Thank you for the opportunity to testify at today’s hearing. In my testimony today, I will begin with an introduction of BSA | The Software Alliance; outline the economic importance of digital trade rules; and provide a view on the digital trade outcomes in the United States-Mexico-Canada Agreement (USMCA).

**BSA | The Software Alliance**

BSA is the leading advocate for the global software industry in the United States and around the world. Our members provide services that have a significant impact on the US and global economy, and those services often depend on the ability to transfer data freely around the world. As a result, an important priority for BSA is promoting international trade by eliminating barriers to global data transfers. BSA broadly supports the outcome on digital trade in the USMCA. The USMCA lays a good foundation for future FTA negotiations, and BSA encourages the Office of the US Trade Representative (USTR) to take further steps in future trade negotiations to advance the digital economy and safeguard against digital protectionism.

**The Economic Importance of Digital Trade Rules**

The digital economy has evolved significantly since the North American Free Trade Agreement (NAFTA) was originally concluded 25 years ago. When NAFTA was negotiated, digital trade was in its infancy, and there were relatively few services that were delivered digitally around the globe. It is therefore not surprising that NAFTA did not address many of the digital trade issues our modern economy now faces; quite simply, the innovations of the last two decades were not and could not have been anticipated. Indeed, since NAFTA was negotiated, the American software industry has moved from floppy disks and bulky desktop computing to mobile apps, cloud computing, smart devices, and data analytics.

Today, the software industry alone supports nearly ten million American jobs, and adds more than a trillion dollars a year to the US economy. Trade in software developed from these technologies has expanded

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1 BSA’s members include: Adobe, Akamai, ANSYS, Apple, Autodesk, Bentley Systems, Box, CA Technologies, Cadence, CNC/Mastercam, DataStax, DocuSign, IBM, Informatica, MathWorks, Microsoft, Okta, Oracle, PTC, Salesforce, SAS Institute, Siemens PLM Software, Slack, Splunk, Symantec, Trend Micro, Trimble Solutions Corporation, and Workday.

rapidly, and has become a significant contributor to US services trade surpluses with Canada and Mexico. Data services, including data storage, data processing, and analytics, are the fastest growing elements of digital trade, and these services rely on the free flow of data across borders. Cross-border data transfers have grown by a multiple of 45 since 2005 and are expected to surge in the next decade.3

Digital trade rules are therefore critical to the future of the digital economy in part because transformative software-based technologies rely on the ability to move data freely from one place to another, and often across borders. Without this ability, most data-analytics software applications that businesses use today simply could not function effectively. This is because most modern software applications do not operate fully in isolation on a single device; rather, they connect to other devices and remote data centres through a variety of online services. Although a software user often creates or receives data on his or her device, the processing of that data increasingly occurs elsewhere, oftentimes in locations miles or even continents away. The ability to transfer data around the world is essential to this structure.

In addition, AI applications, which use computational analysis of data to uncover patterns and draw inferences, depend on machine learning technologies that must ingest huge volumes of data, most often from a wide variety of sources. A language translation program, for example, cannot constantly improve its “understanding” of French without access to large volumes of French-language content—which may come from millions of search queries, mobile apps, databases, and other sources. The data for these AI systems may originate from many sources located in multiple jurisdictions, making it imperative that enterprises can transfer data freely across borders. Therefore, rules that limit or prohibit such cross-border data transfers invariably limit the insights and other benefits that AI systems can provide.

Cybersecurity is another area where the ability to transfer data is critical. Cloud-based storage of data across multiple locations can improve data security by establishing redundant, geographically dispersed back-ups, which can help mitigate physical risks to data like natural disasters, and by eliminating single points of failure. Storing all information in a single location can increase security risks because it isolates data in a high-target “data honeypot” — increasing the stakes and potential consequences of a single breach. By contrast, distributing data storage across multiple locations compartmentalizes data sets, making it easier to contain a breach in one location and minimizing the risk — from either physical damage or cyber-attack — to the entire data set. The ability to transfer data across borders is often necessary to share information between these storage locations. Moreover, dispersed data storage can facilitate continuous, around-the-clock security monitoring and response, with security professionals working across multiple time zones. Requiring data and data centers to be localized within a single country can eliminate these advantages.

More broadly, the data analytics tools that BSA member customers and other companies are using to transform their businesses increasingly require unrestricted transfers of data. These tools often require picking out “needles in the haystack” by drawing meaningful inferences and connections within vast, unstructured datasets. For example, for multinational companies, the ability to collect and holistically analyze data on network analytics, employee technology usages, and data flows are critical to effective enterprise management—they enable a business to comprehensively examine their operations and supply chains. Digital trade restrictions that undermine this kind of technology could cripple enterprise operations.

**Digital Trade Outcomes in the USMCA**

BSA supports the digital trade outcomes found in the USMCA. BSA is pleased that the agreement includes digital trade provisions similar to BSA’s digital trade agenda and looks forward to working with

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the US government on the implementation of the agreement.4

Congress, in recognition of the importance of digital trade, incorporated the subject into the principal negotiating objectives identified in the 2015 Trade Priorities and Accountability Act. Section 102(b)(6)(C) provides that agreements should “ensure that governments refrain from implementing trade-related measures that impede digital trade in goods and services, restrict cross-border data flows, or require local storage or processing of data.” Section 102(b)(6)(D) adds that it is also a negotiating objective “where legitimate policy objectives require domestic regulations that affect digital trade in goods and services or cross-border data flows, to obtain commitments that any such regulations are the least restrictive on trade, nondiscriminatory and transparent, and promote an open market environment.”

The USMCA’s digital trade chapter contains strong digital trade outcomes for North America. The chapter contains explicit commitments that the Parties will neither prohibit the cross-border transfer of data in a commercial context, nor require that data centers or other computing facilities be located domestically. The chapter also disciplines derogations from these commitments, requiring that any derogations be narrowly limited to ensure that they are necessary to achieve a legitimate public policy objective; be no more restrictive than necessary to achieve that objective; not discriminate against foreign service providers; and not constitute a disguised restriction on trade.

Furthermore, the USCMA prohibits Parties from requiring transfer or access to source code or algorithms as a condition of market access, and from requiring transfer or access to encryption keys in the commercial context. The digital trade chapter prohibits discriminatory rules from being applied to digital products, and prohibits the imposition of customs duties on digital products transmitted electronically. The digital trade chapter also requires Parties to adopt or maintain a legal framework that provides for the protection of personal information; provides for appropriate protections against intermediary liability; and promotes principles for the management of cybersecurity risks.

These and other important elements of the USMCA digital trade chapter can help create an environment conducive to future software innovation across North America. BSA supports the US government’s building on the digital trade foundation set in the USMCA in future trade negotiations to respond to rapid technological change and the threat of digital protectionism. The driving principle remains that there should be no market access barriers and no discrimination against software.

We appreciate the US government’s leadership on digital trade, as reflected in the USMCA. Thank you and I look forward to your questions.

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4 BSA, Modernizing Digital Trade: An Agenda for Software in NAFTA and Beyond, at http://www.bsa.org/~/media/Files/Policy/Trade/05222017BSANAFTAHandoutPress.PDF