

Standardization for grand societal challenges: an overview

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Abstract: The 28th EURAS Annual Standardization Conference, held in Delft, the Netherlands (June 19-21, 2024), explored the multifaceted role of standardization in addressing societal challenges. The conference brought together scholars and practitioners to examine the latest developments in the standardization research and practice. This paper summarizes the key themes discussed during the conference.

Keywords: EURAS, standardization, standards

Highlights:

1. The EURAS conference brought together researchers and practitioners in the field of standardization, fostering interdisciplinary dialogue and knowledge exchange.
2. Discussions at the conference illuminated the potential of standardization in addressing complex societal challenges, while also critically examining the barriers and limitations to its effective implementation.
3. The diversity and depth of topics covered, coupled with increased participation, indicate a burgeoning interest in standardization research and practice, suggesting a promising trajectory for the field's future development and impact.

1 Introduction

The 28th EURAS Annual Standardization Conference, held from June 19-21, 2024, at the Delft University of Technology in the Netherlands, brought together over eighty scholars and practitioners to explore the theme of “Comprehensive Standardization for Societal Challenges.” The unique venues of the Lijm and Cultuur, a repurposed former glue factory, and the Green Village, a hub of innovation and experimentation, provided the perfect backdrop for three days of stimulating discussions, debates, and networking opportunities.

This year’s event showcased the growing interest and importance of standardization as a multidisciplinary field. The rich and diverse program reflected the complexity of addressing societal challenges through standardization efforts. In this conference report, I provide an overview of the most prominent macro-topics discussed. For those seeking more in-depth information on specific subjects, I recommend referring to the conference proceedings (Jakobs et al., 2024).

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2 The economic impact of standards

The Conference kicked off with a keynote address by Juliane Eykelhoff, from the Dutch Ministry of Economic Affairs and Climate, who emphasized the crucial role of standards in shaping the European common market and their significance as building blocks for the future economy. This assertion was reinforced by a plethora of studies presented throughout the Conference, which collectively underscored the significance of standards in driving innovation, economic growth, and sustainability.

Several research papers demonstrated the positive correlation between standard adoption and innovation. For instance, Blind et al. (2024a) employed a web mining approach to reveal that the adoption of International Management System Standards is correlated with a higher innovation rate. Similarly, Rochell et al. (2024) analysis of ISO Management System Standards adoption in Germany found a correlation between standard adoption and regional innovativeness. On a broader scale, Blind et al. (2024b) investigated the economic relevance of the “quality infrastructure,” comprising standards, conformity assessment, accreditation, metrology, and market surveillance. Their study aimed to quantify the impact of this infrastructure on the Gross Domestic Product of countries.

Conformity assessment is a critical component of this quality infrastructure, and it was the focus of two presentations at EURAS. Schröder et al. (2024) sought to develop a theory of conformity assessment, essential for supporting and strengthening the daily practice of auditors and assessors worldwide. Ladu et al. (2024), meanwhile, reviewed existing monitoring and evaluation systems to assess the effectiveness of certification schemes and product labels in ensuring the sustainability of bio-based products.

The cumulative evidence presented during the conference confirms the importance of standards in supporting the global economy. However, the ensuing discussions also highlighted some of the challenges faced by researchers in this field, particularly the difficulties of moving beyond correlations and establishing causal links to fully grasp the economic impact of standards.

3 The green transition

The green transition was a dominant theme throughout the conference, with both keynote speakers and presenters highlighting the numerous ways in which standards and standardization can contribute to achieve a more sustainable future.

In their keynote address, Robbert Monteban from the Ministry of Infrastructure and Water Management, and Frank Geerts from Elaadnl/Liander emphasized the importance of standardized solutions for the development of smart chargers for electric vehicles. These standardized approaches are essential for facilitating the adoption of electric vehicles and consequently boosting the energy transition. The automotive sector was further explored in Gerhard Gudergang’s keynote presentation on the OSCAR project, which aims to establish standards for the next generation of circular cars. This focus on the automotive industry was echoed in two additional presentations during EURAS. Rosero Abad et al. (2024) analyzed the impact of Euro standards on consumer choice in Italy, revealing the varying effects of Euro standard strictness on clean vehicle adoption. Tsou & Kim (2024) introduced the idea of “unwritten standards” to explain Tesla’s influence on electric vehicle manufacturers in China,



demonstrating how local automakers have emulated Tesla's practices across various aspects of design, production and marketing.

The Conference highlighted that the contribution of standards to the green transition extends far beyond the automotive sector. The growing adoption of the ISO 50001 standard, as studied by Tominaj et al. (2024), demonstrates the potential of international standards to support better energy management and, by extension, the green transition. In this way, standards can play a significant role in the context of climate change. However, to fully leverage the power of standards in addressing climate change, it is necessary to overcome the knowledge-action gap studied by Kromer et al. (2024). Their research underscores the discrepancy between existing knowledge about climate change and the concrete actions taken to address it through the development and implementation of standards.

From automotive innovations to energy management practices, standardization emerges as a powerful tool in addressing environmental challenges. However, the discussions also highlighted the need for continued efforts to bridge the gap between knowledge and action, ensuring that standards are not only developed but effectively implemented to achieve tangible progress in sustainability. As we move forward, the integration of standardization into green transition strategies will likely become increasingly crucial in our collective efforts to create a more sustainable future. EURAS can offer further contributions in this direction.

4 Standards in the making

The development of standards in various contexts was another key theme explored during EURAS. Presenters delved into the complexities of the standardization process, the benefits of participation in standardization, and the local specificities of standard development.

The study by Longo & Yasumoto (2024) provided valuable insights into how firms navigate the complexities of standardizing complex technologies such as smart robotics. Their research highlighted the crucial role played by lead users in managing trade-offs, for instance, between property rights and technology sharing within action groups. Meanwhile, Grillo et al. (2024) analyzed the benefits that firms can derive from active participation in standard making.

The conference also shed light on the local specificities of standardization processes. Qi & Kim (2024) compared EU and US approaches to blockchain standardization, revealing how different institutional settings can impact the success of standardization efforts in this field. Seo's (2024) research traced the evolution of mobile communications technology standards and standardization in China, Japan, and South Korea, highlighting a shift in the approach of these countries in recent years. Finally, Heikkilä's (2024) research examined the current state of standardization practices in Finland, underscoring the need to strengthen the ecosystem, particularly in areas such as standardization education.

Overall, these presentations demonstrated the importance of considering the specific context in which standards are developed, and the need for a nuanced understanding of the complexities involved in standardization.



5 Reflections on the past, opportunities for the future

The EURAS Conference also provided an opportunity for reflection on the development of standardization research over the past thirty years. In a keynote address, Prof. Henk De Vries, who was appointed the first honorary member of EURAS at the end of the Conference, offered a retrospective on the evolution of research on standardization. De Vries highlighted the critical issues in this field, including the limitations of economic approaches, which often fail to move beyond correlations between standards and their economic impacts, and legal approaches, which may uncritically accept legislators' initiatives on standardization. This address was a fitting tribute to De Vries' contributions to the field, as he looked back on his career and reflected on the progress made in standardization research.

In a similar historical vein, de Vries (2024) also presented an excursion on how various standards have shaped the character of Delft, the city that hosted the conference. However, two further interventions looked towards the future, complementing this retrospective vision. Tartaro's (2024) research explored the ongoing changes that are transforming the landscape of standards and standardization, potentially leading to the emergence of a fourth wave. Meanwhile, Gonzalez Torres & Ali-Vehmas (2024) highlighted the challenges that standards and standardization must address when integrating values, such as in the development of harmonized standards for AI in support of the European AI Act.

6 EU initiatives and projects, workshops and posters

The EURAS Conference program was further enriched by presentations on European projects and initiatives related to standardization, complementing the high-quality research presentations from renowned scholars.

In his keynote address, Prof. Rudi Bekkers introduced the activities of the High-Level Forum on European Standardisation. He presented the Forum's achievements to date, including a pledge to enhance education and skills in standardization. Bekkers emphasized that this initiative represents one of the European Union's commitments towards ensuring a successful future for European standardization. This commitment was reinforced by two parallel workshops on the EDU4standards and StandICT European projects, which focus on supporting education on standardization and promoting stakeholder participation in standardization in the ICT sector, respectively.

The conference programme was further enriched by a poster session, which provided an informal and agile platform for 11 projects to showcase their work². Additionally, two parallel workshops were held, one on access to harmonized standards, chaired by Prof. Panos Delimatsis, which explored the implications of the European Court's judgment on the *Public.Resource.Org* case, and another on dominant design from the perspective of platforms and standards, chaired by Prof. Geerten van de Kaa.

² See the conference program for further details on the poster sessions and the parallel workshops: <https://www.euras.org/conference/2024-call-for-papers>



7 Conclusion

The EURAS conference has once again proven to be an important platform for scholars and practitioners interested in the complex and multifaceted topic of standardization. The conference's multidisciplinary approach is a significant strength, as it facilitates the exchange of ideas and perspectives between researchers from diverse backgrounds. Whether one's focus is on the technological, economic, legal, or ethical-social aspects of standardization, EURAS provides a unique space for discussion and debate.

As we look forward to future editions of EURAS, beginning with the next-year conference in Madrid, we wish that the Conference will continue to attract a high level of participation and showcase research of equally high quality, further solidifying EURAS's position as a premier event in the field of standardization.

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Conflict Of Interest (COI)

There is no conflict of interest.