Program:	0815-S											
Term:	DATE OF AWARD to December 31, 2019											
TITLE:	Editorial Services											
			CALDERA COMM.		**ICTECT, INC.**		**PROGRESSIVE PUB.**		**SAFETY RESEARCH**		**SCHATZ PUBLISHING**	
ITEM NO.		BASIS OF	LARAMIE, WY		STURTEVANT, WI		YORK, PA		DOTHAN, AL		BLACKWELL, OK	
		AWARD	UNIT RATE	**COST**	UNIT RATE	**COST**	UNIT RATE	**COST**	UNIT RATE	**COST**	UNIT RATE	**COST**
I.	**Editorial Services**.....per page.....	1500	$7.45	$11,175.00	$4.00	$6,000.00	$25.00	$37,500.00	$10.00	$15,000.00	$13.00	$19,500.00
	CONTRACTOR TOTALS			**$11,175.00**		**$6,000.00**		**$37,500.00**		**$15,000.00**		**$19,500.00**
	DISCOUNT		**2.50%**	$279.38	**0.00%**	$0.00	**0.00%**	$0.00	**1.00%**	$150.00	**0.00%**	$0.00
	DISCOUNTED TOTALS			**$10,895.62**		**$6,000.00**		**$37,500.00**		**$14,850.00**		**$19,500.00**
			SeeWriteHear, LLC									
ITEM NO.		BASIS OF	SCOTTSDALE, AZ									
		AWARD	UNIT RATE	**COST**								
I.	**Editorial Services**.....per page.....	1500	$43.62	$65,430.00								
	CONTRACTOR TOTALS			**$65,430.00**								
	DISCOUNT		**0.00%**	$0.00								
	DISCOUNTED TOTALS			**$65,430.00**								

U.S. GOVERNMENT PUBLISHING OFFICE
Washington, DC

GENERAL TERMS, CONDITIONS, AND SPECIFICATIONS

For the Procurement of

Editorial Services

as requisitioned from the U.S. Government Publishing Office (GPO) by the

U.S. Department of Commerce

Single Award

TERM OF CONTRACT: The term of this contract is for the period beginning Date of Award and ending December 31, 2019, plus up to four (4) optional 12-month extension periods that may be added in accordance with the "OPTION TO EXTEND THE TERM OF THE CONTRACT" clause in SECTION 1 of this contract.

BID OPENING: Bids shall be publicly opened at 11:00 a.m., prevailing Washington, DC time, on January 11, 2019.

BID SUBMISSION: Submit bid in pre-addressed envelope furnished with solicitation or send to: U.S. Government Publishing Office, Bid Section, Room C-848, Stop: CSPS, 732 North Capitol Street, NW, Washington, DC 20401. Facsimile bids in response to this solicitation are permitted. Facsimile bids may be submitted directly to the GPO Bid Section, Fax No. (202) 512-1782. The program number and bid opening date must be specified with the bid. Refer to Facsimile Bids in Solicitation Provisions of GPO Contract Terms, GPO Publication 310.2, as revised January 2018. Hand delivered bids are to be taken to: GPO Bookstore, 710 North Capitol Street, NW, Washington, DC, between the hours of 8:00 a.m. and 4:00 p.m., prevailing Washington, DC time, Monday through Friday. Contractor is to follow the instructions in the bid submission/opening area. If further instruction or assistance is required, call (202) 512-0526.

BIDDERS, PLEASE NOTE:

- GPO has issued a new *GPO Publication 310.2, GPO Contract Terms - Solicitation Provisions, Supplemental Specifications, and Contract Clauses (Rev 1-18)*. Prospective bidders should carefully read this publication as the applicable terms within become an integral part of this contract. The document is posted at https://www.gpo.gov/how-to-work-with-us/vendors/forms-and-standards along with a list of major revisions.

- The GPO 910 "BID" Form is no longer required. Bidders are to fill out, sign/initial, as applicable, all pages of SECTION 4. – SCHEDULE OF PRICES.

THIS IS A NEW CONTRACT. THERE IS NO ABSTRACT AVAILABLE.

For information of a technical nature, contact Denise Johnson at dajohnson@gpo.gov or (202) 512-0310.

SECTION 1. - GENERAL TERMS AND CONDITIONS

GPO CONTRACT TERMS: Any contract which results from this Invitation for Bid will be subject to the applicable provisions, clauses, and supplemental specifications of GPO Contract Terms (GPO Publication 310.2, effective December 1, 1987 (Rev. 1-18)).

GPO Contract Terms (GPO Publication 310.2) – https://www.gpo.gov/docs/default-source/forms-and-standards-files-for-vendors/contractterms2018.pdf.

In addition, the following documents and publications shall also apply (listed in order of precedence). In the event of a conflict between the documents and publications referenced herein and the content of this contract, the content of this contract shall be considered a superseding requirement.

- Agency In-House Writing Guide (to be furnished after award).
- AP Stylebook (most current edition) – https://www.apstylebook.com.
- Chicago Style Manual, 17th edition – http://www.chicagomanualofstyle.org

SUBCONTRACTING: Subcontracting is not allowed.

OPTION TO EXTEND THE TERM OF THE CONTRACT: The Government has the option to extend the term of this contract for a period of 12 months by written notice to the contractor not later than 30 days before the contract expires. If the Government exercises this option, the extended contract shall be considered to include this clause, except, the total duration of the contract may not exceed five (5) years as a result of, and including, any extension(s) added under this clause. Further extension may be negotiated under the "EXTENSION OF CONTRACT TERM" clause. See also "ECONOMIC PRICE ADJUSTMENT" for authorized pricing adjustment(s).

EXTENSION OF CONTRACT TERM: At the request of the Government, the term of any contract resulting from this solicitation may be extended for such period of time as may be mutually agreeable to the GPO and the contractor.

ECONOMIC PRICE ADJUSTMENT: The pricing under this contract shall be adjusted in accordance with this clause, provided that in no event will any pricing adjustment be made that would exceed the maximum permissible under any law in effect at the time of the adjustment. There will be no adjustment for orders placed during the first period specified below. Pricing will thereafter be eligible for adjustment during the second and any succeeding performance period(s). For each performance period after the first, a percentage figure will be calculated as described below and that figure will be the economic price adjustment for that entire next period. Pricing adjustments under this clause are not applicable to reimbursable postage or transportation costs, or to paper, if paper prices are subject to adjustment by separate clause elsewhere in this contract.

For the purpose of this clause, performance under this contract will be divided into successive periods. The first period will extend from Date of Award to December 31, 2019, and the second and any succeeding period(s) will extend for 12 months from the end of the last preceding period, except that the length of the final period may vary. The first day of the second and any succeeding period(s) will be the effective date of the economic price adjustment for that period.

Pricing adjustments in accordance with this clause will be based on changes in the seasonally adjusted "Consumer Price Index For All Urban Consumers - Commodities Less Food" (Index) published monthly in the CPI Detailed Report by the U.S. Department of Labor, Bureau of Labor Statistics.

The economic price adjustment will be the percentage difference between Index averages as specified in this paragraph. An index called the variable index will be calculated by averaging the monthly Indexes from the 12-month interval ending three (3) months prior to the beginning of the period being considered for adjustment. This average is then compared to the average of the monthly Indexes for the 12-month interval ending September 30, 2018, called the base index. The percentage change (plus or minus) of the variable index from the base index will be the economic price adjustment for the period being considered for adjustment.

The Government will notify the contractor by contract modification specifying the percentage increase or decrease to be applied to invoices for orders placed during the period indicated. The contractor shall apply the percentage increase or decrease against the total price of the invoice less reimbursable postage or transportation costs and separately adjusted paper prices. Payment discounts shall be applied after the invoice price is adjusted.

PREAWARD SURVEY: In order to determine the responsibility of the contractor, the Government reserves the right to conduct an on-site preaward survey at the contractor's facility or to require other evidence of technical, production, managerial, financial, and similar abilities to perform, prior to the award of a contract.

The contractor must have at least five (5) years of editing experience and at least three (3) prior Federal Government or commercial editing jobs without complaint from the customer(s). After bid opening, but prior to award, when requested by the Government, references for these jobs must be provided. As part of the preaward survey process, these references may be checked prior to award.

PREAWARD TEST: The contractor being considered for award may be required to demonstrate its ability to produce the items required in these specifications by completing a preaward test. The Government reserves the right to waive the preaward test if there is other evidence that, in the opinion of the Contracting Officer, indicates that the contractor being considered for award has the capability to successfully produce the items required.

For the preaward test, the Government will furnish an electronic file (via email) consisting of approximately 10 pages that are representative of the materials to be furnished under these specifications.

The prospective contractor must provide editorial services as specified herein.

NOTE: Contractor shall copy the furnished files and make all changes to the copy.

Preaward test samples will be inspected and tested for accuracy and conformance of materials to the furnished specifications, and must comply with the specifications stated herein.

Contractor must email preaward test pages to the U.S. Government Publishing Office, Attn: Contracting Officer (email address to be furnished at time of preaward test).

Contractor must submit test pages within three (3) workdays of receipt of furnished test materials.

If the preaward test samples are disapproved by the Government, the contractor may be permitted, at the option of the Government, additional time to correct defects or to submit additional test samples if so notified by the Contracting Officer.

In the event the revised test samples are disapproved by the Government, the contractor shall be deemed to have failed to comply with the applicable requirements of these specifications and may be reason for a determination of non-responsibility.

Failure to deliver the completed test within the stated time period may disqualify the contractor from further consideration for award.

All operations necessary in the performance of this test shall be performed at the facilities in which the contract production will be performed.

No charges will be allowed for costs incurred in the performance of this preaward test.

ASSIGNMENT OF JACKETS, PURCHASE AND PRINT ORDERS: A GPO jacket number will be assigned and a purchase order issued to the contractor to cover work performed. The purchase order will be supplemented by an individual print order for each job placed with the contractor. The print order, when issued, will indicate the quantity to be produced and any other information pertinent to the particular order.

ORDERING: Items to be furnished under the contract shall be ordered by the issuance of print orders by the Government. Orders may be issued under the contract from Date of Award through December 31, 2019, plus for such additional period(s) as the contract is extended. All print orders issued hereunder are subject to the terms and conditions of the contract. The contract shall control in the event of conflict with any print order. A print order shall be "issued" upon notification by the Government for purposes of the contract when it is electronically transmitted or otherwise physically furnished to contractor in conformance with the schedule.

REQUIREMENTS: This is a requirements contract for the items and for the period specified herein. Shipment/delivery of items or performance of work shall be made only as authorized by orders issued in accordance with the clause entitled "ORDERING". The quantities of items specified herein are estimates only, and are not purchased hereby. Except as may be otherwise provided in this contract, if the Government's requirements for the items set forth herein do not result in orders in the amounts or quantities described as "estimated", it shall not constitute the basis for an equitable price adjustment under this contract.

Except as otherwise provided in this contract, the Government shall order from the contractor all the items set forth which are required to be purchased by the Government activity identified on page 1.

The Government shall not be required to purchase from the contractor, requirements in excess of the limit on total orders under this contract, if any.

Orders issued during the effective period of this contract and not completed within that time shall be completed by the contractor within the time specified in the order, and the rights and obligations of the contractor and the Government respecting those orders shall be governed by the terms of this contract to the same extent as if completed during the effective period of this contract.

If shipment/delivery of any quantity of an item covered by the contract is required by reason of urgency prior to the earliest date that shipment/delivery may be specified under this contract, and if the contractor will not accept an order providing for the accelerated shipment/delivery, the Government may procure this requirement from another source.

The Government may issue orders which provide for shipment/delivery to or performance at multiple destinations.

Subject to any limitations elsewhere in this contract, the contractor shall furnish to the Government all items set forth herein which are called for by print orders issued in accordance with the "ORDERING" clause of this contract.

BILLING: Upon completion of each order, the contractor shall submit an itemized statement for billing to the ordering agency for examination and certification as to the correctness of the billing. Submit billing to the ordering agency contact as specified on the print order.

A signed copy will be returned to the contractor for submission to GPO for payment. Upon receipt of the signed copy, billing invoices must be submitted to the U.S. Government Publishing Office for payment.

Submitting invoices for payment via the GPO fax gateway (if no samples are required) utilizing the GPO barcode coversheet program application is the most efficient method of receiving payment. Instruction for using this method can be found at the following web address:
http://winapps.access.gpo.gov/fms/vouchers/barcode/instructions.html.

Invoices may also be mailed to: U.S. Government Publishing Office, Office of Financial Management, Attn: Comptroller, Stop: FMCE, Washington, DC 20401.

For more information about the billing process, refer to the General Information of the Office of Finance web page located at:
https://www.gpo.gov/how-to-work-with-us/agency/billing-and-payment.

Contractor's billing invoice must be itemized in accordance with the items in the "SCHEDULE OF PRICES."

SECTION 2. - SPECIFICATIONS

SCOPE: These specifications cover editorial services for various documents and products requiring such operations as proofreading, copy editing, content editing, and distribution.

TITLE: Editorial Services.

FREQUENCY OF ORDERS: Approximately 20 to 30 orders per year.

NOTE: Pages for more than one document may be ordered on a single print order requiring the same schedule.

NUMBER OF PAGES: Approximately 10 to 100 pages per order.

TRIM SIZE: Furnished pages will be 8-1/2 x 11".

GOVERNMENT TO FURNISH: Pages will be furnished for various documents as a Microsoft Word file (version 2016) via email. Documents are comprised of reports (up to approximately 40) of varying length. Approximately 500 words per page. Each report will have been prepared by a different author.

Agency In-House Writing Guide.

EXHIBITS: The facsimiles of samples pages shown as Exhibits A and B are representative of the type of document requirements which will be ordered under this contract. However, it cannot be guaranteed that future orders will correspond exactly to these exhibits.

CONTRACTOR TO FURNISH: All materials and operations, other than those listed under "GOVERNMENT TO FURNISH" necessary to produce the product in accordance with these specifications.

MEETINGS: The contractor is expected to work closely with the ordering agency on all orders. Meetings will be conducted via teleconference.

EDITORIAL OPERATIONS: All editorial operations for proofreading, copy editing, and content editing, must be in accordance with the furnished Agency In-House Writing Guide, the AP Stylebook (most current edition), and the Chicago Style Manual (17th Edition). (NOTE: Fact checking will not be required.)

Samples of previous publications to be used as a guide for style and format consistency can be viewed at: http://www.trade.gov/topmarkets.

Products may contain table of contents, text, charts, graphs, captions, links, and indexes.

The contractor will be required to proofread and edit furnished files as described below.

Proofreading –

Proofreading requires the contractor to do a final check for minor mistakes, including but not limited to, spelling, punctuation, and spacing.

Copy Editing –

Copy editing requires the contractor to correct grammar, spelling, punctuation, capitalization, and problems with syntax. Additionally, the contractor is to ensure that:

- singular pronouns represent singular nouns; plural pronouns, plural nouns
- work is in proper manuscript format
- notes, bibliographies, and reference lists are standardized
- make style decisions in accordance with the Agency In-House Writing Guide, AP Stylebook, and Chicago Style Manual.

Content Editing –

Content editing requires the contractor to provide substantive line edits, including but not limited to:

- polishing and reworking sentences to improve clarity and flow
- clumsy wording
- overuse of passive voice
- convoluted sentence structure

Sections may be rearranged, if necessary, and selected subheads and chapter titles may need reworking to make them "catchier" or more relevant.

In addition, the contractor must initiate changes to address instances where an author does not cite outside sources to support assertions, or uses slang.

The finished products generally should be in plain language (i.e., avoiding unnecessary jargon, formality, and technical language), concisely worded, and geared toward a first or second-year college audience.

DIGITAL DELIVERABLES:

For each round of revisions and the final version, the contractor is to furnish the edited pages (via email) as a Microsoft Word file (version 2016) with tracked changes.

For each report furnished for editing, the contractor must include a run document that indicates the dates, times, and pages covered during the editing sessions. Each report page should be initialed at the end of the page to indicate that it has been reviewed.

Prior to making revisions, the contractor shall copy the furnished files and make all changes to the copy.

Upon receipt of the edited file, the ordering agency will review and provide revisions/corrections and feedback. The contractor must revise the report based on the ordering agency's review. The process will repeat until the edited report is approved by the ordering agency.

Several rounds of revisions may be required before the ordering agency gives final approval.

DISTRIBUTION: Each print order will contain the POC, phone number, and email address for that order. Contractor to email each round of revisions and the final version.

The subject line of the email shall be "Distribution for Program 815-S, Print Order XXXXX."

Upon completion of each order, contractor must notify the ordering agency (on the same day the final file(s) emails) via email to the address indicated on the print order. The subject line of the email shall be "Distribution Notice for Program 815-S, Print Order XXXXX, Jacket Number XXX-XXX." The notice must provide the title of product.

SCHEDULE: Adherence to this schedule must be maintained. Contractor must not start production of any job prior to receipt of the individual print order (GPO Form 2511).

Print order and furnished material will be furnished via email.

No definite schedule for placement of orders can be predetermined at this time.

The following schedule begins the workday after notification of the availability of print order and furnished material; the workday after notification will be the first workday of the schedule.

Initial Draft: Contractor must submit edited (with track changes) file(s), including reference editing, within five (5) workdays of receipt of notification of the availability of print order and furnished material.

Each Round of Revisions: Contractor must submit revised/proofread pages within three (3) workdays of receipt of revisions/feedback of the initial draft or previous round of revisions, as applicable.

Final Deliverables: Contractor must submit final digital deliverables within three (3) workdays of receipt of final approval on revisions.

NOTE: Edited pages (initial draft/each round of revisions) will be withheld no more than seven (7) workdays from their receipt at the ordering agency until they are returned electronically for the next round of revisions/final deliverables, as applicable. (The first workday after receipt of edited pages at the ordering agency is day one (1) of the hold time.)

The ship/deliver date indicated on the print order is the date the final files must be received (via email) by the ordering agency.

Unscheduled material such as shipping documents, receipts or instructions, delivery lists, labels, etc., will be furnished with the order or shortly thereafter. In the event such information is not received in due time, the contractor will not be relieved of any responsibility in meeting the shipping schedule because of failure to request such information.

For compliance reporting purposes, the contract or must notify the U.S. Government Publishing Office of the date of shipment or delivery, as applicable. Upon completion of each order, contractor must contact the Shared Support Services Compliance Section via email at compliance@gpo.gov; via telephone at (202) 512-0520; or via facsimile at (202) 512-1364. Personnel receiving email, call, or facsimile will be unable to respond to questions of a technical nature or to transfer any inquiries.

SECTION 3. - DETERMINATION OF AWARD

The Government will determine the lowest bid by applying the prices offered in the "SCHEDULE OF PRICES" to the following units of production which are the estimated requirements to produce the one (1) year's production under this contract. These units do not constitute, nor are they to be construed as, a guarantee of the volume of work which may be ordered for a like period of time.

The following item designations correspond to those listed in the "SCHEDULE OF PRICES."

I. 1,500

SECTION 4. - SCHEDULE OF PRICES

Prices must include the cost of all required materials and operations for each item listed in accordance with these specifications.

Bidder must make an entry in each of the spaces provided. Bids submitted with any obliteration, revision, or alteration of the order and manner of submitting bids may be declared nonresponsive.

An entry of NC (No Charge) shall be entered if bidder intends to furnish individual items at no charge to the Government.

Bids submitted with NB (No Bid), NA (Not Applicable), or blank spaces for an item may be declared nonresponsive.

The Contracting Officer reserves the right to reject any offer that contains prices for individual items of production (whether or not such items are included in the DETERMINATION OF AWARD) that are inconsistent or unrealistic in regard to other prices in the same offer or to GPO prices for the same operation if such action would be in the best interest of the Government.

All invoices submitted to the GPO shall be based on the most economical method of production.

I. EDITORIAL SERVICES: Prices offered shall include the cost of all required materials and operations necessary for the complete production and distribution of the product listed in accordance with these specifications.

Per page.....$_____

_____
Initials

SHIPMENT(S): Shipments will be made from: City _____, State _____

The city(ies) indicated above will be used for evaluation of transportation charges when shipment f.o.b. contractor's city is specified. If no shipping point is indicated above, it will be deemed that the bidder has selected the city and state shown below in the address block, and the bid will be evaluated and the contract awarded on that basis. If shipment is not made from evaluation point, the contractor will be responsible for any additional shipping costs incurred.

DISCOUNTS: Discounts are offered for payment as follows: _____ Percent, _____calendar days. See Article 12 "Discounts" of Solicitation Provisions in GPO Contract Terms (Publication 310.2).

AMENDMENT(S): Bidder hereby acknowledges amendment(s) number(ed) _____

BID ACCEPTANCE PERIOD: In compliance with the above, the undersigned agree, if this bid is accepted within_____ calendar days (60 calendar days unless a different period is inserted by the bidder) from the date for receipt of bids, to furnish the specified items at the price set opposite each item, delivered at the designated points(s), in exact accordance with specifications.

NOTE: Failure to provide a 60-day bid acceptance period may result in expiration of the bid prior to award.

BIDDER'S NAME AND SIGNATURE: Unless specific written exception is taken, the bidder, by signing and submitting a bid, agrees with and accepts responsibility for all certifications and representations as required by the solicitation and GPO Contract Terms - Publication 310.2. When responding by fax or mail, fill out and return one copy of all pages in "SECTION 4. – SCHEDULE OF PRICES," including initialing/signing where indicated.

Failure to sign the signature block below may result in the bid being declared non-responsive.

Bidder _____
(Contractor Name) (GPO Contractor's Code)

_____
(Street Address)

_____
(City – State – Zip Code)

By_____
(Printed Name, Signature, and Title of Person Authorized to Sign this Bid) (Date)

_____
(Person to be Contacted) (Telephone Number) (Email)

THIS SECTION FOR GPO USE ONLY

Certified by: _____ Date: _____ Contracting Officer: _____ Date: _____
(Initials) (Initials)

Introduction

This snapshot provides market assessment information for U.S. cybersecurity companies interested in entering and/or expanding in international markets. It offers quantitative information regarding U.S. exports and imports of relevant digital services as well as information about some of the business challenges that U.S. companies might face when doing business abroad. Most of the quantitative data utilized in this snapshot comes from the U.S. Bureau of Economic Analysis (BEA). Because data on U.S. cybersecurity exports and imports is not separately available, the data presented in this snapshot also includes other U.S. digital exports and imports. BEA's data provides a picture of current digital trade flows and where international market opportunities may exist for U.S. cybersecurity companies. The key international competitiveness issues described in the snapshot have been compiled through consultations with industry experts at the U.S. Department of Commerce. These competitiveness issues are constantly evolving and U.S. companies should use thorough due diligence when crafting their business plans for certain countries or regions. Finally, the snapshot provides a list of resources that U.S. companies can use in developing their international expansion strategy.

Industry Trends

As countries continue to digitize their economies, cybersecurity increasingly becomes critical to securing data flows and boosting consumer confidence. According to Gartner, organizations currently spend more on security because of regulations, shifting buyer mindset, awareness of emerging threats, and the evolution to a digital business strategy.[1]

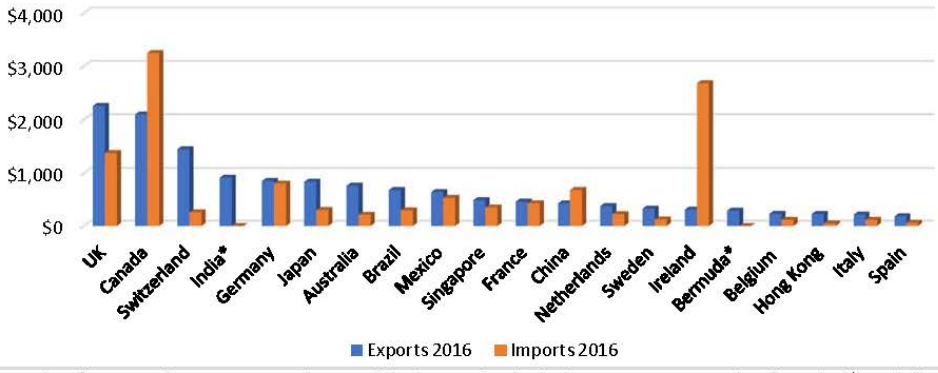
U.S. cybersecurity companies are global leaders in a great position to capitalize on the expected global increases in cybersecurity spending. Based on 2016 annual revenue figures, six of the top 10 global cybersecurity companies whose core business consisted of cybersecurity were from the United States. According to CIO Applications, 22 of the top 25 cybersecurity companies in 2017 were based in the United States.[2]

Export opportunities for U.S. cybersecurity companies remain concentrated in advanced information and communications technology (ICT) markets with large volumes of data flows and digital transactions, as well as highly digitized manufacturing and services sectors. Europe and the Asia-Pacific region generally present the biggest opportunities.

U.S. companies are not alone in competing for global market share. Israel, Japan, and the United Kingdom, among others, are strong competitors. Cloud computing adoption, the Internet of Things (IoT), automation, and artificial intelligence will be some of the driving forces behind cybersecurity spending and an increase in global competition.

The graph below contains data regarding U.S. exports and imports of computer services in 2016, which include cybersecurity-related services, among other computer services. BEA defines computer services as hardware and software-related services and data processing services, sales of customized software and related use licenses as well as licenses to use non-customized software with a periodic license fee. Computer services also include software downloaded on the internet, fees and subscriptions for online gaming, and licensing agreements and end-user fees associated with downloading applications.[3, 4]

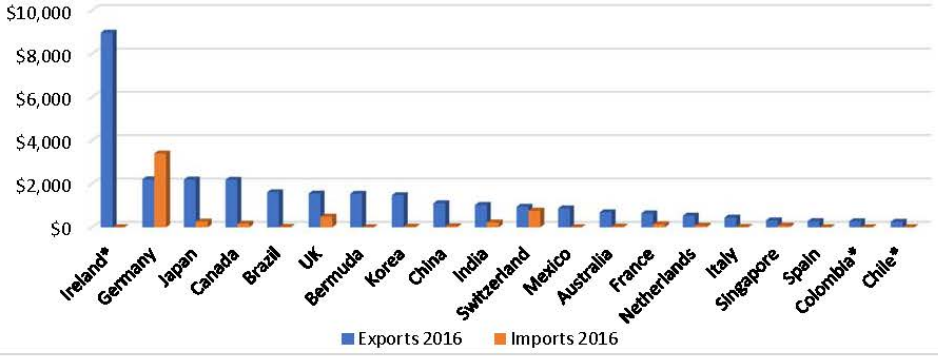
Figure 1: U.S. Exports and Imports of Computer Services in 2016 (in millions of USD)



* Import data for Bermuda was suppressed to avoid disclosure of individual companies. Import data for India ($13.7 billion imports) not included for graph display reasons.

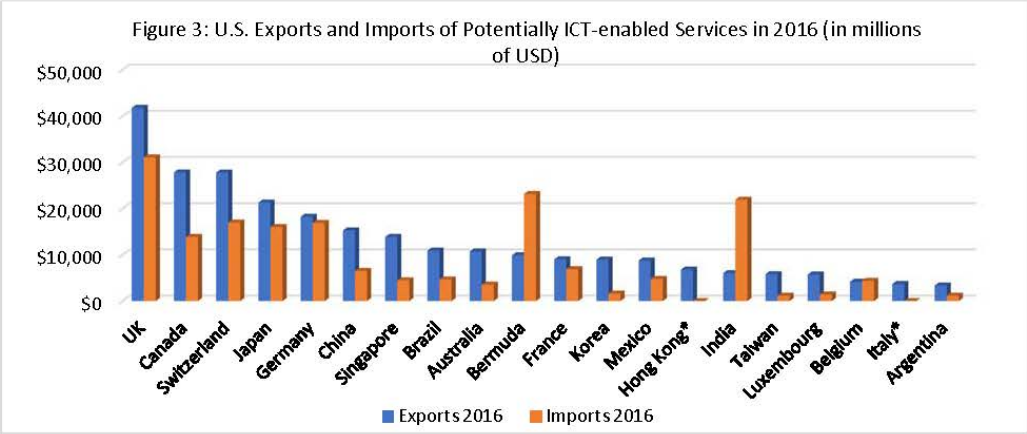
The next graph contains data regarding U.S. exports and imports of computer software, which includes cybersecurity-specific software. According to BEA, computer software includes receipts and payments for rights to distribute general use software and rights to reproduce or use general use computer software that was made from a master copy. Computer software also includes licensing fees for reproducing copies of general use software for local area network computer systems.[5, 6]

Figure 2: U.S. Exports and Imports of Computer Software in 2016 (in millions of USD)



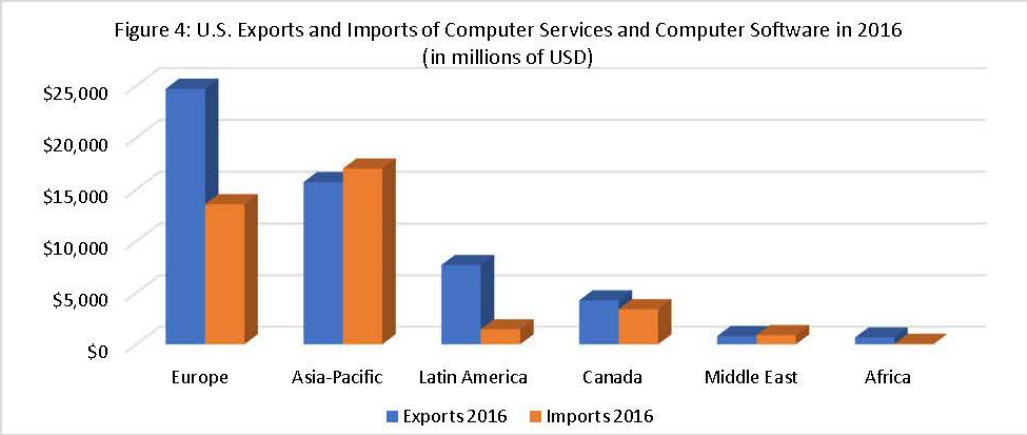
* Import data for Ireland was suppressed to avoid disclosure of individual companies. Import data for Colombia and Chile was between zero and +/- $500,000.

The following graph contains data regarding U.S. exports and imports of potentially ICT-enabled services. This data provides information with respect to where U.S. digitally-enabled services exports go, which can show, consequently, where cybersecurity services might be deployed to protect such digital flows. According to BEA, potentially ICT-enabled services include types of services that can be predominantly delivered remotely over ICT networks.[7, 8]

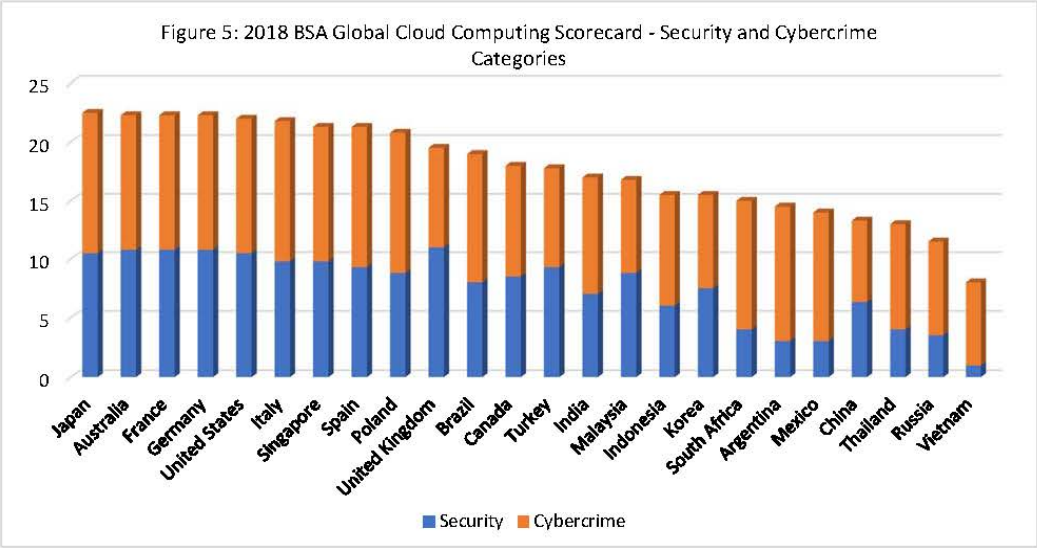


* Import data for Hong Kong and Italy was suppressed to avoid disclosure of individual companies.

The next graph contains data regarding U.S. exports and imports of computer services plus computer software by region. Europe and the Asia-Pacific region account for approximately 75 percent of all worldwide exports.[9, 10]



The 2018 Software Alliance (BSA) Cloud Computing Scorecard, a report that ranks countries' preparedness for the adoption and growth of cloud computing services, examines the legal and regulatory framework of 24 countries.[11] Among other factors, BSA's scorecard includes security and cybercrime categories. The following graph ranks 24 countries by their scores in those categories.[12]



Key International Competitiveness Issues

When entering or expanding into international markets, U.S. cybersecurity companies might face some of the following market challenges:

- *Source code disclosure requirements*

  The requirement to disclose source code as a means to ensure that imported digital services do not pose threats to national security or cybersecurity could pose a challenge to U.S. companies. Forced source code disclosure requirements force companies to provide a copy of their source code to relevant government authorities. This requirement poses considerable intellectual property risk and security challenges if the source code, once disclosed, is not stored adequately. Brazil, China, Indonesia, and Russia are examples of countries with source code disclosure requirements.[13]

- *Restrictions on cryptography*

  Some countries require the use of specific, often nationally-developed, cryptographic standards instead of internationally accepted cryptographic standards. These requirements may keep companies from using their preferred cryptographic methods, forcing them to create unique products for that market, which increases cost and reduces interoperability.

  Onerous requirements on the use of encryption, including intrusive approval processes and mandates to disclose proprietary information, are other examples of cryptography-related challenge for U.S. companies.[14] China, India, South Korea, Turkey, the United Kingdom, and Vietnam are examples of countries with restrictions on cryptography.[15, 16]

- *Licensing and certification requirements*

  Mandatory licensing requirements for cybersecurity services intended to assure the quality of those

services should also be considered. When looking to enter a market, U.S. companies should be aware of potential licensing requirements, as well as other related requirements on licensing fees, and renewable terms. For example, Singapore's Cybersecurity Act provides that certain cybersecurity services cannot be performed without a license. Other examples, according to U.S. exporters, include Russia, which continues to limit the importation of encryption products through the use of import licenses or one-time "notifications," and Vietnam, which also requires a license to provide cybersecurity services.[17]

Cybersecurity certification schemes aimed at increasing trust and security in cybersecurity products and services could also increase the cost of doing business. The European Union's proposed cybersecurity certification is an example of a requirement that might need to be incorporated into exporting plans to the European Union if it enters into force.

- *Breach notification requirements*
  Breach notification requirements typically require companies that experience cybersecurity incidents to report the breach to a local authority within a certain timeframe and, in some cases, inform affected individuals. Failure to comply with breach notification requirements can result in significant fines. The European Union's General Data Protection Regulation and Network and Information Security Directive are examples of legislation that impose breach notification requirements.

U.S. exporters of cybersecurity technologies have access to a wide array of resources to mitigate the market access challenges outlined above. The U.S. Department of Commerce has a network of digital attachés located in strategic markets (Belgium, Brazil, China, France, Germany, India, Indonesia, Japan, Mexico, Singapore, South Africa and South Korea) tasked with helping digital services exporters gain market access and navigating foreign digital policy and regulatory issues.

The U.S. Department of Commerce also provides a network of international trade specialists located in over 100 U.S. cities and in more than 75 countries, whose goal is to provide export assistance to U.S. companies. For more systemic issues, such as foreign laws or regulations that prohibit or limit the ability of U.S. companies to offer their services in international markets, the U.S. Department of Commerce may be able to support U.S. companies through government-to-government engagement.

The National Institute of Standards and Technology's (NIST) Framework for Improving Critical Infrastructure Cybersecurity, also known as the Framework, is a well-regarded approach to cybersecurity based on international standards and is increasingly used both in the United States and abroad. Since the release of the Framework in 2014, NIST has collaborated with more than 30 countries on Framework-related dialogues and exchanges, with some countries using elements of the Framework as the basis for their respective cybersecurity approaches. The Framework, developed in open processes with robust international stakeholder engagement, demonstrates U.S. leadership in cybersecurity best practices and can help harmonize different approaches to cybersecurity. Additionally, U.S. companies

familiar with the Framework could leverage it as a harmonization tool to talk about cybersecurity and do business with international partners. In April 2018, NIST updated the Framework with the release of the version 1.1 of the document.[18]

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U.S. Department of Commerce
International Trade Administration

2017 Top Markets Report Oil and Gas Equipment Regional Case Study

North America

Although low oil prices have hindered the pace of new O&G projects in North America, Canada and Mexico remain the top markets for U.S O&G equipment exports. Given the advanced technical capabilities of many U.S. companies, there are significant opportunities for developing Mexico's deepwater and unconventional oil resources, which are largely undeveloped. There is also a high demand for U.S. technologies for oil sands production because the U.S. companies have technologies that support protecting local communities and compliance with environmental regulations.

Canada	Mexico
Overall Rank	Overall Rank
1	2

Market Overview

Canada

Canada has the third largest oil reserves after Venezuela and Saudi Arabia, and was the fifth largest oil producer in the world with production output of 4.4 mbpd in 2015. Canada's National Energy Board (NEB) projects that the country's oil production dropped in 2016, to 3.9 mbpd.[1] Oil sands play a large role in Canada's O&G industry as oil sands reserves comprise more than 98 percent of Canada's total oil reserves.[2] The majority of Canada's oil sands are recoverable through *in situ* methods, although mining is also used. Canada's refineries are only able to process less than half of the crude oil produced domestically and the country lacks sufficient pipeline infrastructure to transport crude feedstock to downstream facilities.

Canada is also the world's fifth largest producer of natural gas with annual output projected at 5.5 Tcf in 2016.[3] All of Canada's current natural gas exports are transported via pipeline to U.S. markets. However, Canada intends to expand its export capacity through the construction of new LNG liquefaction facilities. Although the NEB has received more than thirty LNG export applications, it is unclear how many terminal projects will be successful in the current low price environment, as development costs are severely higher due to limited existing infrastructure and inadequate midstream capacity.

Mexico

Mexico is one of the world's top ten oil producers and the fifth largest in the Americas after the United States, Canada, Brazil, and Venezuela. Mexico has seven oil and gas basins within the Gulf of Mexico and along its Gulf Coast. Altogether, they represent reserves of 55 billion boe. In 2015, Mexico produced 2.6 mbpd of crude oil amid significant production declines over the past decade.[4] Slowed oil production rates are likely to continue, and it is projected that Mexico will produce 2.5 mbpd by 2020.[5] Petróleos Mexicanos (PEMEX) operates six domestic refineries but these facilities are underutilized due to a lack of financing for needed upgrades. Mexico's downstream sector is opening up to private sector participation. PEMEX's recently formed a partnership with France's Air Liquide SA, to operate an existing hydrogen plant, and build a second plant at its Tula refinery.[6]

In 2015, Mexico produced 1.5 Tcf of natural gas and holds an estimated 544 Tcf of technically recoverable shale gas resources.[7] Despite its large shale gas resources and rising demand for natural gas for power production, insufficient water resources, pipeline infrastructure, and roadways challenge increased shale gas development in

Mexico. In addition, Mexico's increasing reliance on inexpensive natural gas imports from the United States is likely to continue discouraging the development of its own shale gas resources.

Market Analysis

Canada and Mexico remained the largest destinations for U.S. exports of O&G equipment in 2016. Despite representing more than one-third of total U.S. exports of O&G equipment to global markets, U.S. exports of O&G equipment to North American markets dropped significantly in 2016 to $6.5 billion, from $7.9 billion in 2015. Canada and Mexico are two of the larger O&G equipment importers globally, and combined, their imports totaled close to $13.6 billion in 2015. We expect Canada and Mexico to remain the largest destinations for U.S. exports of O&G equipment, and project U.S. exports to North American markets to reach nearly $10 billion in 2020.

In 2015, the United States was by far the largest source for Mexican and Canadian imports of O&G equipment, holding a 51 percent market share. After the United States, the largest sources for O&G equipment were Germany and China with ten and eight percent market shares, respectively. Canada's most significant imports were parts and attachments for derricks (16 percent), filtering/purifying machines for gases (14 percent), and machines/mechanical applications with individual functions (14 percent). Mexico's most significant imports were machines/mechanical applications with individual functions (32 percent), filtering/purifying machines for gases (22 percent), and rotary positive displacement pumps (7 percent). In 2016, the greatest amount of U.S. exports to North America were filtering/purifying machines for gases (22 percent) and machines/mechanical applications with individual functions (20 percent).

The trade of crude oil, natural gas, and refined petroleum products among North American markets is sizeable and flows in all directions. In 2016, the United States imported 1.3 billion barrels of crude oil from Canada and Mexico, with nearly 85 percent coming from Canada. Canada and Mexico both produce large amounts of heavy, sour crude, which is typically refined by U.S. Gulf Coast refineries that have the advanced refining technologies to process heavy crude. As such, the United States exported 267 million barrels of refined fuels to North American markets last year, with 58 percent of products going to Mexico. The United States did not export any crude oil to Mexican markets in 2016, but did export 110 million barrels of crude oil to Canada. North America's natural gas pipeline infrastructure is well-integrated, and the United States received 2.8 Tcf of natural gas from North American markets while exporting 1.6 Tcf of natural gas to Canada and Mexico via pipeline.

Challenges Facing U.S. Exporters

Canada

O&G companies have significantly reduced investments in Canada's oil sands in recent years as a result of low oil prices, high operating costs, and competition from shale plays in the United States. According to the Canadian Association of Petroleum Producers (CAPP), capital investment in the Canadian energy sector dropped 62 percent in two years.[8] Although projects currently under way will be completed, investment in new start-ups and project expansions has significantly decreased. Royal Dutch Shell, Marathon Oil Corporation, and ConocoPhillips are the most recent companies to divest from Canadian oil sands assets to reduce debts and focus on higher-margin assets. Despite declining investment, the Alberta government predicts that higher oil prices and declining conventional production will encourage oil sands production to surpass 2.9 mbpd in 2017 and reach 3.3 mbpd by 2020.[9]

Canada's new environmental policies create additional challenges for local O&G exploration and production projects, which have already been affected by low oil prices. Alberta's new carbon tax is particularly impactful as the province's oil sands reserves are the third-largest proven crude oil reserves in the world and oil sands production is highly carbon-intensive.[10] The regulation sets emission taxation on businesses and homeowners for their consumption as a rate of emission, and is also applied to large industrial emitters including any firm operating

in O&G production and refining. As of January 1, 2017, a carbon levy will be charged on all fuels that emit greenhouse gas emissions when combusted at a rate of $14.83 per ton in 2017 and $22.25 per ton in 2018.[11] A carbon tax also exists in British Columbia, where the current rate has been $22.25[i] per ton since 2012.[12]

Mexico

Low oil prices and increased competition from private companies have caused PEMEX to suffer huge losses in recent years, and are affecting the investment environment in Mexico in addition to threatening to derail the success of Mexico's energy reforms. As a result, PEMEX has made cuts to capital expenditures and jobs, and reported that it eliminated forty percent of its senior management positions last year. In 2016, budget cuts totaled 22 percent, and PEMEX's 2017 budget was cut by an additional $5.3 billion to $20.7 billion.[13] The Mexican government estimates that budget cuts will cause oil production to drop to 1.9 mbpd, the lowest since 1980.[14] Corruption and inefficiencies further impact PEMEX's losses, and Moody's downgraded the company's credit rating last year, which will make it more difficult for PEMEX to borrow money. Mexico's presidential election in 2018 could cause further uncertainties about the future of the energy reforms, as new policies could be put in place to slow the sector's liberalization.

While Mexico's regulatory and fiscal terms for O&G upstream projects are reasonable, LCRs do exist and may create challenges for O&G equipment and service providers exporting to Mexico. Mexico's LCRs are lower than other countries in Latin America, with local content for new projects set at 25 percent to increase to 35 percent by 2025. There are some LCR exemptions for deepwater projects, and local content is set at three percent to increase to eight percent by 2025, which were the terms in place for Mexico's successful deepwater bidding round 1.4 in December 2016.[15] Regardless of the rate of local content, the reporting requirements for firms to demonstrate they have met LCRs are burdensome. In addition to LCRs, PEMEX is required to have a 20-percent stake in all cross-border fields, including deepwater and onshore shale projects.[16]

Opportunities for U.S. Companies

Canada

Although Canada is itself a leader in technology, equipment, procedures and personnel for the O&G industry, it remains a premier export market for U.S. O&G machinery and equipment and related supply chain goods and services. Although exploration for new offshore deepwater, unconventional oil, and Arctic projects is unlikely to increase in the near term due to low profitability, Canada's oil sands production is expected to grow. Alberta oil sands production has typically relied heavily on U.S. suppliers for the capital intensive equipment needed, and we expect this trend to continue. According to CAPP, more than 1,900 U.S.-based companies supplied equipment, parts and services used in Alberta's oil sands between 2013 and 2015,[17] and the Conference Board of Canada has predicted that the United States will supply over $48.2 billion in manufactured equipment for Canada's oil sands by 2035.[18]

Demand is likely to increase for technologies used in oil sands production that ensure the protection of local communities and compliance with environmental regulations, such as those associated with protecting local water resources, land reclamation, and reducing associated greenhouse gas emissions. Upstream O&G facilities will need new energy efficient environmental controls and site reclamation technologies, and existing equipment will need upgrading. U.S. manufacturers of drilling tools have done exceptionally well in Canada, as well as steel fabrication companies, as local production cannot meet industry demand. There is also an increased focus on innovative methods for cutting down operating costs and increasing the value of existing assets. New technologies under development include solvent injection/co-injection (*in situ*), waterless extraction (mining), radiofrequency heating/electrical heating (*in situ*), and "field" upgrading techniques.

[i] Figure as of April 19, 2017, when the conversion rate was 1 CAD to .74 USD.

Some specific equipment and services opportunities in Canada include:

- Maintenance, repair and operation services;
- O&G technology and services, field machinery and equipment, exploration and drilling services, refinery equipment, and pipeline construction equipment including tanks, centrifuge technology, pigs, pumps, and pipe;
- Specialty mining and extraction equipment and services, general mining equipment replacement parts, and mobile mining equipment, including trucks and support gear (bulldozers, tires, excavators, shovels);
- General construction materials, choking and recovery units, instrumentation and control systems, safety and security equipment, pressure vessels, heat exchangers, and transportation equipment.

Mexico

Mexico represents a major market for offshore O&G equipment and services for the foreseeable future. U.S. companies are likely to find more business opportunities in Mexico's energy sector as a result of liberalization efforts. In recent years, energy reforms ended PEMEX's 76-year monopoly over the O&G sector and instituted flexible terms for foreign companies operating in Mexico. Subsequent reforms have encouraged the development of Mexico's deepwater and unconventional resources, providing significant opportunities for U.S. companies given their advanced technical capabilities.

Mexico's deepwater auction in December 2016 was highly successful and demonstrated foreign investors see Mexico's as a profitable market, even with low oil prices. As part of bidding round 1.4, Mexico auctioned exploration licenses for ten deepwater blocks, with eight of the blocks receiving bids. The December auction also included a farm-out opportunity with PEMEX for the Trion field, which was awarded to Australia's BHP Billiton. The blocks could generate $40 billion in investment, and in combination with output from Trion, are expected to add 900,000 bbl/d to Mexico's oil production in the next decade.[19] The December auction marked the entrance of supermajors and international oil companies such as ExxonMobil, Chevron, Total, BP, Statoil, Petronas, and the state-owned China National Offshore Oil Corporation (CNOOC) to the Mexican market.

In addition, new discoveries in shallow water blocks auctioned during previous rounds, such as ENI's recent oil find in unknown areas of a block in the Bay of Campeche, are exciting investors. Mexico's second round of licensing auctions are planned for 2017, with three phases of shallow water and onshore block auctions scheduled for June and July.[20]

Despite budget cuts, PEMEX's 2017 budget remains substantial at $20.7 billion and the company has outlined several ambitious projects in its business plan for 2017 to 2021 that provide commercial opportunities for U.S. companies:[21]

- Drilling: Over 30,000 wells planned (exploration, development, shale gas) in alliances with private companies (farm-outs);
- Storage: Plans to invite Public-Private Partnerships for 77 existing Storage/Distribution Terminals (TAR);
- Refineries: Five refineries upgrades to produce low sulfur diesel;
- Pipeline: Gulf of Mexico-Pacific Ocean Pipeline (300 km, 44 inch diameter) totaling $200 million;
- Gas Stations: Opening of supply concessions and new gas stations.

Some specific equipment and services opportunities in Mexico include:

- Support equipment and services, from environmental protection and spill cleanup to helicopters, fire response, and security systems;
- Marine seismic exploration services;
- Platform rigs, drillships, tender assist rigs, jack-ups, semi-submersibles;
- Inland barges;
- Drilling: Well control, pressure management;
- Station keeping: Mooring and dynamic positioning;
- Current and vessel hydrodynamics;

- Pipelines: Construction and maintenance;
- Subsea completions: Processing, control systems, well maintenance and seafloor processing.

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