



SUMMARY REPORT

OF THE U.S.-GERMAN STANDARDS PANEL, 2023

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AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

The American National Standards Institute (ANSI) is a private, non-profit organization that administers and coordinates the U.S. voluntary standards and conformity assessment system. Founded in 1918, the Institute works in close collaboration with stakeholders from industry and government to identify and develop standards- and conformance-based solutions to national and global priorities.

Together, standards and technical regulations impact up to 93% of global trade. Globally relevant standards and the conformance measures that assure their effective use help to increase efficiency, open markets, boost consumer confidence, and reduce costs. And ANSI is the U.S. leader in fostering that potential for the benefit of businesses across every industry and consumers around the world.

ANSI is not itself a standards developing organization. Rather, the Institute provides a framework for fair standards development and quality conformity assessment systems and continually works to safeguard their integrity. And as a neutral venue for coordination of standards-based solutions, the Institute brings together private- and public-sector experts and stakeholders to initiate collaborative standardization activities that respond to national priorities.

ANSI serves as a strong voice on behalf of the U.S. voluntary standards community, protecting and strengthening its impact domestically and internationally. Through its membership, partnerships, and diverse programs and activities, ANSI represents the interests of more than 270,000 companies and organizations and 30 million professionals worldwide.

U.S. NATIONAL COMMITTEE OF THE IEC (USNC)

The U.S. National Committee (USNC) of the International Electrotechnical Commission (IEC) serves as the focal point for U.S. parties who are interested in the development, promulgation, and use of globally relevant standards for the electrotechnical industry. The USNC is also engaged in the assessment of conformance to standards, undertaking work in areas such as testing, certification, and accreditation.

As the U.S. representative to the IEC and many related regional standardization bodies, the USNC serves as a conduit to the global standards-setting community for technical and policy positions arising in the U.S. In this capacity, the USNC brings issues from the global arena to the U.S. for review, consideration, and response. In the IEC, the USNC operates via Technical Advisory Groups (TAGs), comprising volunteer experts working collaboratively to develop U.S. positions on technical issues under consideration within IEC technical committees.

The USNC is a totally integrated committee of ANSI. ANSI provides administrative support to the USNC and its more than 4,000 U.S. managerial, engineering, scientific, and professional participants.





GERMAN INSTITUTE FOR STANDARDIZATION (DIN)

DIN, the German Institute for Standardization, is the independent platform for standardization in Germany and worldwide. As a partner for industry, research, and society as a whole, DIN plays a major role in helping innovations to reach the market in areas such as the digital economy or society, often within the framework of research projects.

More than 36,000 experts from industry, research, consumer protection, and the public sector bring their expertise to work on standardization projects managed by DIN. The results of these efforts are market-oriented standards and specifications that promote global trade and encourage rationalization, quality assurance, and the protection of society and the environment, as well as improving security and communication.

DIN was founded in 1917 and celebrated its 100 year anniversary in 2017.



DKE GERMAN COMMISSION FOR ELECTRICAL, ELECTRONIC & INFORMATION TECHNOLOGIES (DKE)

The DKE German Commission for Electrical, Electronic & Information Technologies (DKE) is the national platform for about 9,000 experts from industry, science, and public administration to elaborate standards and safety specifications for electrical engineering, electronics, and information technology. Standards support global trade and, among other things, the safety, interoperability, and functionality of products and systems. As a competence center for electrotechnical standardization, the DKE represents the interests of German industry in European (CENELEC, ETSI) and international standardization organizations (IEC). In addition, the DKE provides comprehensive services in the field of standardization and VDE specifications.

Welcome remarks were given by Joe Bhatia, president and CEO of ANSI; Christoph Winterhalter, CEO of DIN and vice president of policy of ISO; and Florian Spiteller, head of external relations and support, board member, DKE.



Joe Bhatia emphasized in his remarks that the U.S. and German standardization communities have enjoyed a highly constructive partnership through the collaboration of ANSI, DIN, and DKE over many years. The U.S.–German Standards Panel is an important contributor to this relationship, offering a valuable venue to discuss shifts in the international standardization and technological landscape and jointly explore standardization solutions to shared challenges. Bhatia emphasized that the U.S. is committed to partnerships and standardization that meet global needs and support a global trading system. He noted the tremendous value in a positive U.S.–German relationship in the standardization area. ANSI and the U.S. standardization community are committed to working closely together with Germany to further the cooperation.



Christoph Winterhalter pointed out that ANSI and DIN are the most active members in the international standardization community and that therefore it is important for our nations to drive international standardization and to have meetings like the U.S.–German Standards Panel. He further stated that the U.S. and Germany are bound by profound ties and that the transatlantic partnership enjoys very close political and economic relations as well as a rich cultural cooperation. He expressed his wish to bring the two markets even closer together and stated that early agreements on key positions between the two transatlantic partners will support a transition to global standards. On the topic of climate change, Christoph Winterhalter explained that we have to assess and adapt our standards. Standards describing the state of art are not sufficient anymore to support the intended transformation. In Germany, DIN/DKE/VDI, supported by the German Federal Ministry for Economic Affairs and Climate Action (BMWK), have just published the Roadmap on Circular Economy, a subject of particular importance for achieving the targets of the “European Green Deal” and the European Climate Change Act of 2021.



Florian Spiteller pointed out that present challenges demand that the two countries join forces and work together as they have shared interests. He stated that the partnership on standardization between the U.S. and Germany is impressive. The countries have the same values, and both are convinced that standardization has to be driven by industry and their needs. Real innovation is needed, and standardization can offer solutions for the societal challenges. He confirmed that the present meeting is a good opportunity to further strengthen this partnership.

PANEL 1: EUROPEAN STANDARDIZATION STRATEGY AND THE U.S. STANDARDIZATION STRATEGY



KEYNOTE SPEECH: INTRODUCTION OF THE U.S. STANDARDS STRATEGY

This keynote speech was presented by **Mary Saunders**, ANSI, who stated that:

- » The United States Standards Strategy (USSS) serves as a statement of purpose and ideals resulting from an examination of the principles and strategy that guide how the United States develops standards and participates in the international standards-setting process. It represents a framework and vision for the future of the U.S. standards system in today's globally competitive economy. The USSS represents the coordinated efforts of a large and diverse group of stakeholders, and it affirms that standardization activities encompass both sector-specific

and cross-sectoral approaches, allowing interested parties to address priority issues collaboratively.

- » The global standards landscape is evolving at an increasing pace, with work ongoing in formal consensus bodies, treaty organizations, consortia, fora, and in the open standards space. Furthermore, advanced technologies are important for U.S. competitiveness and national security, and carry strategic significance. All of this points to the continued importance and value of a rules-based standards system open to all stakeholders.
- » The USSS upholds the WTO TBT principles for good standardization practice and international standards that are globally relevant. These WTO TBT principles provide the basis for the U.S. definition of what constitutes globally relevant standards.
- » Innovation and technical progress are accelerated by having common standards at global scale, and therefore, barriers to participation should be minimized wherever feasible. A diverse and inclusive standards system supports flexible solutions to global challenges and priorities and facilitates international trade and market access. International outreach programs promoting common understanding and collaboration with other nations is another key feature of the USSS.



KEYNOTE SPEECH: INTRODUCTION OF THE EUROPEAN STANDARDIZATION STRATEGY AND PLANS FOR ITS IMPLEMENTATION

This keynote speech was presented by **Gerhild Roth**, BMWK, who stated that:

- » European standards play a key role in the European Union's single market and its competitiveness, for compliance with EU law and safe, interoperable, and environmentally friendly products.
- » The European Commission launched its European Standardization Strategy in February 2022 in order for Europe to stay competitive and resilient, to support a green and digital transformation, and also to bring innovation faster into markets.
- » Within its strategy, the European Commission pointed out specific standardization areas of strategic importance, such as clean hydrogen or data standards; stressed adherence to innovation and greater academic awareness of standardization; and also triggered governance reforms within the European standardization organizations, especially within ETSI.
- » As the essential part of the strategy's implementation, a High-Level Forum on European Standardization in a multi-stakeholder format with the Commission presiding was established to coordinate on strategic

standardization matters, to inspire global leadership in key technologies, and to further promote international standards collaboration.

- » While regulation provides a legal framework, standards are industry-driven and developed as “state of the art” technical rules. The proven relationship of legislation and standardization in the EU, as given by the New Legislative Framework to take the strain off legislation and enable self-regulation of industry and businesses, shall be kept in place. Further on, with the EU strategy in place, international standards will still be the ultimate level in order to achieve a successful global green and digital transition.
- » To strategic trading partners such as the U.S., it will be beneficial if Europe remains a competitive global like-minded partner.
- » On the national level, the political focus on standardization has increased. As such, BMWK established The German Strategic Forum for Standardization, aiming for better coordination on standards activities among all relevant stakeholders and to mirror European activities in a High-Level Forum.
- » Political intervention with the bottom-up approach of industry-driven standards would be seen as critical. Therefore, the German government aims to take on more responsibility in standardization policies by jointly developing recommendations for the German business community.

PANEL DISCUSSION

PANELIST



**Dr. Thomas Zielke,
BMWK**



**Michael O'Donovan,
USTR**



**Dr. Wolfgang Weber,
German Electro and Digital
Industry Association ZVEI**



**Dr. Ajit Jillavenkatesa,
ANSI IPAG Chair and
Apple**

MODERATOR:



Joseph Tretler, ANSI

GOAL OF THE PANEL:

To foster greater understanding of the U.S. and EU standards strategies and their commonalities and differences to determine appropriate U.S./German actions.

During this session the panelists addressed a series of questions from the moderator and the audience on the following issues:

- » The values that drive standardization from the perspective of the EU, the U.S., and Germany, and where there may be commonality and divergence on such values;
- » What may be seen as major differences in vision between the U.S. and EU standardization strategies?;
- » Technological sovereignty and competitiveness among the EU, the U.S., and Germany in relation to international standards development;
- » The impact of regional and/or national technological sovereignty and competitiveness on the global relevance of international standards; and
- » The common challenges we face in international standardization and where the U.S. and Germany can work together to meet them.

PANEL CONCLUSIONS

- » The U.S. and Germany share many values in their standardization work. These shared values range from ethics to safety and cyber security to supporting business, trades, and open markets.
- » There is a common desire to ensure that a market-driven standardization system exists that embraces transparency and openness. Both countries understand the importance and value of private sector and public sector cooperation. Both standardization strategies provide guidelines for this.
- » Despite formal processes and differences, Germany and the U.S. have always worked together. It is essential to keep the dialogue in an open and transparent manner. In addition, it is essential to use common terminology and definitions when referring to global standardization.
- » Continuous collaboration and cooperation, especially in new technology areas and to support the digital and green transitions, are key.

PANEL 2: DIGITAL TRANSFORMATION OF STANDARDS DEVELOPMENT AND SMART STANDARDS



KEYNOTE SPEECH

This keynote speech was presented by **Matthias Marzinko**, Drägerwerk, who stated the following:

- » Standardization in a globalized world is of the utmost importance, and a shift is needed in thinking about how standards are created and used in the future. It is important to consider the diverse needs of customers and the challenges of integrating standards into digital systems. Additionally, there is a need for a new model of standardization that considers mobility, the circular economy, and service-oriented standards.

- » Implementing standards in a digital world is challenging, and there is a need for collaboration between all stakeholders, including industry, and learning from the customer experience. In the future, standards must be workable for both machines and humans, and a more customer-centric approach to standardization is needed to meet the needs of a rapidly evolving global market.
- » Stakeholder collaboration; integrating standards into digital systems; and new models of standardization that consider mobility, circular economy, and service-oriented standards are vital for the future.

PANEL DISCUSSION

PANELISTS:



**Christoph Winterhalter,
ISO Vice President - Policy**



**Matthias Marzinko, Drägerwerk
AG & Co. KGaA**



**Peter Rauh,
DIN**



**Stuart Radcliffe, ASTM
International**



**Dr. George Borlase, UL Standards
& Engagement**



Muhammad Ali, HP, Inc.

MODERATOR:



Florian Spitteller, DKE

GOAL OF THE PANEL:

To mutually understand the needs of German and U.S. industry and the plans of German and U.S. standards development organizations in relation to digital transformation of standards development and SMART (i.e. machine readable) standards.

During this session, the panelists addressed a series of questions from the moderator and the audience on the following issues:

- » The importance of digital transformation of standards development and SMART standards from a company perspective;
- » What companies must do to be “SMART Standards Ready;”
- » SMART standards activities of CEN/CENELEC/ETSI, DIN/DKE, and U.S.-based SDOs beyond the efforts of ISO and IEC;
- » The need for coordination/alignment across the different levels of SMART standards activity;
- » Business models for SMART standards; and
- » Future visions for and the importance of the digital transformation of standards development.

PANEL CONCLUSIONS

- » SMART standards promote collaboration, reduce complexities, and help companies strategically influence the standards of interest to them, and are essential for successful transition.
- » SMART standards are important in the cyber-physical age—digital transformation in standards is no longer optional, but necessary for companies.
- » Companies need to improve their technology infrastructure, develop a digital strategy, and train their employees on the new technologies.
- » There is considerable value in engaging people with different perspectives from different parts of the world, but significant legal and financial challenges must be addressed.
- » The U.S. and Germany must connect and share with each other, and trust and learn from each other to address the challenges connected to digital transformation and SMART standards.

DISCUSSION ROUND 1: ARTIFICIAL INTELLIGENCE STANDARDS



WELCOME AND INTRODUCTION

Artificial intelligence (AI) has become widely adopted across a number of applications and is projected to continue to grow. This panel looked towards emerging trends, requirements, and the future direction of AI standardization with an eye on German–U.S. collaboration.

Topics: AI standardization work domestically and internationally; the emerging international regulatory environment; the role of standards as part of the broader ecosystem; steps towards AI standardization in verticals; enabling societally beneficial outcomes and applications; looking towards the future.

The session was initiated with a presentation by Wael Diab, who highlighted the importance of ISO/IEC 42001 and horizontal deliverables of ISO/IEC.



KEYNOTE SPEECH

This session's keynote speech was delivered by **Elham Tabassi** from NIST:

- » There is a great need for standards to define trustworthiness aspects of AI and provide guidelines for their implementation. Furthermore, evaluation standards, test sets, verification, validation, and appropriate evaluation methods for AI systems will all be vital in its development.
- » Methodologies must be developed to test AI systems and ensure their reliability.
- » A risk-based approach to AI trustworthiness standards is vital. Given the complexity of generic AI systems, understanding their risk profiles becomes challenging, and standards to evaluate and measure AI systems would be helpful.
- » Comprehensive AI standards are needed that go beyond technical specifications and include trustworthiness aspects and evaluation criteria. By establishing such standards, organizations can assure the reliability and safety of AI systems, thus building trust in their use.

GENERAL DISCUSSION

PANELISTS:



Elham Tabassi, NIST



Christoph Winterhalter, ISO Vice President – Policy



Laura Lindsay, Microsoft

MODERATORS:



**Dr. Wael William Diab,
ISO/IEC JTC1/SC42 Chair**



**Dr. Sebastian Hallensleben,
VDE**

DISCUSSION CONCLUSIONS

- » U.S., German, and ISO/IEC AI roadmapping projects should be reviewed together to identify opportunities for alignment.
- » There is a need for outreach to people who are not currently involved in standardization, and the challenge of incentivizing them to participate. One potential approach to this is to focus on developing standards for the positive use of AI, with a focus on assessing the risk/benefit ratio. Bringing in industry perspectives and connecting use cases can help to make standards more relevant and applicable.
- » Different types of expertise are needed in standardization, including domain expertise, process expertise, writers, and those affected by standards. A multidisciplinary approach is necessary to assure that standards are comprehensive and effective, to combine the “outside in” and “inside out” perspectives.
- » ISO/IEC JTC1/SC42 could serve as a test field for developing a standardized roadmap that incorporates both perspectives.
- » Opportunities exist at the national level to engage more stakeholders to explain work across sectors.
- » Strategic planning is another critical aspect that needs attention. This goes beyond bottom-up and top-down approaches to enable outside-in perspectives.
- » The importance of linking to outreach efforts was also recognized. For instance, a 4-legged stool model was suggested, which includes standardization, innovation, skills development, and public outreach.

DISCUSSION ROUND 2: CLIMATE CHANGE STANDARDIZATION



WELCOME AND INTRODUCTION

Discussion Round 2 focused on opportunities to support alignment and collaboration between the U.S. and Germany through standards that support sustainability and address climate change. This session was led by **Anna Trawnitschek**, DIN, and **Ryan Colker**, ICC.

In their opening statement, they pointed out that climate change is a cross-cutting issue impacting all aspects of the economy, and that its drivers and its solutions are multifaceted and touch on all aspects of standardization. On the European political level, there is the Green Deal, which can be described as a package of policy initiatives to set the EU on track for the green transition, and reaching its goal of becoming carbon neutral by 2050. In the U.S., the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA) provide significant investment in technologies and policies to tackle climate change. Alongside these political activities, ISO is very active. In 2021, the London Declaration was signed, by which ISO commits to work with its members, stakeholders, and partners to ensure that international standards and publications accelerate the successful achievement of the Paris Agreement, the United

Nations Sustainable Development Goals, and the United Nations Call for Action on Adaptation and Resilience. The session focused on three main themes: measuring sustainability and life-cycle assessment; resource scarcity and resilient supply chains; and digital product passports and secondary raw materials.

The moderators then addressed the participants with a high level question: **Are there any existing gaps in ISO's programs that need to be filled, or may be better addressed at the national level or with bi-national cooperation between the U.S. and Germany?**



KEYNOTE SPEECH

During this session's keynote speech, **Christian Schiller**, cirplus, provided a snapshot on how one segment of the economy (plastics) is contributing to and looking to address climate impacts. He noted:

- » 15 million tons of plastic waste enter the ocean every year (statistic dated 2020)—in comparison, Germany produces 14 million tons of new plastic in all industries.
- » There is a gap between realization and action. The plastic industry is on a steep growth trajectory; for example, the petro-chemical industry is on track to triple its global production of plastic from now until 2050.
- » It might be that in ten years' time, mankind is not just looking at the plastic problem from an environmental perspective, but also from a health angle (e.g. microplastic in our blood streams).
- » Plastic has a significant CO₂ footprint. The plastic industry emits twice as much CO₂ as the aviation industry.
- » The plastic market is not currently aligned with climate-related requirements, with virgin plastic being substantially cheaper (20%–30%) and better in quality than recycled plastic. If the market does not push companies to be more sustainable, regulation will have to set requirements.
- » The structure of the plastic recycling market is, at present, highly fragmented where waste is handled, thus failing in consistency of quality and quantity. Here, DIN SPEC* 91446, "Classification of recycled plastics by Data Quality Levels for use and (digital) trading," issued November 2021, closes the gaps by making it possible to use digital technology to set quality levels for recycled plastics and by this to build scalable supply chains, thus making it cost efficient, transparent, and reliable. In the next step, this national specification will be presented to become a European standard.
- » Even if the DIN specification might not be recognized as a climate standard at first glance, it does help the climate when used.
- » There is power in combining standardization and digitalization, making it a flawless integration into what market players are needed.

MODERATORS:



Ryan Colker, ICC.



Anna Trawnitschek, DIN

DISCUSSION CONCLUSIONS

- » The concept of climate standards is not limited to strictly sustainability-related standards. Numerous standards can or do influence the drivers or results of climate change. Engaging technical experts from across the standards ecosystem in understanding the impacts and opportunities is challenging, but necessary.
- » Digitization is a climate solution and offers opportunities to manage complexity. Data quality and interoperability will be essential.
- » There is a role for regulation in relation to standardization, but also a role for the private sector through standards development organizations to fill identified needs.
- » Assuring the right discussions are happening across government and the standards community is important, given the cross-cutting nature of climate solutions. Assuring those most impacted by climate change are at the table is key.
- » When starting to look for measuring sustainability, working on life cycle assessment, and building up a good methodology, one should start with “low hanging fruit.”
- » When using and sharing data, while transparency is needed, processes must protect proprietary information of businesses.
- » Use cases with true-value propositions should be developed in order to better demonstrate standards’ benefit to regulators and to share these use cases.
- » Roadmapping on climate standardization between the U.S. and Germany may be very helpful.
- » It may be useful for U.S. and German regulators to establish a dialogue on climate change policies to explore alignment. There should be exchanges on all levels for cross-fertilization of standards experts/ industry and policymakers across the borders.
- » SDOs should undertake an effort to examine their standards and assess the impacts (and opportunities) of standards on achieving climate goals.
- » Develop a common U.S./German communication strategy around ongoing activity and achievements reflecting the value propositions for different stakeholders.

CLOSING REMARKS

Florian Spitteller thanked all the participants of the meeting—in person and online—for two intense and inspiring days. After waiting for five years, the bilateral talks have been successfully resumed. A truly fruitful exchange in a good spirit on a good mix of important topics has led to new ideas how to connect the dots. On behalf of DKE, he thanked the host and all behind the scenes who organized the conference.

Christoph Winterhalter emphasized the value of the event, and that there should not be another five-year gap before meeting again. Face-to-face meetings are important. He pointed out that the right topics were selected for fruitful discussions. There is a lot of common ground, and a lot of common understanding of the opportunities and the challenges. Even if the standardization systems in the U.S. and in Germany are slightly different, there is so much in common, and many common approaches that serve as a good basis to work on. He suggested following up on the discussions and using them as a sounding board. A lot of the discussions and to-dos will go into the processes at the ISO and IEC level, and also into COP 28. He pointed out that it is good to see that the U.S. standardization organization is present at the climate summit. This will help to bring a common message to the world and to the regulators' forum. This event is not just a conference, but a starting point for a good cooperation that needs to be continued.

Joe Bhatia noted the tremendous information sharing that took place over the course of the two days, as well as the opportunities to further enhance cooperation related to standardization, conformity assessment, and market access. He thanked all participants for sharing their time, knowledge, and experience, and extended appreciation to DIN and DKE for many years of collaboration with ANSI. Additional thanks were shared with BMWK for their support. He looks forward to seeing everyone again at a future U.S.-German Standards Panel.