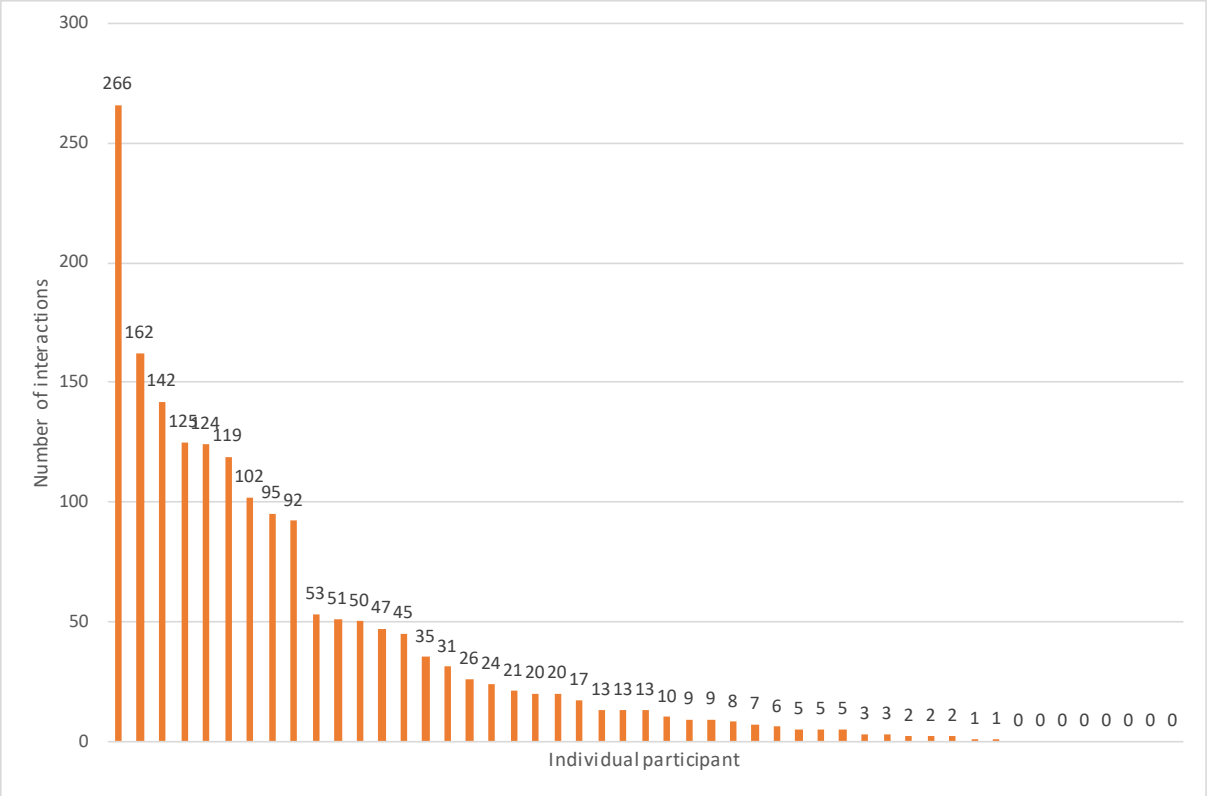

Figure 1: Number of interactions per participant, sorted from highest to lowest number of interactions.

5 Discussion

Voluntary consensus-driven standard setting and standardisation are more than just getting a group of experts to agree on specific topics. Successful standardisation requires the active participation and impartial contribution of experienced volunteers with relevant and adequate expertise, representing a diversity of stakeholder perspectives. The empirical evidence of this study reveals obstacles and pitfalls to successful standardisation associated with power relations.

5.1 Perspectives of power

A key driver for many actors to participate in standardisation is the opportunity to contribute to standards development and to influence standard-setting (Grøtnes, 2008; Lundsten & Paasch, 2017; Riillo, 2013). Hence, it is natural that participants seek influence. There are many ways to secure influence, e.g. by dominating standardisation processes and exerting power. In standardisation, the "dominating power" perspective (Lukes, 2021), where some people have control over others, is typically less significant since, in typical standardisation processes, participants have limited – if any – formal power over others. Among standardisation researchers, the standardisation setting is often viewed to be more about "the power to do" in terms of "the ability of people, through cooperation, to do more than they otherwise would have been able to" (Yates & Murphy, 2019, p. 12). However, as Hearn (2012) argues, since power involves both "over" and "to" aspects that are intrinsically linked, attention cannot be diverted only to the "power to" perspective when examining standardisation processes. Since successful standardisation is about the collective capability of the standardisers to agree on the best way of doing things, the collective's "power to" define a standard is intrinsically linked with the members' "power over" each other.

From a power perspective, this study's data set mainly entails two of the four forms of power suggested by Wrong (1979): *authority* and *persuasion*. Authority is demonstrated by some

chairs who do not remain impartial and focus on facilitating discussions but rather actively participate and use their position to influence others. An illustrative example of authority from the data set is when chairs initiate a discussion on a topic by declaring their own position. Persuasion, i.e. when a participant accepts another participant's arguments unconstrained by considerations of penalties, rewards, or perceived obligations, is a tool available to all standardisers. This is perhaps best illustrated by the numerous observations of participants using reasoning and deliberation to digest a proposition before making a decision. Standardisation related to risk management is not as competitive as other application areas (e.g. technical products where significant economic interests are at stake), nor is it as controversial as for example cultural or ethical standards, resulting in fewer incentives for hidden agendas, so manipulation (another form of power suggested by Wrong) is less likely to occur in this context.

Whereas authority is somewhat undesired in standardisation settings due to its command-obedience relationship, persuasion is uncontroversial since the voluntary consensus mechanism of standardisation carries an openness from participants to consider a multitude of arguments and deliberations based on dialectics. Of the distinguished subtypes of authority (Wrong, 1979), *competent authority*, in which participants obey out of the belief of other participants' superior expertise, and its contrast *personal authority*, where participants agree with or obey other participants because of their personal qualities, are observed in the data of this study.

Competence authority, or the similar concept of *expert power* (French & Raven, 1959), is interesting in standardisation since subject matter expertise is a requirement for participation. All participants should be competent, leaving little room for obvious competence superiority. Competence authority should be levelled among participants if all participants are experts or expected to be experts. In practice, however, there is often a wide span in competence among participants since there are no formal competence criteria to qualify participants, and the only requirement to participate in SSB workgroup activities is the nomination by an NSB. However, in combination with the often limited lifespan of many SSB workgroup activities, there are likely limited opportunities for participants to experience significant variations in competence among fellow participants, leaving more room for personal authority than competence authority to influence discussions and decisions.

5.2 Language and communication

The use of language may also be seen as an aspect of competence authority and expert power. Simply put, observations indicate that someone using advanced language decorated with abbreviations and standardisation jargon is likely to be more influential than the less conversant participant, even if there is no actual, objective "technical" superiority between the two. This is unfortunate since it may result in a preference for weaker perspectives or arguments. Further, as demonstrated by the empirical examples of this study, English proficiency is critical for successfully participating in the standardisation work. Even if technical and pedagogical tools were used to bridge the language barriers (e.g., live transcript during online meetings, presentation slides to support verbal information, etc.), this study suggests that participants with a high command of English have a strong advantage. Even if not all risk management standardisation processes are international, language as an aspect of power comes into play and should be managed accordingly.

It is clear from this study that participants with a direct communication style, to a larger degree, disregard the common rules of engagement by interrupting others or not waiting to be granted the word, and they are heard more often than those with a less direct communication style. This kind of personal authority is not exhibited as extreme in the standardisation setting as it may be by charismatic leaders in political and religious movements, but personal qualities, personalities, and behaviour matter. Personality and the role of individuals and social capital

are previously recognised to play an important role in standardisation (Isaak, 2006). Since the basis for influence is to be heard, introvert personalities are disadvantaged from this perspective. However, some participants, perhaps women or individuals from a collectivist culture, as suggested by Yates & Murphy (2019, p. 337), are put off by this potentially aggressive style. Naturally, a wide selection of personalities is innate in standardisation processes. The key to not hindering successful standardisation by restraining participation is recognising the differences, ensuring that all are heard and potentially listened to by including all participants in the discussions and using multiple means of communication and diverse fora for deliberation. A first step to acquiring this is to make all participants aware of how personal and competent authority may influence standardisation. A second step would be, reiterating the importance of the role of the chair, having someone in charge of the process who can ensure all participants are treated equally rather than similarly.

5.3 The important role of the chair

Even if SSB work groups are democratic and non-hierarchical, it is demonstrated by this study's empirical examples that the role of the chair stands out. The chair's role is perhaps the most influential factor in standardisation group dynamics. The primary role of the chair is, ideally, not to directly influence the output (i.e. the standard) by using power in terms of imposing one's will on others (Wolf, 2001) but indirectly by involving and engaging participants. As indicated by the data analysis, the chairs' diverse performance across SSB working groups greatly affects the chance of successful standardisation. The chair's unique position of simultaneously being the engine in all activities, agenda-setter, impartial discussion leader, time-keeper, custodian of the code of conduct, and overseer that all participants are recognised and their positions and views are understood by all and given equal treatment, results in the chair being a powerful position. Therefore, chairs and convenors should be selected based on merits rather than availability and adequately trained in all aspects of this role, including power theory fundamentals, to avoid their misuse of power and improve their ability to identify inappropriate use with others.

Considering the importance of the function, SSBs seem not to pay adequate attention to implementing safeguards preventing intentional or unintentional misuse of the position and monitoring the performance of chairs. Once appointed, chairs are not evaluated or assessed by the SSBs. The only tool to potentially discover the substandard performance of chairs is a post-meeting feedback form that is encouraged (ironically by the chair) to be used in some groups. However, a potential downside of monitoring the performance of chairs could be that candidates are less prone to step forward if their performance is subject to detailed scrutiny.

5.4 Participation

Participation is naturally a prerequisite for influence in all standardisation processes. Participating is, however, not the same as contributing, and as seen in section 4.2, there is a small group of very active participants (46% of all interactions come from the top five contributors, 72% from the top 10). Combined with the common unbalanced representation of all actors (Fomin & Vries, 2009; Grøtnes & Kristoffersen, 2009; Hoel & Chen, 2018; Jakobs, Procter & Williams, 2001), there is an apparent risk that standardisation process output does not represent best practice, even less so the "distilled wisdom of people with expertise in their subject matter" (ISO, 2024). With few stakeholder perspectives being represented in SSB group work activities, the influence of individual contributors increases. This is particularly problematic for standardisation in risk management since it is criticised for not being anchored in novel risk science and suffering from inadequate involvement from the risk science community (Aven & Ylönen, 2019; Lindøe & Baram, 2020).

The issue of representation in risk management standardisation efforts is also demonstrated in the study material by the overrepresentation of well-experienced standardisers. If SSB group

work and activities are "dominated by seasoned veterans who know all the nuts and bolts of the process" (Jakobs, Procter, and Williams, 2001, p. 6), the standardisation process may benefit in terms of efficiency if all participants are familiar with all the formal and informal rules of the game. Still, it may be at the cost of new perspectives and initiatives from newcomers. Attracting all types of risk management stakeholders with various experiences from standardisation is critical for maintaining a balanced perspective and ensuring the quality and relevance of risk management standardisation output. Meanwhile, the risk of experienced standardisers outplaying those who are less experienced by playing the game must be managed.

Since standardisation depends on voluntary participation (Murphy & Yates, 2009) and input from group members, ensuring participants contribute to the process is essential. Including participants is a matter of first getting stakeholders to volunteer, then making participants feel included and welcome their contributions. The former is a topic extensively covered in the literature, from exploring motivations to individuals (e.g. Lundsten & Paasch, 2017) and organisations (e.g. Riillo, 2013) to practical barriers to participation (e.g. Blind, Pohlisch & Zi, 2018). The latter is at the core of the empirical findings of this study. The tools used to support inclusion and prevent exclusion in this study are limited and applied inconsistently across SSB workgroups. The toolkit available to participants in general and chairs/convenors in particular must be expanded. Only adapting the meeting schedule to time zones and being polite and friendly in dialogue with participants is insufficient. Ideally, the toolkit may also include time limits for each participant (similar to what is commonly used in political debates) to ensure all participants are given equal treatment and adequate access to professional communicators so the quality of communication is not left to the rather arbitrary skill levels of the voluntary participants.

Being present and active in the standardisation process does not only comprise vocal interaction during meetings. Experienced participants and participants willing or able to spend considerable amounts of time promoting their perspectives by being actively involved in in-between meeting activities (preparation of documents, sub-group discussions, etc.). Even if equal opportunities are presented to all participants, it is evident from this study that physical presence is a crucial factor in influence. In line with previous research (Jakobs, Procter, and Williams, 1996), examples from this study include situations where participants have presented a technically sound proposal that is initially well-received but later rejected when no one is present to campaign for it.

Another way of influencing the work by playing the game observed in the study is how some participants volunteer to be part of subgroups or offer to draft suggestions, reports, etc. Even if these kinds of initiatives and engagement are mainly positive, not the least, since standardisation is built on voluntary efforts, it may be challenging if positions and views are based on personal agendas rather than rationale and reasoning. As with the appointment of chairs and convenors discussed above, selecting participants for performing the detailed craft of standardisation should be based on merits rather than availability.

5.5 Study limitations and generalisation

An important limitation to the study is that the discussion is based on a limited number of workgroup activities (two national and two international SSBs, two Technical Committees, one Task Group, two Ad Hoc Groups, and five Plenary Sessions). While being representative in terms of the most common standard-setting activities in voluntary consensus-driven standardisation, the way in which individual standardisers and convenors/chairs act is naturally diverse in the world of standardisation. Consequently, the generalisation of the study findings should be done with care. The themes identified in the quantitative analysis of the Task Group involvement are typically found also in the other groups and activities of the study, but this does not imply that they are applicable to all standard-setting activities and forms of

standardisation. Neither does it imply that there cannot be other relevant influencing factors in the standardisation process.

The output of the standardisation process, i.e. the standard, is a result of both the expertise of the standardisers and the process of their interaction. Consequently, the factors influencing standard-setting activities discussed in this paper are not the only contributors to the final standard. Standardisers and stakeholders in the standardisation process may still be able to significantly influence standard development without prominent interaction in all workgroup activities. Similarly, a high level of interaction during discussions does not equate to specific contributions to the standard's text. However, as indicated by the empirical evidence in the study, the work practices and structures of many standard-setting activities offer ample opportunities for individual actors to influence the standardisation process. Awareness of the potential misuse of power in this situation and tools to tackle this potential challenge would be beneficial to future standardisation. Even if this paper's empirical contributions are related specifically to the risk management domain, findings may well apply to other areas as well since standardisation processes are similar across the board, regardless of mode or application area.

The discussion above is based on data from international and international SSBs working with voluntary risk management standards. The use of standards and standardisation as part of risk management regulations, as discussed by Antonsen, Skarholt & Ringstad (2012); Kica & Bowman (2012); Lindøe & Baram (2020); and Nyvik, Flage & Guikema (2021), may be different. Since regulations are non-voluntary and driven by a specific party (the regulator), the influence of individuals and the use of power to influence standardisation is seemingly less significant. However, the successful use of standards in regulations still requires stakeholder buy-in through active participation from various actors with relevant and adequate expertise to balance stakeholder perspectives. This means that the influence of individual actors and the exertion of power to influence standardisation is a relevant topic in risk management regulations. Hence, the improvement opportunities discussed above are also relevant when using standards and standardisation in risk management regulations.

5.6 Looking ahead

To further explore the influence in standardisation processes, it may be valuable in future research efforts to add a perspective on how group dynamics influence standardisation. Since groups "are inescapable and powerful determinants of our behaviour" (Brown & Pehrson, 2020, p. 51), a focus on groups rather than the current focus on individuals in this article would add to a more comprehensive understanding of how to design and implement risk management standardisation processes. Applying models of team dynamics, e.g., the Tuckman team model (Tuckman, 1965; Tuckman & Jensen, 1977), the Thomas-Kilmann Conflict Mode Model (Thomas & Kilmann, 1977), or Lencioni's model discussing the five dysfunctions of a team (Lencioni, 2002), have not been part of the scope of this paper would add to the body of knowledge by providing a wider perspective of group dynamics.

Other related areas of interest for future research also include assessing the effectiveness of the suggested tools to overcome barriers to transparent and fair risk management standardisation processes identified in this paper.

A potential shortcoming of this study is that the data, quite naturally, only captures the experiences, behaviour, and actions of the participants. Other perspectives of potentially significant value would be to listen to the voices of those not actively participating. It may be beneficial to follow up on why participants leave standardisation, decide not to engage despite registering, or even do not volunteer at all. In the qualitative part of this study, 8 participants joined only one or two meetings, and 17 people signed up for participation but never joined. With a total number of 49 participants in the study, these 25 people form a sizeable data set

potentially worth diving into as part of future research activities. Since they are not active standardisers, their perspectives may prove valuable to acquire a comprehensive knowledge of what and who influences risk management standardisation processes.

6 Conclusion

With standardisation being founded on voluntary consensus and the unpaid efforts of the participants, active participation and interaction by interested stakeholders are the cornerstones of shaping risk management standards and influencing the standardisation process. Searching for factors that influence the outcome of standard-setting activities, this study provides empirical evidence that a limited number of participants significantly influences standard-setting activities if considering the level of engagement and amount of interactions.

This research shows that using power theory as an analytic lens to data from hundreds of hours of SSB workgroup activities is valuable to comprehend the influence of individuals in standardisation. There are ample opportunities for individuals to influence standardisation processes, and all participants need to be attentive to the use of power to prevent undue impact. Therefore, power theory fundamentals should be part of the introduction to standardisation for all standardisers, particularly the induction of chairs and convenors. Training SSB staff and representatives is in line with the mandate and responsibility of the SSBs to ensure that all standardisers have equal opportunity to engage in the work, irrespective of standardisation maturity level, nationality, gender or language proficiency.

Any participant may significantly impact the process and the output by knowing the rules of the game and playing the game, which indicates the need for an improved vetting process for participating in the work. The chair or convenor of groups is a highly influential role for which a particularly high competence profile should be sustained and monitored. In addition, the toolkit available for standardisation leaders should be expanded to include practical methods and techniques to ensure the inclusion of participants and promote interaction. These tools would support transparent and fair risk management standardisation processes.

This study reveals that people with high proficiency in English interact more in standardisation activities than participants with a lower command of English. To balance potential influence and to ensure valuable input from non-English-speaking experts is captured, standardisation activities and a diverse flora for deliberation with minimal language barriers should be developed and promoted. Activities should also be designed so that actual presence is not a requirement to be heard. This study also further stresses the challenge of inadequate participation and unbalanced representation in risk management standardisation activities.

Funding (or Grant)

This research is funded by the Swedish Transport Administration.

Use of AI

During the preparation of this work, the author used Grammarly software as a writing assistance tool. After using this tool, the author reviewed, edited, made the content their own and validated the outcome as needed, and take full responsibility for the content of the publication.

Contributor Statement

Author: Conceptualization, Data curation, Formal analysis, Methodology, Writing-Original Draft, Writing-Review & Editing

Acknowledgements

An early version of the manuscript was presented at the EURAS 2024 conference. The author is grateful for the constructive and valuable feedback received at the conference and the journal review process resulting in significant changes to the manuscript.

Conflict Of Interest (COI)

There is no conflict of interest.

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