Moving Forward to a New Digital Transatlantic Agenda

Recommendations of the Data and Digital Economy Steering Group

20. Dezember 2021

Introduction

Digitization is one of the strongest growth drivers for our economy. Around 59 percent of industrial companies with more than 100 employees in Germany use "*Industrie 4.0*" applications, and 93 percent see the digitization of industry as an important opportunity. The German and European digital and data economy is closely integrated into a global digital ecosystem, especially with the other side of the Atlantic. On both continents, there is currently a controversial political and value-based discourse on how and whether the digital transformation of the economy should be regulated, be it for big platforms, for artificial intelligence, or regarding data protection and data transfer. Particularly in the area of the digital economy, the EU must define its role in a self-determined manner and determine its position in relation to the technospheres of the US and China, entirely in the spirit of a new togetherness, not antagonism.

Joe Biden's inauguration as US President on 20 January 2021 opens a new chapter for reshaping the transatlantic relations. In mid-June of this year, US President Biden and European Commission President Ursula von der Leyen decided to put transatlantic cooperation in the area of digitization and trade on a new footing and launched the Trade and Technology Council (TTC) at the EU-US summit. This new forum is intended to promote transatlantic coordination on economic and technology issues. The focus of deepening the transatlantic partnership should to establish joint efforts in standardization based on a shared democratic understanding of values. This should serve as a foundation to shape the digital transformation and strengthen transatlantic cooperation based on trust.

To ensure the success of transatlantic cooperation on the urgent issues of global digital policy, the TBI Data and Digital Economy Steering Group has developed proposals for the negotiators of the European Union and the United States to take into consideration within the framework of the Trade and Technology Council.

Semiconductors

The Issue

We recognize the fundamental role that semiconductors play in modern life. Technological progress in this area enables innovation across industries and along value chains, and supports industrial ecosystems. The semiconductor value chain itself is among the most global of any industry, with no single state holding complete autonomy of the value chain. Rather, there is a high degree of mutual interdependency between nations and regions. In light of increasing geopolitical tensions, interdependencies, and bottlenecks along the value chain – such as global logistics – the semiconductors value chain has been in the centerof political attention in recent months. To ease the current semiconductor shortage in the long-run, the access to raw materials, R&D facilities, IP and technological know-how is as important as the provision of robust government support and the availability of a skilled workforce. The TTC offers the unique opportunity to jointly address these challenges on a transatlantic level, in order to strengthen the resilience and competitiveness of the semiconductor ecosystems in Europe and North America.

European and US Semiconductor Strategies: Towards a Transatlantic Perspective?

European Chips Act

By 2030, the production of semiconductors in Europe should be at least 20 percent of world production in value, according to the European Commission's plans. To achieve this goal, the current European semiconductor strategy relies on two initiatives launched in July and September 2021. The Alliance for Processors and Semiconductor Technologies, announced in July, could function as an umbrella organization, where policymakers, research organizations, and industry leaders jointly develop the roadmap for a European semiconductor ecosystem. The European Chips Act (EUCA), mentioned by President von der Leyen during her State of the European Union speech in September 2021, aims to create a "state-of-the-art European chip ecosystem, including production." If equipped with a semiconductor fund, the EUCA has the potential to streamline and simplify regional, national, and European funding initiatives.

The publication of the EUCA is planned for the first or second quarter in 2022. According to Commissioner Breton, the EU Chips Act could cover three dimensions:

- A European Semiconductor Research Strategy that builds on Europe's preeminent research capacity and first-rate institutions to push the research ambitions of Europe to the next level while preserving its strategic interests,

- A collective plan to enhance European production capacity, including leading-edge production, and ensure the resilience of the entire supply chain including design, production, packaging, equipment and suppliers such as producers of wafers,

- A framework for international cooperation and partnership: While making European local production more resilient, a strategy is needed to diversify European supply chains in order to decrease overdependence on a single country or region.

US Chips Act

In light of ongoing geopoltical tensions, the shrinking share of semiconductors manufactured in the United States and growing concerns with regard to supply chain security, bipartisan support emerged in 2020 to spur more domestic semiconductor production through tax incentives and grants. By enacting the CHIPS for America Act in the FY 2021 National Defense Authorization Act (NDAA), Congress paved the way for a comprehensive semiconductor funding program. In June 2021, the Senate passed the US Innovation and Competition Act (USICA), which includes $52 billion in federal investments for the domestic semiconductor research, design, and manufacturing provisions in the CHIPS Act. Awaiting the approval of the House, the program aims to provide $39 billion of overall funding in grants for semicondcutor manufacturing, including equipment, fabrication, packaging and testing, with $19 billion to be paid in the first year. Companies applying for grants can receive up to 50 percent of funding for their projects but no more than $3 billion per project. In addition to the CHIPS Act, the Facilitating American-Built Semiconductors (FABS) Act is also under preparation. The FABS Act should offer tax credits for investments in semiconductor manufacturing, including equipment, as well as the extension of existing or the construction of new manufacturing facilities. Companies that are not funded under the CHIPS Act could still benefit from government support through tax incentives.

Similarities and Differences

Although the US lawmakers seek to provide a substantial proportion of the funding within the first year of the CHIPS Act, application and distribution mechanisms are not in place yet. The Department of Commerce, responsible for the roll-out of the act, can only start planning after the US Congress passes the CHIPS Act. However, the amount of funding available for the American semiconductor industry is clearly communicated in the US CHIPS Act. An explicit prioritization allows the buildup of enhanced manufacturing capacities, while a smaller share is dedicated to R&D efforts and the funding of mature node technologies. In comparison, the European Chips Act is nascent. Although the EUCA is intended to strengthen R&D efforts, secure supply chains, extend manufacturing capacities and foster international partnerships, it is still unclear whether the act will entail a funding component and from where the financial resources will come. To be effective, the total amount of funding should be comparable to the financial support other major semiconductor regions offer. So far, the most suitable option to support the construction of manufacturing facilities is through an "Important Project of Common European

Interest" (IPCEI), which is granted under EU state aid law but financed by individual Member States. Tax incentives as discussed in the US FABS Act could also be a valuable option under the EUCA, which the EU should consider to strengthen the entire ecosystem.

Suggestions for EU-US Cooperation (Key Recommendations)

International supply chains, teams, and customers characterize the global semiconductor ecosystem. Thus, efforts to strengthen the semiconductor industry should be coordinated and complementary to each other to support the entire value chain. Initiatives such as the TTC offer the unique opportunity to enhance core competencies in both regions while working closer together to reinforce the competitiveness of the semiconductor industry in Europe and North America as a whole.

To enhance cooperation, governments and industries in the United States and Europe should:

- **Work together to advance international standardization roadmaps and technical norms:** Cooperation on standardization is key to achieving economies of scale and delivering benefits to end users in form of affordable, high-quality products. With rapidly growing technology trends such as autonomous driving, the Industrial Internet of things (IIoT), electric vehicle (EV) charging, 5G/V2X communication, cloud computing, and quantum computing, a globally harmonized standardization system is vital for all members of the value chain as well as for users and consumers. Fostering dialogue in areas of mutual interest with leading stakeholders in the US and Europe would contribute to a deeper common understanding of the requirements related to standards and their implementation.
- **Ensure equal market access and competition conditions that enable a level playing field, which is beneficial for US and European economic actors:** This includes the reciprocal reduction of investment barriers as well as the avoidance of new trade restrictions used as retaliation measures. In addition, coordination of export control measures is critical to prevent negative impacts on European or US companies along the semiconductor value chain. Thus, export controls should be implemented multilaterally and in a strategic, targeted manner to address concrete security issues posed by products that are intrinsically sensitive. Extraterritorial rules, which are unilaterally controlled and impact items that clearly do not pose a security threat, should be removed. Furthermore, both sides should guarantee a predictable and transparent licensing process to safeguard level playing field between our countries.
- **Develop common strategies to secure the semiconductor supply chain, including semiconductor equipment, materials, and raw materials:** The EU and US should jointly identify bottlenecks in the value chain and work towards a more balanced global supply chain.

- **Find a common understanding of leading-edge semiconductors:** To ensure that public investments (grants and tax incentives) match the current and future needs of all industrial sectors, we urge the European Commission and the US Administration to agree on a common understanding of leading-edge semiconductors. Such an understanding should encompass both semiconductors in the range of two to five nanometers as well as semiconductors of larger sizes that are leading-edge, e.g. because of innovative use of materials, production processes, enhanced energy efficiency etc. The size of nodes can only be one aspect out of the range of many for the understanding of leading-edge semiconductors.

Expectations towards the European Commission

While international cooperation is important to enhance the entire semiconductor ecosystem, the European Commission should continue its efforts to strengthen the technological sovereignty of the European Union. Addressing certain lead markets and industrial ecosystems, European semiconductor companies play an integral role in the global value chain and offer a unique competitive advantage. Reinforcing existing core competencies enables the European Union to foster its semiconductor industries in a competitive and compatible manner. Government support, which takes the respective lead markets into account, ensures strategic regional funding while preventing a subsidy race.

In this light, the TBI endorses the European Commission's latest amendment of the State Aid Temporary Framework supporting national semiconductor projects under the Recovery Fund, which will allow Member States to set priorities and design support schemes that leverage private investments into new production lines or machinery to extend production to overcome supply shortages. Especially against the backdrop of global competition, we consider the outspoken prospect of public support for the establishment of a European semiconductor ecosystem, especially European first-of-a-kind facilities, to be a very positive move towards achieving supply chain resilience.

To ensure that Europe takes full advantage of this new opportunity, we believe that the following should be the EU's focus application areas going forward:

- Semiconductors and systems (hardware, software and related data models) for automotive, industrial IoT and robotics, security and identification, and sustainable energy markets,

- Microcontrollers for automotive, security and industrial/general purpose applications, power semiconductors (Si- and SiC/GaN-based) and sensors,

- Base materials and processing (e.g. epitaxy, CVD) for wide-band gap semiconductors, EDA tools, litography, design and manufacturing (including packaging) of advanced semiconductors, software and system algorithms as well as data models.

The Alliance for Processors and Semiconductor Technologies and the announced European Chips Act will play a key role here. To create an immediate impact, the EU should define goals and priorities for the Chips Act and the Alliance in a timely manner. Equally important is a non-bureaucratic application process for the Alliance and a sufficient funding component for the EUCA. Here, funding criteria should be in line with the markets and customers European semiconductor companies serve to support the entire ecosystem. Europe is home to countless state-of-the-art semiconductors. Power semiconductors, microcontrollers and sensors are not manufactured on cutting-edge nodes but are just as leading-edge when it comes to technology and applying it to products and end markets. Narrowing the definition of leading-edge semiconductors to technology nodes neglects a wide range of applications, products, and industries. The EU Chips Act must strike a balance between strengthening existing competencies and paving the way to more advanced nodes in the future.

To achive the above, we further endorse the recommendations published by BDI on its website ("5 Kernpunkte zu Halbleitern: Die Bedeutung von Halbleitern für die Zukunft der deutschen Industrie", October 2021).

Data Policy

Executive Summary

The TBI advocates a data policy that provides legal certainty for the use and the exchange of data across borders. Data policy needs to promote better uptake of industrial data between businesses through voluntary data sharing, based on commercial contracts. Promoting trustworthy data infrastructures and cloud solutions as well as encouraging innovation more broadly will define the success of data-driven ecosystems. This requires a clear commitment to international partnerships and cooperations. "Digital sovereignty" should be understood as the ability to independently choose and use digital technologies in a competitive landscape, as well as how they should be used and with whom to partner.

European and Cross-Atlantic Data Policies

European Data Policy

The "European data strategy" of the European Commission (2020) aims to create a single market for data. Data should flow freely within the EU and across sectors for the benefit of businesses, researchers, public administrations, and the broader society. The Data Governance Act (DGA) aims to ensure that more data is made available to EU business and for society through voluntary tools. It envisages the reuse of data held by public entities (G2B-data sharing), requirements for data intermediaries, tools for data altruism, and the introduction of an EU Data Innovation Council. The EU data strategy also addresses investments in data and in strengthening European capacities and infrastructures for hosting, processing, and using data, by aiming to create a European Cloud ecosystem, using synergies with e.g. GAIA-X. The European Alliance for Industrial Data, Edge, and Cloud has the twin objectives of strengthening the position of EU industry on cloud and edge technologies and meeting the needs of EU businesses and public administrations that process sensitive categories of data. This is in line with the EU data strategy addressing sector-specific data spaces in strategic sectors: industry (manufacturing), Green Deal, mobility, health, financial data, energy, agriculture, public administration/public procurement, skills, and research. Beyond those initiatives regulating data governance, recent EU policy initiatives also recognize data as a relevant competitive factor and seek to address potentially unfair market practices as well as the market dominance of so-called gatekeeper platforms.

US Data Policy

Since 2013, the United States has put diverse data policy measures in place to strengthen their data policy, focusing mostly on open data. There is an open data policy for transparency and

interoperability of public data[1] and the US government has published requirements for common standards for government data, which shall be open and machine-readable and can be used for commercial purposes. Recently the State Department published its Enterprise Data Strategy[2] with the goals to address the most critical area needs of the Department: cultivating a data culture, accelerating decisions through analytics, establishing mission-driven data management, and enhancing enterprise data governance. In July 2021, new rules for more interoperability of medical data came into force from the Centers for Medicare and Medicaid Services. 48 out of 50 States also have their own Open Data strategies.[3] Historically, the United States has approached data privacy regulation via a sectoral approach, with national data privacy regimes covering financial data, health data, and children's data. There is not a national general data privacy regime in place. In the absence of a federal approach, several states, led by California, have adopted their own general privacy laws, often based on the principles of the GDPR. There have been ongoing efforts over the last several years in Congress to establish a national approach to avoid inconsistent, state-by-state laws.

Canadian data policy

As of today, there is no governmental "national data strategy" in place. However, in 2018 the Government of Canada published "A Data Strategy Roadmap for the Federal Public Service". This strategy focuses on how the Canadian government makes decisions and creates, protects, uses, manages, and shares data to improve the lives of Canadians. Further, it addresses how to support businesses, researchers, and the not-for-profit sector. It builds on current federal data initiatives to ensure complementarity, coherence, and transparency, so that emerging opportunities are understood and quickly acted upon. In 2021, the Canadian Department of National Defence was the first government authority within Canada to publish a data strategy.[4]

Key Topics and Suggestions for Cooperation

1. Data Privacy and Transatlantic Data Flows

As the United States and Canada consider federal data privacy laws, there is a significant opportunity to adopt rights, requirements and mechanisms that are consistent and meet the data protection level of the existing privacy regime in Europe, specifically the requirements of the General Data Protection Regulation (GDPR). Taking those principles on board would provide consistency and thus help to facilitate cross-border data flows by building confidence that the United States and Canada will treat data in line with the EU's fundamental values. Similarly, as

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[1] https://obamawhitehouse.archives.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government-

[2] https://www.state.gov/the-department-unveils-its-first-ever-enterprise-data-strategy/

[3] https://www.data.gov/open-gov/

[4] https://www.canada.ca/en/department-national-defence/corporate/reports-publications/data-strategy/data-strategy.html

the EU develops additional legislation that also impacts data privacy, policymakers on both sides should consider a harmonized transatlantic approach.

Those harmonization efforts should strive to meet existing high levels of data protection instead of settling on a lower common denominator in order to provide strong privacy protections to citizens while creating a consistent and predictable playing field for companies operating on both sides of the Atlantic. Privacy regimes on both sides of the Atlantic should have consistent definitions of privacy and what levels of personal and business data they cover (such as levels of trust to protect private and trade secrets).

A timely conclusion of negotiations between the EU and the United States over an enhanced Privacy Shield framework – thereby adequately addressing the findings of the Court of Justice ruling in Schrems II – is necessary to ensure an effective and durable transatlantic data transfer mechanism or mechanisms, while respecting the rights of individual citizens and domestic data protection regimes.

At the same time, negotiators must find adequate solutions and safeguards to address the continued legal conflict between the US CLOUD act and the GDPR in relation to US access requests to data stored in the EU that are not based on mutual legal assistance and as such, violate Europe's data protection regime.

2. Regulation of Online Platforms

To protect freedom and stability in democratic societies, determining accountability, liability, and transparency obligations for illegal content, harmful content and misinformation is necessary. The largest platforms bear the strongest responsibility and must live up to it. Determining the right way to respond to those responsibilities also requires recognising that companies offering software platforms may act as gatekeepers in the digital sector. Policymakers should pursue obligations for those that exercise control over whole platform ecosystems and are structurally difficult to challenge. These gatekeepers have a major impact on digital markets and exert control over many users creating significant dependencies. In certain cases, this has led to unfair behavior and creates negative effects on the contestability of the core platform services concerned. The EU aims to ensure an open and fair online environment, in particular by complying with specific obligations laid down in the proposal of the European Digital Markets Act (DMA) and Digital Services Act (DSA).

When it comes to regulating industrial platforms, policymakers must understand the difference between B2C and B2B scenarios. To preserve the interests of economic actors and especially smaller players, it is essential to not impose a one-size-fits-all approach. Otherwise, there is a risk of capturing industrial platforms which operate in dynamic markets that are not associated with any gatekeeper characteristics. EU and US regulators should support the diversity of emerging business models and ensure that B2B platforms are able to operate with a sufficient level of flexibility to meet customer's expectations in the best possible manner. Any essential business

model must include the ability to show customers where the value of their data lies and help them generate value from this data.

To facilitate and support data-driven business models, we request EU and US regulators to drive uptake through collaborative action. Any regulation must be targeted and thus clearly focused on the respective issues in terms of scope, while respecting proportionality.

3. Data-Driven Innovation and Competitiveness

With the emergence of digital technologies, the market power of cloud services and its providers becomes obvious. The increasing reliance on cloud services to manage and share data across all sectors of the economy comes along with an increasing need for effective oversight and control mechanisms.

As the European Commission is clearly committed to support innovation via increased data-sharing, it is important to establish a common vision to encourage and leverage the innovative and collaborative power of open source and open data – not just across sectors, but also across jurisdictions. To unleash the benefits of data-driven innovation for individuals and the economy as a whole, data should not be approached in silos. Instead, a holistic framework is necessary for how data may be accessed and processed. Authorities should limit sectoral interventions to clear cases of market failure, considering the sensitivity of the data concerned and regulation needs to find the right balance between innovation and data protection. To allow innovation to scale, it will be necessary to develop common EU-US roadmaps and cooperation for new technologies.

One of the most prominent applications of data-enabled innovation is artificial intelligence (AI). For AI specifically, the United States seem to favor a sector-specific regulatory approach but is also preparing a bill of rights for the AI age to protect civil rights, avoid pervasive surveillance and establish redress mechanisms for individuals. The EU is currently negotiating a horizontal, technical, and risk-based regulation on AI systems. The European Commission proposed rules on governance and sanction mechanisms including technical requirements for providers and users for high-risk AI.[5] These obligations will have to be standardized. Thus, the EU-US Trade and Technology Council (TTC) aims to establish an approach for cooperation and coordination in critical and emerging technology standards.[6] The question of standardization is strategically important given that standard-setters will have competitive advantages.

The European Union and the United States share common values as liberal democracies. We support the ambition to translate these values into joint efforts in international standardization to make sure that those reflect such values and emerging digital technologies such as AI are compliant. There must be institutionalized cooperation on technical aspects taking into account the latest development in technology development.

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[5] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206
[6] https://trade.ec.europa.eu/doclib/docs/2021/june/tradoc_159642.pdf

On the regulatory side, there should be as much convergence as possible as the technology is borderless by nature. While any regulation should be risk-based, there is also the need for a shared understanding on how to regulate the technology to avoid frictions. Also, any regulatory intervention should be limited to closing identified gaps as AI is already subject to numerous regulatory requirements – horizontal and sector-specific. For example, in the financial, health, manufacturing, transport, and telecoms sectors, regulation should build on established practices of technical regulation such as standardization, vehicle type-approval, conformity assessment, and market surveillance. There must be a shared understanding of key terms related to AI-systems such as risk, bias, or explainability.

The EU and the United States need to learn from each other when it comes to the design of a regulatory and legal framework that can support innovation and new technology and at the same time prevent regulatory arbitrage. With the EU currently developing a legal framework for artificial intelligence, it will be important to avoid overly prescriptive requirements that may lead to further outflow of innovation away from the EU and increase the differences between EU and US solutions. This could hinder the implementation and deployment of AI solutions on a cross-border basis, with negative implications for economies of scale that would hit transatlantic business.

Expectations towards the European Commission

Protecting European Fundamental Rights – Supporting Responsible Data Management

- Transatlantic businesses require clarity and certainty regarding data transfers to operate and compete efficiently, while ensuring that citizens' data is adequately protected, in line with requirements set out by the existing legal frameworks and jurisidictions.

- Cross-border access to data for criminal investigations, law enforcement and government surveillance needs to be based on a sound (international) framework with mutual legal checks and balances in place that include adequate safeguards to protect data.

Democratize Data and Break Down Silos

- Develop a holistic framework regulating data access and processing that also applies to industrial data and limit sectoral interventions to the required minimum.
- Support international cooperation for the development of data infrastructure including cloud, based on common values and rules and refrain from data localisation requirements.
- Ensure a fair competition and open digital markets to enable cross-sectoral data-sharing and stimulate innovations.
- Support a diversity of emerging business models, especially when it comes to B2B data platforms, and not impose too restrictive one size-fits-all visions of data marketplaces, which lead to hampering innovation and data sharing.

Create Trust, Minimize Risks and Distribute Responsibilities

- Work on joint regulatory approach for high-risk AI and technical requirements. Share best practices on supervision and enforcement rules.
- Encourage joint efforts in international standardization that reflect shared values and ensure high levels of security and integrity of the data concerned.
- Ensure providers of AI systems are subject to adequate and clear responsibility to guarantee compliance. Potential lock-ins and technological dependencies in AI systems must be avoided from the start.
- Develop clear KPIs and benchmarks based on joint goals and objectives to track the technology's uptake and ensure competitiveness.

Standardization in Transatlantic Relations

Executive Summary

Standards[7] are an important factor for an efficient and internationally competitive economy. Almost all globally traded products, their manufacturing processes and many associated services are directly or indirectly related to standards. In this way, standardization promotes the safety and usability of products and components, contributes to legal certainty, facilitates access to markets worldwide, and promotes innovation and competition. Internationally recognized and applied standards reduce trade barriers and equalize market access conditions in favor of the free movement of goods. The implementation of the objective "one standard, one test, accepted everywhere" can prevent the modification of products for different countries and additional costs for regional certificates or multiple tests.

On a global level, some countries have recently substantially increased their engagement in standardization, in parallel with efforts to reach a top position in international economic competition. Whereas this is desirable from the perspective of economic cooperation and global trade, it means that different societal models are present in standardization. Thus, there is a need for a preference for active cooperation in the development and subsequent adoption of international standards. Digitalization also induces constant change into regulated markets at a high and formerly unseen pace. As a result, requirements for safety, cybersecurity, and quality need to be continuously reviewed and readjusted. However, this dynamic also offers an opportunity to jointly shape the digital future with the result of more structured cooperation in the development of new regulations on product safety and services, as well as their revisions.

Against this background, the TBI sees a need for action in key digital technologies. EU and US policymakers and stakeholders should establish lighthouse projects in key areas such as artificial intelligence, semiconductors, telecommunication networks, cybersecurity, and cloud and data governance.

European and Cross-Atlantic Approach to Standardization

The European Approach to Standardization

European standardization is organized around the European Standardisation System (ESS) with the standardization organizations CEN, CENELEC (electrotechnology) and ETSI (telecommunications), where CEN and CENELEC are in turn based on their national member organizations. The overarching principle is to maintain a coherent set of standards, i.e., the

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[7] Concerning cooperation in the field of product testing and certifications including mutual recognition in relation to conformity assessment please see the position of the TBI steering committee Trade and Investment Policy

requirement that there should not be more than one standard dealing with a given matter. Consequently, international standards are adopted as European standards where applicable. Existing national standards are required to be withdrawn if a European standard on the same matter is published. This approach has proven to be an extremely powerful tool to establish and maintain the European Single Market.

EU regulation uses a rather uniform and clear product regulation framework involving the ESS. It consists of two main pillars, namely **harmonized EU directives and regulations** setting out basic requirements and technical requirements defined by **harmonized European standards** (hENs) which are developed by European standardization organizations (ESOs).

EU regulations employ a risk-based approach as a guiding principle, where both product requirements and conformity assessment procedures scale with a potential risk inherent to a product.

The US Approach to Standardization

The American National Standards Institute (ANSI) is at the center of the US standardization system. Under its umbrella, there is a multitude of accredited sectoral standardization organizations. The US gives more priority to domestic standards than the EU, and its adoption rate of international standards developed by ISO and IEC is lower. Contradicting standards are explicitly welcomed in the US. Three obstacles in particular hinder market access in the United States: different technical standards, mandatory testing and certification, and the monopolistic structures of Nationally Recognized Testing Laboratories (NRTLs).

Suggestions for Cooperation (Key Recommendations)

Common Societal Values

The economic areas on both sides of the Atlantic share common societal values: fundamental liberties, rule of law, a stable legal regulatory framework, an open market economy with free and fair competition, economic strength, and innovative power.

European industry sees a closer relationship between the economic areas as an opportunity to create a benchmark for the safety, reliability, sustainability, flexibility, and compatibility of products and services in an international context. In this way, both sides can further develop and strengthen their international competitiveness through joint efforts.

Regulatory Action

Digitalization shapes products, services, and markets. A reliable regulatory framework, high technical standards, and compliant products and services are crucial for a functioning economy.

Meanwhile, it has become clear that there is also a need for regulation in certain genuinely digital markets, such as data spaces or artificial intelligence, due to their increasing importance for and influence on the overall economy and society. Moreover, digitalization induces constant change into regulated markets at a high and formerly unseen pace. As a result, the requirements for security and quality need to be continuously reviewed and readjusted. However, this dynamic also offers an opportunity to jointly shape the digital future. This requires closer, more structured cooperation in the development of new regulations on product safety and services as well as their revisions.[8]

Market Driven and Consensus-Based International Standards

The core function of standards is to create future-proof trust in the security, safety, marketability, or interoperability of a given product or solution. Standards should support markets by addressing the right topics with useful definitions and requirements. Trust is best created by involving all interested parties into standardization work and reaching consensus, whereas the support of markets can best be achieved by giving market players a leading role. Finally, as the digital world is international by nature, its standards should be international as well.

Consequently, closer cooperation in the development of standards under the umbrella of ISO and IEC as well as some other global organizations, such as 3GPP for mobile communication, should be sought. As shown by the "German Standardization Panel"[9], German companies favor a consistent adoption and observance of international ISO standards by both trade areas as the best solution.[10]

It is also important to set a benchmark for the regulatory framework and recognized standards in the international context, to sustainably strengthen the common position in the competition of global rulemaking. Market driven and consensus-based standardization, particularly on international level through the ISO and IEC, is a powerful tool in this respect.

The creation of concrete and joint bilateral standardization projects, pursued by the relevant standards bodies in the US and EU aimed at the international level, can be particularly helpful. Examples include joint standardization roadmaps in innovative technology areas. Such projects can also support coordination of the regulatory frameworks on both sides of the Atlantic at an early stage.

Greater regulatory cooperation should be promoted with the goal of harmonizing diverging technical legislation based on international standards. We call upon the EU and the United States to conclude the negotiations on conformity assessments as soon as possible.

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8 BDI (2015): Zehn Forderungen für eine gute transatlantische Regulierungskooperation. S. 14.

9 The German Standardisation Panel is an annual series of studies into various aspects of standardization, chartered by DIN and DKE and performed by Technische Universität Berlin, see https://www.normungspanel.de/

10 DIN (2014): Normung und das Freihandelsabkommen (TTIP) mit den USA – Chancen und Risiken

Lighthouse Projects

Given the fast-moving digital domain and the danger of closing windows of opportunity, we propose the establishment of transatlantic lighthouse projects for cooperation in key areas. Those should aim to develop common regulatory requirements and coordinate on international standardization activities and related evaluation benchmark setting as adequate in their respective areas.

Artificial Intelligence

To exploit the potential of artificial intelligence and to create the necessary trust in the safety and security of AI-based systems, a set of risk-based regulatory requirements can support a high level of social acceptance. The protection of fundamental rights and ethical principles must be ensured to help this technology achieve a breakthrough on both sides of the Atlantic. In light of core societal values shared between the United States and the European Union, the US Administration and the European Commission should strive to harmonize their regulatory frameworks on artificial intelligence and to develop harmonized standards. Based on such a common regulatory and standards-based foundation for AI, the transatlantic community will be able to develop a common AI ecosystem and set a benchmark for safe, secure, and value-based AI systems in a global market. Thereby, trade barriers for AI-based solutions can be removed, and digitized goods and services can be introduced into the respective markets more quickly, efficiently, and cost-effectively. This will stimulate growth and bring the world's largest economic areas closer together. The German Standardization Roadmap on Artificial Intelligence[11] provides examples for potential joint projects. With the European AI Act in its making, and the intention of European regulators to have it referring to internationally harmonized standards, we strongly recommend that the EU and US join forces based on commonly shared values in international SDOs, such as ISO and IEC, to aim for international standards acceptable in both the EU AI act and in the respective US AI regulations.

Semiconductors

The semiconductor industry creates a palette of very high-tech, very affordable products specialized for numerous applications. These products are driving the rapidly advancing automation of society. This diversity of products is based on international markets founded on international standards. Recently, the semiconductor industry has been the focal point of regional trade tensions and supply chain friction. This, in combination with the ambitions of upcoming new players, fuels national and regional approaches to standardization and creates

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[11] https://www.din.de/resource/blob/772610/e96c34dd6b12900ea75b460538805349/normungsroadmap-en-data.pdf

tension in international formal standardization, in international industry standard setting, and associated certification regimes. We also recognize substantial steps are possible in many fields to better national, European, transatlantic, and global alignment, such as on semiconductor security certification. To this end, cooperation among stakeholders, both within the EU and with US partners, is of utmost importance. For example, at national level, ZVEI and BDI coordinate exchange among semiconductor producers and users. At a European level, France Industrie and BDI are currently establishing a joint working group, and at the transatlantic level, the European Semiconductor Industry Association (ESIA) has reached out to its US counterpart SIA.

Telecommunication Networks

6G

In telecommunications industries, global standards are key to ensure global communication. The success of mobile telecommunications standards such as 3G, 4G, and recently 5G is based on collaborative research all over the world in international standardization organizations such as "3GPP". The sixth generation (6G) of wireless communication networks is expected for the year 2030 and beyond to integrate terrestrial, aerial, and maritime communications into a reliable and fast network. Researchers are proposing cutting edge technologies such as AI, quantum communications, blockchain as well as terahertz and millimeter waves communications. In partnership, Europe and the United States need to find ways to improve transatlantic collaborations in this core technology of the future.

This needs to start in 5G specifications bridging the way to 6G standards. The involvement of European companies, especially network operators, in standardization has declined in recent years, leading to less influence. To promote a swift roll-out of new telecommunication infrastructure, European and US network operators must contribute to the work of European and international standardization organizations. Likewise, US and European companies developing infrastructure components for telecommunication networks must also contribute to European and international standardization organizations. If not, we run the risk that companies from other parts of the world will fill this gap and thereby set standards that might not be compatible with our values, our economic ambitions, and our innovations. Therefore, different kinds of incentives to foster and strengthen European and US 6G standardization are required.

Broadband Internet

As reliable broadband connections are vital for economies and societies, high-performance and resilient secure broadband access and internet transport networks have been built in part due to global standards, including recommendations of the ITU, internet protocols specified by the IETF as well as solutions defined by industry fora such as Broadband Forum or Cablelabs. With the evolution to software-defined networking, organizations developing and integrating open-source solutions in a collaborative way have grown into a key role. Bodies such as the Linux Foundation

and ONF host open collaborative efforts for development, testing and integration of open-source solutions (from distinct APIs to complete solution platforms) that become de facto standards. In combination with global interface and protocol standards, such efforts have proven to offer a great potential to speed up adoption of new software solutions, which lowers the barrier for new innovative market entrants. Open interoperability test lab infrastructures and technology incubators ensure that technology and skill sets are leveraged to deliver solutions to the markets at an increased pace. Telecommunication stakeholders on both sides of the Atlantic already acknowledge the effectiveness of the open collaborative approach , which is expected to further help fostering technology leadership with software and hardware innovation. Given that R&D frameworks are not set up to offer the flexibility required for such de-facto standardization activities in the fast-paced software area, the EU and the United States should create opportunities to more directly support and incentivize activities for more collaboration in this area.

Cloud and Data Governance

Data governance and cybersecurity have become priorities to regulators aiming for open and competitive data driven ecosystems. While European observers must acknowledge that as US vendors develop more advanced technology and become more dominant in the data ecosystems they provide, Europe needs to catch up with its own secure, transparent, and sovereign alternatives. In the context of digital standards and certification a level playing field and competition is key for Europe. The EU and the European actors in data-driven business ecosystems are willing to set up a regulatory framework and a matching Europe-wide framework of federated data services, which will reflect European principles and values of privacy, security, and competitiveness. Data spaces are key to achieve sovereign, interoperable, and trustworthy data-sharing across businesses and societies – a key step to the data economy of the future.

Several initiatives have commenced on European level, e.g. GAIA-X[12] or the European "Data Spaces Business Alliance" (DSBA),[13] to strengthen the ability to pull multiple levers that can simultaneously drive awareness, shape standards and enable integration across industries. European activities aim to develop reference architectures for international data spaces, including a governance model and adoption strategy. Their aim is to contribute to international standards for data exchange in the economy of the future, based on common standards for transparency, interoperability, and trustworthiness. However, the United States and EU must have a vital interest in the openness for mutual accessibility of their data ecosystems and thus shall aim for common international standards to safeguard interoperability. International SDOs such as ISO do offer possibilities to get engaged in respective standards-setting based on

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[12] Gaia-X: A Federated Secure Data Infrastructure (www.gaia-x.eu)
[13] DSBA: BDVA, FIWARE, GAIA-X and IDSA Launch Alliance to Accelerate Business Transformation in the Data Economy | International Data Spaces

multilateral consensus. Bilateral projects on standards for an open transatlantic data space could drive international standard setting and provide early solutions to avoid a divided data space.

Cybersecurity

Global cybercrime is predicted to cause a damage of $10.5 trillion annually by 2025 – this compares to $3 trillion a decade ago and $6 trillion in 2021.[14] Data theft, industrial sabotage, and espionage will cost German industries alone more than €220 billion in 2021, with almost nine out of ten enterprises being affected by cybercrime.[15] Against this background, Europe and the United States should cooperate in their efforts to enhance their regions' cyber-resilience.

Coordinated Vulnerability Disclosure

Both European and US producers of connected devices and digital services aspire – by applying security-by-design and sometimes even security-by-default – to develop market solutions that are highly cyber-resilient. However, no company can guarantee hundred percent cybersecurity as attack vectors are constantly changing and new cyber threats emerging. To enable businesses to ensure the highest possible degree of risk-based cyber-resilience of products, services, and internal processes within governments, authorities on both sides on the Atlantic should inform companies directly about vulnerabilities and backdoors in IT solutions (hardware and software), in accordance with the Coordinated Vulnerability Disclosure principles. Any vulnerability that is not patched or updated, even if it may only be used by government agencies, is a security risk for everyone and weakens overall cyber-resilience. Therefore, we urge the US Administration, the European Commission, ENISA, and the respective institutions in the EU's 27 Member States, to stop holding back information on vulnerabilities, and to support enterprises in their intentions to ensure a high degree of cyber-resilient products, services and processes.

Developing and Utilizing International Cybersecurity Standards

Alignment and further collaboration on cybersecurity are vital to the protection of our people, our economies, and our strategic interests. Regulatory requirements differ based on varying standards for products and services on both the European and national/regional level. In order to streamline cybersecurity requirements and standards, the European Commission and the US Administration should strive for a high degree of interoperability. To this end, the European Commission and US Administration should encourage their companies to engage their employees in international standardization organizations to help further developing harmonized cybersecurity standards.

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[14] Cybersecurityventures. 2021. Global Cybersecurity Spending To Exceed $1.75 Trillion From 2021-2025. URL: https://cybersecurityven-tures.com/cybersecurity-spending-2021-2025/

[15] Bitkom. 2021. Wirtschaftsschutz 2021. URL: https://www.bitkom.org/sites/default/files/2021-08/bitkom-slides-wirtschaftsschutz-cybercrime-05-08-2021.pdf

Both regions should ensure that their regulations refer – if applicable – to the same harmonized international standards, such as the ones elaborated and published by ISO and IEC. Moreover, governments on both sides of the Atlantic should encourage companies to certify their business process based on international standards, such as ISO 27001, to ensure a high degree of cyber-resilience across sectors. In addition, in public procurement, governments on all levels should urge suppliers to comply with cybersecurity requirements adequate to the risk posed by the respective use-case. Suppliers could prove compliance with certification based on international cybersecurity standards. Further, the European Union and United States should initiate technical dialogue towards mutual recognition of cybersecurity certifications as a result of conformity assessments results based on international requirement standards.

Imprint

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