THE DIGITAL SINGLE MARKET

Policy Perspectives

U.S. CHAMBER OF COMMERCE

EU DIGITAL SINGLE MARKET

Policy Perspectives

October 2015

Shared Interests in a Global Digital Economy

The commercial relationship between the United States and the European Union is without peer, with trade in goods and services topping $1 trillion (€878 million) annually. Even more impressive is the transatlantic investment relationship: U.S. firms have invested $2.2 trillion (€1.9 trillion) in the EU and European companies $1.6 trillion (€1.4 trillion) in the United States. Almost all of this trade and investment is dependent on some form of digital services, whether through direct interactions with customers over the Internet, intra-company HR management, or a New Yorker using a credit card while on holiday in Rome.

The United States and the EU are also global leaders in digital trade, which generates over $8 trillion (€6.9 trillion) a year. Three quarters of the value created by digital trade accrues to firms not usually viewed as "Internet companies," such as manufacturers, retailers, and banks. Today, every successful business operates digitally in some capacity, often with those operations spanning borders in a global economy, which is why getting the Digital Single Market (DSM) initiative right is critical to the European market and to European firms' global competitiveness.

Europe's approach to the single-market is always most successful when it aims to remove trade barriers between the Member States and not to limit competition in a misguided attempt to support the single-market. The removal of internal Member State barriers and enabling firms — of any nationality — to adhere to a Europe-wide regulatory environment not only lowers the cost of doing business but more importantly allows European consumers to enjoy competition among products and services.

Historically, American businesses have benefited from these reforms. Indeed, the Commission's initial DSM communication recognized the ultimate end goal will be to "make the EU an even more attractive location for global companies."

Unfortunately, since announcing the DSM as a priority, the initial "win-win" framing of the exercise has faded as some European officials have sought to use the DSM to handcuff the competiveness of U.S. companies. For example, a former French minister went so far as to claim that EU sovereignty was at stake, saying, "We don't want to be a digital colony of U.S. Internet giants."

Overall such statements seem aimed at scoring political points rather than identifying real problems and putting forward policy proposals for debate. This anti-American tone at times reflects an intellectually sloppy critique of government surveillance programs that lumps in unrelated private business activities; at other times, it betrays a misunderstanding of the best practices required to build domestic industry. In any event, it is important that the DSM remain focused on keeping Europe open for business within Europe and connected to the rest of the global economy.

"Circle the wagon" statements shortchange the immense wealth of talent and creativity that exist in the EU. European startups like Spotify, Soundcloud, and Skype didn't grow due to protectionist policies but because they offer real value for consumers with their products and services. Market forces in the fast moving digital economy have consistently demonstrated that it is quality that trumps all other factors. The path to creating a competitive playing field doesn't begin by pulling companies down but by figuring out ways to allow innovation to flourish.

In the end, American companies have a steadfast commitment to the European market and are pleased that the DSM communication from the EU Commission specifically calls out the importance of the international dimension, stating that "the openness of the European market should be maintained and developed further." It further highlights the importance of various collaborative international approaches.

The Chamber is further encouraged by statements of Andrus Ansip, the EU Commission Vice President in charge of the DSM, who has pushed back against notions that the DSM will be used for protectionist purposes, explaining that "our doors are open, not closed."

As the DSM strategy moves from aspiration to implementation, it is critical to remember that digital products and services shouldn't be seen as a zero sum game. The EU can create thousands of jobs by continuing to serve as a leader in development of Industrial Internet technology as well as develop globally successful European tech firms, and U.S. business can similarly benefit from ancillary products and services built using EU-born cutting-edge technology, thus allowing the benefits of the digital economy to flow to all sectors.

U.S. and EU firms already support hundreds of thousands of jobs in one another's markets and are poised for more growth. For most companies, the transatlantic

market represents a natural place to do business due to our shared values. This is why American companies have long supported the European goal of a single-market.

But in given how integrated our two economies are, it is critical that we not divide ourselves with policies that limit the potential of the digital economy and that, in turn, give rise to emerging markets to make policy choices that further fragment the global potential of a digital economy. The Chamber looks forwarding to working with our members and EU policy makers as the DSM strategy moves forward.

Myron Brilliant is the Executive Vice President and Head of International Affairs at the U.S. Chamber of Commerce.

Trust in Tech - A Prerequisite to a Successful Digital Single Market

The past few years have been transformative in technology. Cloud computing, the Internet of Things, and Big Data are either entrenched or fast arriving, and already helping economies in Europe and beyond become stronger, more agile, and more productive, all while empowering users to better work and play. As the European Commission put it in the Digital Single Market (DSM) Communication, this particular trio of new technologies "are central to the EU's competitiveness."

- **Cloud computing**. Cloud computing enables businesses to reduce hardware infrastructure costs, and helps companies tap into world class Information and Communications Technology (ICT) systems at a low and flexible cost. An International Data Corporation (IDC) study estimated that in the period from 2015 to 2020, cloud computing alone could add a cumulative total of €449 billion to the EU28 GDP and approximately 303,000 new companies. The cumulative impact on employment is expected to reach 1.6 million new jobs created for the years from 2008 to 2020.[1]

- **The Internet of Things**. The Internet of Things (IoT) – that is, the growing network of smart, connected devices – is quickly becoming a key feature of many logistics and supply chains, and may also play a big role in other industries such as healthcare in the near future. Similar to cloud computing, the Internet of Things will create network effects that benefit adopters by improving productivity, in part through enhancing machine to machine task coordination. Moreover, IoT promises unprecedented quality of life improvements and positive socio-economic effects, such as a decrease in epidemic diseases or water consumption, or the minimisation of pesticides usage in agriculture; and ultimately enhances opportunities for all people, including those who are disabled or disadvantaged.

- **Big Data**. Big Data – that is, the analysis of large data sets to derive new and often unexpected insights through pattern spotting – is a fast growing subfield of data science. As with the other technologies above, Big Data offers new opportunities for businesses. For example, the "connected cow", a cow-monitoring system, gives farmers insights that can boost milk production,

[1] *See* European Commission, "Uptake of Cloud in Europe", June 2015, available at: http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=9742.

> smooth the calving process and ensure healthier cows — all while saving time for farmers. The DSM Communication noted that the market for Big Data is growing by 40 percent annually, a rate of growth that exceeds most other areas of industry, including ICT industries, by a substantial margin.

These technologies support the free movement of services, by providing the means to deliver services cross-border at a high level of quality and competitiveness. Instead of focusing on where to locate offices and stores, a company can focus on its offering for Europe's 500 million consumers, wherever they happen to be and whatever devices they happen to be using. They support free movement of people, by divorcing their location from their productivity, enabling them to participate in the digital economy wherever they may be. And they help drive European economic growth by enabling businesses to gain insights through intelligent systems and data analytics, maintain their own infrastructure whilst avoiding the capital costs of buying own servers. Last but not least, they benefit from enhanced security and functionality from sophisticated tech companies so they can concentrate on their core competencies.

Technology continues to rapidly evolve, but some things haven't changed. In 2015, just as much as at any given time in history, progress depends on trust, and those who are asked to trust require proof and commitment.

And while technology is evolving at unprecedented pace, we have seen an extraordinary sequence of events in Europe and elsewhere in the world that impact, in one way or another, national security, freedom of expression, and privacy – and ultimately the trust of citizens, consumers and businesses. We've seen it with the adoption of the Data Retention Directive following the London attacks to increase security, and the annulment of that same directive through the European Court of Justice to safeguard the privacy of European citizens. We have also seen it in the United States with an increase of surveillance measures after 9/11 to enhance national security, and citizens and businesses increasing demands for more transparency and privacy through encryption measures, court proceedings and efforts to change the laws, after the extent of the surveillance became known. And more recently, those same encryption measures are challenged in the light of the increasing terrorism threats in many regions of the world.

Indeed, ubiquitous computing and the global span of the Internet and new means of communication have caused the world to come closer together, spread ideas more rapidly, and brought innovation and economic growth to more people. But recent

events such as the attack on Charlie Hebdo or the Sony cyber-attack have highlighted the challenges of achieving a secure world in which our rights to privacy and freedom of expression are respected, even as totalitarian nation states or extremists use modern tools to spread their hate.

To put the equation plainly: citizens, consumers and business customers expect to maximise the value of technology while also preserving the values that are timeless. Ensuring that new technologies are trusted is thus critical to Europe's economic success and the successful up-take and completion of a DSM.

Technology and law have to move together. The answer is to propose reforms to further strengthen a platform for transparency and trust, to give adopters confidence as they shift to new technologies. The Commission is therefore right to propose initiatives in the DSM to strengthen transparency, privacy and cybersecurity. Such measures will help to build trust in cloud computing, Big Data, and the Internet of Things. Increased trust, in turn, will accelerate European adoption rates by unleashing demand for new technologies.

Key measures proposed by the Commission in the DSM that will help to build "trust in tech" include, among others:

- **Building a trusted cloud**. Adopting a code of conduct for cloud providers, to ensure that services and user rights are as consistent as possible.
- **Leadership by example**. Driving governments across Europe to lead by example by embracing new technologies to improve public services.
- **Privacy and security certification schemes**. Supporting certification schemes that will help provide transparency in cloud services and enable users to distinguish between services with strong or lax data security and data ownership policies.
- **Public – private partnerships for cybersecurity**. Renewed support for a coordinated partnership of public and private sectors for cybersecurity that involves information sharing to ensure all stakeholders use effective and updated techniques.
- **Free flow of data**. Removal of blockers that unnecessarily prohibit the flow of data, and which currently disrupt or fragment cloud services across the Single Market.

The Commission's emphasis on interoperability of services and standardisation will also play an important role in the process of building further trust in new technologies. So too will the modernisation of the European data protection

framework – which will be completed through the proposed General Data Protection Regulation.

It is also important that industry responds to these initiatives. Although the Commission's efforts to resist additional restrictions on transfers of data are a key step, providers may cater to customer preferences, for example by offering hybrid or private cloud, local storage or transparency over data location. Protecting digital security, digital sovereignty and the promotion of local economies are key commitments that providers of these technologies should make.

The tension that sometimes arises between the advance of new technologies and the protection of enduring values is not new. The challenge that lies ahead to achieve a Digital Single Market is to focus on how we can maximise the benefits of technology while simultaneously preserving values we hold timeless.

This commentary is provided by Microsoft. Microsoft (Nasdaq "MSFT" @microsoft) is the leading platform and productivity company for the mobile-first, cloud-first world, and its mission is to empower every person and every organization on the planet to achieve more.

The views expressed here are those of the author and may not necessarily reflect those of the U.S. Chamber of Commerce.

Boosting E-Commerce – Bringing More Business & Consumers On-line

With over 500 million consumers and over 20 million small and medium sized business, there is a great potential in the European Union for boosting economic growth and making the EU more competitive. The challenge is creating a connection between consumers with SMEs, which has yet to be fully realized. The Internet and digitalization of traditional economic and commercial processes are helping to move this process in the right direction. However a number of practical, legal and technological barriers remain as obstacles to creating a truly single market in Europe that relies on digitalization for further economic growth and integration.

The European Commission's Digital Single Market strategy has identified a number of policy initiatives and actions that will remove these barriers. The DSM strategy comprises three key elements: better access for consumers and business to online goods and services; creating the conditions for digital networks and services to flourish; and maximizing the growth potential of the European digital economy.

The DSM strategy rightly puts strong emphasis on boosting e-commerce and cross-border e-commerce sales. E-commerce eliminates the element of distance in sales processes, creating a significant advantage for the companies that want to expand to new markets and for consumers that look for more choice across borders.

Working with SMEs: Going beyond digitalization

Small and medium sized companies can benefit from the lower costs that come with digitalizing the sales and marketing process. But digitalization is not enough. Increasing cross border sales requires reliable payment systems – trusted by both the seller and the buyer. Furthermore, difficulties around administrative and value added tax (VAT) related obligations for cross-border sales in the EU often prevent SMEs from exporting. While express delivery companies like UPS offer a number of services to help SMEs manage these administrative processes, simplification of the regulatory framework is necessary.

But beyond regulatory barriers, increasing SME use of e-commerce is heavily reliant on making consumers comfortable when buying online, and an immediate need for clarity on price, delivery and returns procedures across all markets. To better understand consumers and ensure that SMEs are making the most of the digital single

market, UPS together with comScore asked European shoppers exactly how they use online and traditional retail channels in its "Pulse of the Online Shopper" study.

SMEs that can provide an easy and reliable shipping, delivery and return experience will have an edge over their competitors. We found that nine out of ten of customers using online channels will go to the trouble of reviewing a retailer's returns policy. There are two lessons here. One, is that businesses have to make critical details easy to find and easy to see, whatever the device, whatever the channel. The other, is that customers are very interested in exactly how retailers deliver: what options are offered, speed, price and how easily a business can process returns.

Customers will use that information to select the retailer that offers the delivery service they need. Our study shows that this means offering multiple delivery options, from where packages are delivered to the ability to change delivery dates and reroute deliveries. Customers will then use that information to make certain trade-offs. For example, 61% of customers will wait up to four extra days (the average acceptable wait time) to get free shipping, and more customers are willing to wait three days. These results are another confirmation of what we already believe at UPS: that the ability to choose a truly tailored delivery option and change it if necessary, is now one of the keys to successful e-commerce.

Reducing regulatory barriers to increase efficiency

While digitalization can eliminate distance in the sales process, goods need to be transported, which has an impact on the sales price. In addition to the innovations introduced by parcel delivery operators, there are a number of policy measures that should be considered to maintain the affordability of delivery.

Reducing regulatory fragmentation reduces costs for operators, removes barriers to entry for new entrants in the delivery sector and sets the right conditions for increased competition. Difference in road charging systems and concepts across Member States, absence of cabotage possibilities in all Member States and differences in driving times/ bans (including weekend driving bans) lead to unnecessary inefficiencies in intra-European transportation that need to be addressed. Overregulation and fragmentation in parcel delivery – linked to national postal rules – is another issue that needs to be examined to reduce the regulatory burden on delivery services.

Fair competition in the parcel delivery sector will contribute to better service at more competitive prices for their customers. Traditional postal operators should not be allowed to abuse their privileged position as universal service providers to compete private operators on commercial services.

The use of postal retail infrastructure as collection or drop off points for commercial e-commerce purposes should be recognized as a commercial activity that falls outside the scope of basic universal service. At the same time, the collection, transportation, sorting and delivery of commercial e-commerce parcels flowing through postal networks, including returns, should not benefit from preferential and special treatment for customs, security, waste recycling/returns and other aspects of the service.

Express delivery service users have benefitted from fierce competition in the sector, resulting in high quality and competitive rates. It is in the interest of consumers and small and large volume shippers to maintain a high degree of competition and wide choice of express delivery service providers.

The Digital Single Market has the potential to unlock the full e-commerce potential, but SMEs need to be ensure that they are equipped with seamless logistics to win customers and keep them. In fact, choice and control are not really options any more, but rather necessities for any SME that aims to survive and prosper in the online marketplace.

This commentary is provided by UPS. UPS (NYSE: UPS) is a global leader in logistics, offering a broad range of solutions including the transportation of packages and freight; the facilitation of international trade, and the deployment of advanced technology to more efficiently manage the world of business.

The views expressed here are those of the author and do not necessarily reflect those of the U.S. Chamber of Commerce.

The Internet is an Engine for European Growth

Earlier this year, a proud daughter in the UK shared the story of her mother Tricia Cusden using Google tools to launch a makeup business called Look Fabulous Forever. Tricia used Search to find suppliers; she built a following using YouTube to provide older women makeup tips; and she's employed Google Adwords to find customers online. To date, her YouTube channel has racked up over a million views, and her company now exports products to 24 countries around the world.

This is just one example of the hundreds of thousands of businesses across Europe that are using digital tools to build a brand, find customers and grow. Not long ago, small businesses could only afford to source and sell locally. Global marketing and distribution were out of reach for all but the biggest. Today, any business can reach a global market using the Internet, allowing even the smallest businesses to be a multinational.

So why do we hear so much pessimism about doing business in Europe? With all the challenges Europe's economy faces, it is tempting to think that everyone has given up on the idea of European business success.

But this doom and gloom is misplaced - as long as we take the right steps now, Europe is well positioned for growth. The EU has a rich tradition of innovation and entrepreneurship - in fact, it is the world's largest exporter of manufactured goods and services. We also have a bigger digital trade surplus than the US.

And, contrary to the prevailing view, there is cause for optimism on the digital front too. Since 2000, for example, Europe's had nearly two thirds as many digital startups reaching $1 billion valuations as the US. Two German businesses - Zalando, the fashion site, and Rocket Internet, the start-up incubator - both recently broke the one billion euro mark when they went public.

It is not just tech start-ups that are doing well in the digital world: Europe's millions of small businesses are going digital too. We're seeing firsthand how businesses are using the Internet to grow and we're proud that Google products like AdWords, Play and YouTube are a growth engine helping them to expand their reach and create new jobs across Europe.

Traditional businesses like Holl Souvenir, a Dutch clog-maker supplying the tourism industry, is another great example of a traditional business finding success online. Last

year, they started an online marketing campaign and launched a new webstore. Now their business is never closed.

The question for policymakers today is how do we enable more companies like Holl Souvenir to succeed online and ensure that businesses across the economy can take advantage of digital technology. The Digital Single Market Strategy sets out a clear agenda for Europe to ensure that companies here can take advantage of the 500 million consumers in Europe. A key aspect of this agenda is boosting the digital skills of Europeans who want to take a larger part in the Internet economy.

New digital opportunities need new kinds of workers with the rights skills to help these businesses grow. At current rates, the EU predicts a shortfall of 900,000 jobs by 2020 due to a lack of digital skills. This skills gap slows growth in startups and scale-ups, dampens the pace of innovation and hurts business. The risk is that Europe misses out on the potential boom in digital technology as other regions of the world educate talented young people with these skills.

At Google, we believe we can make a real contribution to helping fill this gap. Earlier this year we pledged to provide 1 million Europeans with digital skills by 2016. We know we can meet this goal because we have a track record of helping to boost these skills all across Europe. We support teachers delivering coding and computer science in the classroom, encourage more young people to pursue these academic degrees and support small and medium sized businesses in getting the necessary digital skills to grow their business online. We also have a long track record of supporting the advertising industry and our brand partners in building up the digital skills base of their employees.

By working with partners all across Europe, we are delivering training all around Europe. Over the last eighteen months we have helped tens of thousands of German entrepreneurs export through partnerships with DHL, PayPal and Commerzbank through our Weltweit Wachsen program. In Italy we are working with the Chamber of Commerce and the Ministry of Jobs to train 500,000 young people not currently in training or education with digital skills. Following their training, 3,000 of these new digitizers will be partnered with local SMEs for 6 month paid internships. This model has already proven effective, helping Italy's traditional crafts industries take advantage of digital tools.

We have similar programs in many European countries including France, Poland, Spain and the UK. We will build on this offline success by launching an online digital skills hub. This will provide a diagnostic tools and training programs to help address

individuals' skills needs. We are proud that our Growth Engine initiatives are part of the solution to filling Europe's digital skills gap.

Our work with partners across Europe is building a strong model for how Europe can address the skills challenge. While we make our contribution, we also believe that there is more that business, government and non-profits can do to encourage more young people to pursue degrees in science, technology, engineering and math (STEM) degrees. The UK recently introduced coding to the school curriculum from the age of five, teaching kids not just how to use computers but how they actually work. This is a positive development that will help to meet our long term skills gap that other governments in Europe should look to as an example.

Some people look at the state of the economy in Europe and are pessimistic. We see something else: a huge diversity of businesses and entrepreneurs with creativity, ambition, and talent -- all using digital tools to create jobs and boost the economy. By helping more Europeans get the digital skills they need, we will help them take their success to the next level.

This commentary is provided by Google. Google provides technology and support to help millions of people and businesses grow online. Businesses, creators and non-profits across Europe use Google as a growth engine for their success.

The views expressed here are those of the author and may not necessarily reflect those of the U.S. Chamber of Commerce.

Expanding The Digital Economy Through Data

The late summer reverberations throughout global markets of China's economic slowdown and stock market fall remind us once again how much the world's major economies depend on each other.

Nowhere is this more true than between the European Union and the United States, the world's two largest economic entities. Together, they account for one-half of the world's GDP and about one-third of its trade flows. So the United States has a significant stake in the success of the European Commission's Digital Single Market Strategy. Its promise of economic growth for Europe will help to lift the American economy as well, and Americans share the Commission's vision of information and communications technology as "the foundation of all modern innovative economic systems."

The use and flow of data is a vital component of the US-EU economic partnership. My Brookings Institution colleague Joshua Meltzer found that "cross-border data flows between the U.S. and Europe are the highest in the world" and include an increasing business transactions, supply chains, and trade in services and open new markets and opportunities for research and collaboration.

A more vibrant and more digital economy in Europe will depend on even greater flows of digital information across the Atlantic and around the globe. Digital information – data – is a key element of the Commission's focus on investment in cloud computing and Big Data. It identifies Big Data as "central to the EU's competitiveness" and "a catalyst for economic growth, innovation and digitization across all economic sectors […] and for society as a whole." Its research estimates that the use of Big Data by the top 100 EU manufacturers could lead to savings worth €425 billion and that, by 2020, data analytics can increase EU economic growth by 1.9%, equivalent to a GDP increase of €206 billion. The Commission believes Big Data not only will boost growth and jobs, "but also improve the quality of life [for] Europeans."

The European Union has an opportunity to advance the building a data-driven economy as it conducts the Trilogue on the proposed EU General Data Protection

Regulation (the "Regulation"). The Commission's Digital Single Market communication identifies the Regulation as a "key enabler of the Digital Single Market." American companies no less than European ones welcome the prospect of dealing with one set of consistent rules across the EU and a single lead data protection authority rather than 28 so long as the rules are workable and the consistency mechanism streamlined.

The Digital Single Market Strategy recognizes that the digital economy must be built on networks and services "that safeguard consumers' fundamental rights to privacy and personal data protection while also encouraging innovation." The Regulation contains a number of provisions that will have a significant impact on development of a European data-driven economy and – depending on the outcome of the Trilogue – can encourage innovation or discourage it.

In particular, Article 20 and its parallel Recital 58 on "profiling' directly affect the ability to analyze and extract meaningful and actionable insights from Big Data. Efforts in some quarters to restrict ***any*** use of automated processing – any algorithmic inference from data about an individual – reflect a deep-seated distrust of data that is at odds with the Commission's vision for a data-driven economy.

The aggregation and correlation of increasing volumes of data across transactions, devices, and now a multiplying sensors in the Internet of Things present important challenges for data security and privacy. Eric Brynolfsson and Andrew McAfee, leading scholars of the digital economy, have likened the transformation in the power and granularity of computational science from Big Data to the revolution in natural science that occurred when Anton Van Leuwenhook first trained his newly-invented microscope on samples. Whether this new microscope of data analysis produces a virus or a wonder drug depends on how the data is used.

There are numerous forms of profiling used in both the private and public sectors that are legitimate and beneficial to society:

- In healthcare, for clinical decision support and surveillance and management of diseases such as malaria and Ebola.
- In banking, to prevent and detect credit card fraud.
- In insurance, to improve risk analysis and pricing accuracy.

- In retailing, for demand-driven forecasting, merchandising, pricing strategy, overall operations improvement and customer relationship management.
- In government, for tax and revenue as well as benefits programs fraud detection and prevention, smart cities, and citizen engagement.

To realize the aspirations expressed in the Commission's digital agenda, therefore, the Regulation should differentiate between profiling that is beneficial to individuals or society, and that which can cause harm. Both the Commission and the European Parliament in their proposals for Article 20 focus on the "measures" used for profiling (i.e. the technology and techniques used in profiling). The Council places greater focus on the 'decision' (i.e. the outcome of the profiling), as opposed to profiling as such. Focusing instead on negative effects of algorithms – inferences that are unfair and discriminatory as used – would avoid sweeping in analytics that the Digital Single Market strategy seeks to foster.

Another provision that could have a significant impact on the success of the digital agenda is the scope of "legitimate interest" as a basis for profiling or other further processing. Consent is a vital element of individual control over data. A rule that requires explicit consent to all conceivable uses in a world of constantly multiplying interactions with digital systems and rapidly evolving data uses devalues privacy because it ignores the universal recognition that click-through consents too often are reflexive and meaningless. As the President's Council of Advisers on Science & Technology found in conducting President Obama's review of Big Data, over-reliance on notice and consent "fundamentally places the burden of privacy protection on the individual" when more responsibility should fall on providers with greater knowledge.

The Regulation contains the means of shifting responsibility and enabling more dynamic uses of data. That is in the concept of compatible and incompatible uses of data. Article 22 as proposed by the Parliament and Council makes the obligations of a data controller subject to the nature, scope, and context of the processing and the risks to the rights and freedoms of the individual. These factors recur throughout numerous provisions of the Regulation, and can shape the responsibility of data controllers (and potentially processors) in using personal information.

The European Parliament introduced the concept of pseudonymous data into the proposed Regulation, i.e. *personal data* that does not identify a specific individual without the use of identifiers that are held separately. The Parliament provided that where profiling is based solely on the processing of such pseudonymous data this

profiling will not be subject to the restrictions in Article 20. Use of pseudonymous data needs to be administered and controlled carefully to ensure against re-identification but, if so, can enable beneficial uses of data without associating that data with an individual.

The Trilogue should ensure that the Regulation strikes the right balance between effective data protection and the social and economic goals of the Digital Single Market Strategy and will not generate unintended consequences for the digital economy and society nor discourage the growth of a data-driven economy in Europe.

Cameron F. Kerry is the Ann R. & Andrew H. Tisch Distinguished Visiting Fellow at the Brookings Institution's Center for Technology & Innovation, a Visiting Scholar at the MIT Media Lab, and Senior Counsel at the global law firm Sidley Austin LLP. He is the former General Counsel and Acting Secretary of the U.S. Department of Commerce.

The views expressed here are those of the author and may not necessarily reflect those of the U.S. Chamber of Commerce.

Globally Relevant Standards and Conformance Will Support Europe's Vision for a Digital Single Market

The Digital Single Market is a bold and exciting strategy aimed at boosting the growth of Europe's digital economy and creating new opportunities for trade and investment.

A critical, but often overlooked, component of this strategy is standardization: the guidelines, standards, and conformance measures that drive manufacturing and services the world over.

Just take a look at your smart phone. There are thousands of standards that have gone into the design, manufacturing, distribution, and operation of that device, from tangibles like its battery and materials to intangibles like its security features and safety. And then there are the testing and inspection measures – also called conformity assessment – that assure that these standards were followed.

Now let's look beyond your phone, and even beyond the information and communication technology (ICT) sector. Just how important are standards in a broad sense? According to the U.S. Department of Commerce[2], standards and conformity assessment impact more than 80% of all global commodity trade. And when we're talking about one of the world's strongest and most vibrant trade relationships, there are a lot of dollars, euros, and jobs on the line on both sides of the Atlantic.

In order for Europe's vision for a Digital Single Market to truly take hold, their strategy will have to embrace the importance of international standards and global approaches to conformity assessment.

To understand what I mean, put yourself in a manufacturer's shoes. Now imagine that each of your target markets has its own, "home-grown" market access requirements, including unique standards, regulations, and testing and certification procedures. These can create a complex and sometimes contradictory web of requirements for companies doing business internationally, driving up the costs associated with exports

[2] United States Department of Commerce, **Standards and Competitiveness – Coordinating for Results**. *Washington, DC May 2004, p1*

and trade. But international voluntary consensus standards can help to address these problems by giving countries a common base for such requirements.

How do we define an international standard? The World Trade Organization (WTO) offers an answer: the WTO Technical Barriers to Trade (TBT) Agreement Committee Decision[3] states that the global relevance of a standard is determined by how it was developed, not where. More specifically, the Decision states that the development of international standards must rely upon a number of principles, including openness, impartiality, consensus, transparency, and coherence, among others.

In other words, the global relevance of a standard cannot and should not be measured by which organization developed it. The degree to which a standard is used in the global marketplace is the best measure of an international standard.

In the United States, we refer to this concept as the "multiple-path approach."

The U.S. standardization system is fundamentally built on the needs of the marketplace, where users decide which standards best meet their needs, and in which standards development venues they wish to work. Ultimately, the U.S. standardization community supports the fact that there are multiple paths to global relevance – as articulated by the WTO TBT Agreement Committee Decision – and that it is the marketplace that decides the utility or applicability of any given standard.

For over twenty years, the American National Standards Institute (ANSI) has convened a cooperative dialogue with the European standards organizations: CEN, CENELEC, and ETSI. Chief among our goals for this dialogue is to affirm our support for increased transatlantic trade, and to further mutual understanding of our respective U.S. and European standardization systems.

Discussion surrounding the definition of an international standard is always an aspect of our agenda for these meetings, and certainly will continue to be as the Digital Single Market moves forward from vision to strategy to implementation.

For that reason, ANSI will strongly advocate for the multiple-path approach in any standards-related discussions surrounding the Digital Single Market.

[3] *G/TBT/ 1/REV. 10. "Decision of the Committee on Principles for the Development of International Standards, Guides and Recommendations with Relation to Articles 2, 5 and Annex 3 of the Agreement"*

We will take a similar approach on the conformity assessment side of the dialogue. Consider how much time and money could be saved if conformity assessment providers that test, certify, and accredit could be recognized at a global scale. Products, services, and personnel would cross borders far more easily, without the need for duplicative testing in each market. This would be a huge benefit to companies on both sides of the Atlantic.

The U.S. ICT sector is certainly invested in the European economy, and will want to see that this initiative moves forward with a global, inclusive approach to standards and conformance. But the impact of the digital economy is felt far beyond the ICT sector, and this ambitious strategy has the potential to positively impact both the U.S. and the European Union in a number of ways.

As our colleagues in Europe continue to develop their vision for the Digital Single Market, ANSI and the broader U.S. standardization community stand ready to work collaboratively with CEN, CENELEC, ETSI, and other stakeholders in the European standardization system to bring vision to reality in a way that embraces globally relevant standards and conformance for the benefit of all.

S. Joe Bhatia is the President and CEO of the American National Standards Institute (ANSI). ANSI is the coordinator of the U.S. standards and conformity assessment system, and is the U.S. member body to the International Organization for Standardization (ISO) and, via the U.S. National Committee, to the International Electrotechnical Commission (IEC).

The views expressed here are those of the author and may not necessarily reflect those of the U.S. Chamber of Commerce.

The Digital Single Market and IoT: A Leadership Opportunity for Europe

The Commission's Digital Single Market (DSM) proposal recognizes that the Internet of Things (IoT), cloud computing and big data are central to EU competitiveness, an enabler for innovation and a catalyst for economic growth and jobs. When it comes to data technologies, the EU should not limit its ambition. If policy-makers and industry agree on the direction of travel and work together with velocity to implement the DSM, the EU has a real opportunity to transform Europe's economy *and* establish a leadership position for the EU in IoT.

The Internet of Things - made up of billions of smart devices from miniscule chips to mammoth machines that use wireless technology to talk to each other and to us – is exploding. Our IoT world is growing at a breathtaking pace. Estimates from IDC and Morgan Stanley forecast 50-75 billion connected devices in the marketplace by 2020. That would be 6 to 10 connected devices for every person on earth. This new reality of IoT is being driven by the convergence of increasingly connected devices, compute economics, and the proliferation and acceleration of cloud computing, big data and analytics. At Intel we like to say IoT is an overnight transformation thirty years in the making.

According to a recent European Commission study[4], the market value of IoT alone in the EU is expected to exceed one trillion euros in 2020. IDATE Research projects that Europe will be the most valuable region in a global machine-to-machine (M2M) market worth €40 billion in 2017, and Frost & Sullivan forecasts the European M2M market to increase at a 33% compound annual growth rate through 2016. The transformational opportunities of IoT will impact the entire marketplace, from manufacturing to healthcare to transportation. In the automotive industry alone, it is projected that 250 million (or one in five) cars worldwide will be connected to the Internet by 2020 via technologies like WiFi, LTE, Bluetooth, satellite, and 5G communications networks.

With billions of connected devices producing enormous amounts of data it is important that IoT is secure from the sensor to the cloud. EMC/IDC forecast that devices will generate more than 44 zeta bytes of data by 2020 and security of this data will be critical to trusted data exchange and to enable scale of IoT deployments. Security is the foundation of IoT and must be designed into IoT systems from the outset.

[4] https://ec.europa.eu/digital-agenda/en/news/definition-research-and-innovation-policy-leveraging-cloud-computing-and-iot-combination

For some time Intel has advocated that the EU's public policy framework must encourage the development of a robust IoT ecosystem that promotes critical capabilities, including connectivity and interoperability, privacy and security, and intelligent analytics and big data. With IoT is in its nascent stages, it is critical to develop a policy framework focused on innovation and competition, and the DSM is a welcome step in that direction. The free flow of data initiative, cybersecurity public private partnership, and ongoing initiatives to drive cloud adoption, interoperability, connectivity, privacy, security and digital skills show that industry and the Commission are pointed in the same direction.

To accelerate and maintain the viability of IoT in the long run, the EU policy framework should encourage solutions based on horizontal building blocks and an open architecture framework - one that is scalable, interoperable, and reusable across deployments, vendors, and sectors. Proprietary technologies that are inherently antithetical to the concept of the Internet of *All* Things will slow down IoT adoption, limit scalability and delay economic benefits. Intel believes that global, voluntary, industry-led open standards will enable scale to drive cost-effective solutions. Open standards efforts, targeted funding, and impactful public-private partnerships can help bring IoT and its benefits to reality sooner.

Intel commends the Commission on its initiative to set up the Alliance for Internet of Things Innovation (AIOTI) to build strengths across the IoT ecosystem and we will play our part in that process. As industry continues to design and build secure IoT solutions, the Commission's focus to drive large scale IoT testing and deployments is the right one in order to bring about economic and social benefits to consumers, governments and business. Success will hinge on the rapid implementation of DSM policies to enable the proliferation of these technologies across markets and help Member States realise the significant economic and societal benefits that IoT can deliver. And in doing so the EU can seize the leadership in this next evolution of computing.

This commentary is provided by Intel. Intel designs and manufactures a variety of essential technologies, including microprocessors and chipsets and the additional hardware, software, and related services that together serve as the foundation for many of the world's computing devices. Over the last decade, Intel has evolved from a company that largely serves the PC industry to a company that increasingly provides the vital intelligence inside all things computing.

The views expressed here are those of the author and may not necessarily reflect those of the U.S. Chamber of Commerce.

U.S. CHAMBER OF COMMERCE

1615 H Street NW, Washington, DC 20062
www.uschamber.com