

CompTIA[®]

DC FLY-IN

February 13-14, 2018

Washington, DC

[#CompTIAFlyIn](#)



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Welcome to the 2018 CompTIA DC Fly-In

Dear CompTIA DC Fly-In Participant:

We look forward to your arrival at CompTIA's 7th annual Washington, DC Fly-In. In a topsy-turvy year, the importance of citizen engagement has never been higher. The need to advocate for our industry and to ensure that federal policymakers understand the challenges and opportunities the technology sector is experiencing is vital. As is true every year, we at CompTIA are deeply appreciative of your willingness to make the journey to the nation's capital and participate and be a citizen advocate.

Congress and the Administration recently finished an end-of-year push to complete work on major legislative efforts – comprehensive tax reform, avoiding a government shutdown, and extending major legislation that was set to expire. While Congress faces a significant policy agenda, it also faces the looming 2018 elections that will have an impact on how policy advances in the House and Senate. The DC Fly-In comes at a time when our industry faces significant challenges. Many of our core priorities – strengthening our workforce, advancing cybersecurity, embracing and preparing for emerging technology – need smart policy approaches to help our industry grow, innovate, and remain globally competitive. Moreover, the public exuberance for technology has become a little less bright as the industry matures and challenges arise over issues of data, privacy and traditional conversations about the role of big business. As enthusiasts for our industry, your voice is needed more than ever to highlight how industry understands its role in ensuring that technology can be a positive force in our society.

We have an exciting agenda for your time in DC, which will include an afternoon of panel discussions around relevant policy topics, an evening to honor our technology policy champions, a breakfast discussion with policymakers and senior staff, and an afternoon on Capitol Hill to meet with your elected Members of Congress and Senators. It's a full agenda, but one that will provide plenty of time for networking, discussion, and sharing your perspective with your elected officials.

In our Hill visits this year we will focus on the CHANCE in Tech Act (H.R. 3174 and S. 1518), which is legislation that CompTIA worked with allies on Capitol Hill to get introduced in 2017. The legislation was built from meetings and feedback from last year's DC Fly-In and presents an important opportunity to create a stronger pathway for apprenticeships within the technology sector. In 2017, we got CHANCE in Tech introduced; in 2018, we would like to get it passed into law!

We look forward to your arrival in DC and appreciate your willingness to spend time advocating for our industry and helping to advance important policy solutions. Please let us know if you have any questions about policy or logistics in advance of the DC Fly-In.

Sincerely,



Elizabeth Hyman
Executive Vice President of Public Policy

The Current Landscape in Washington, DC

Since the 2016 election, the political and policy landscape has experienced a dramatic shift that has resulted in a hyper-partisan atmosphere coupled with significant uncertainty around the policymaking process.

The Trump Administration's first actions when they took office were largely done through executive order and focused on rolling back key policies of the Obama Administration. On the Congressional front, Republicans spent much of the new Congress leveraging the legislative process to unwind several major regulations. The key victory for Republicans has been the passage of tax reform, which will be their marquee "win" for this Congress.

While Republicans control the White House, the House of Representatives and the Senate, Democrats have a significant amount of power within the legislative process. Since Senate rules still require 60 votes to move legislation (tax reform was an exception to this rule), most legislation moving through the Senate requires bipartisanship, which the Democrats have been able to leverage to advance some of their own priorities.

This year brings some interesting challenges. By the time you are in Washington, D.C., the 2018 election will be less than 280 days away and the election has the potential to create a dramatic shift in the D.C. landscape with both the Senate and the House majorities in play. The looming election has created anxiety on both sides of the aisle and may drive policy decisions in a manner that reduces political risk and, when possible, drives a core campaign message.

All that said, Congress is facing a significant agenda. Speaker Ryan has already stated his intention to pursue entitlement reform – a massive policy lift. Other issues on the agenda include healthcare reforms, funding all federal programs, major trade negotiations and re-negotiations, the Farm Bill, immigration, an infrastructure package, and possible reforms related to the financial industry.

The relationship between the Congress and the Administration continues to evolve. Ironically, there have been times when Congressional Republicans have been at odds with the President's policies and there have been times when Congressional Democrats have secured major deals with the President, which has added to the uncertainty in the policymaking process. This year provides opportunities for both sides to advance priorities, but it also provides risks that the looming election may slow down or even halt policymaking in D.C. If Congress is able to find moments of bipartisanship, key legislation will move to the President's desk for his signature.

What does all of this mean for the technology industry? After a rocky beginning, where cultural differences between the tech sector and the incoming administration made for awkward meetings, the reality is that several technology priorities have been addressed. The creation of the Office of American Innovation in the White House set a tone. The Executive Order on Cybersecurity continued the direction of the prior two administrations, and, among other things, emphasized a risk-based approach to IT security, directed agencies to employ the NIST cybersecurity framework, and promoted a government-wide initiative to modernize information technology. Passing comprehensive tax reform was a major win for much of the tech sector. The Administration's muscular approach to trade relations with China, while fraught with risk of over-reach, does address long standing concerns that our trading partner has gotten the best of the deal on tech policy. And at the end of the year, Congress passed and the President signed into law the Modernizing Government Technology Act, which allows federal agencies to reprogram unused IT budget allocation to fund future modernization projects.

Still, there have been significant flash points for the industry as well. The reversal of the FCC ISP privacy rules spawned a rash of bills at the state level that are varied in approach and quality. The debate over net neutrality has thrown certain aspects of our internet based economy into great uncertainty. High skilled immigration reform remains stalled while attention turns to the DACA debate.

As we kick off 2018, it is important to take stock of the role that technology plays in our society and its treatment by policymakers. Over the past two decades, the breadth and value of benefits provided mean technology and the companies supplying it have been given the benefit of the doubt by consumers and law makers.

However, signs point to changing expectations and a different environment unfolding. Questions surrounding security and consumer privacy continue to intensify. Concerns over market concentration and power imbalances loom. Reports of toxic corporate cultures and a lack of inclusiveness in certain quarters of the industry bring much needed attention to structural problems. Further advances in artificial intelligence and automation may bring greater scrutiny of their impact on work and society.

To be clear, technology will generally be viewed as a force for good, but these trends will be reflected in policy making and politics. Moreover, because technology can often be viewed as disruptive to traditional sectors of the economy, some law makers may be more dubious of industry objectives. While it is not clear that we will see enacted legislation, there is more of a willingness, by both democrats and republicans, to consider policies around data privacy, the balance between law enforcement, civil liberties and innovation, and the role of social media platforms in our public discourse – just to name a few. At a minimum we should see several of these issues become fodder for mid-term election messaging.

Your mission, as advocates for the industry, is to present the issues we collectively hope to move this coming year. Of course, addressing the work force through the CHANCE in Tech Act is a key component of that effort. But continuing to push for our priorities: an infrastructure package that includes the tools of a modern IT economy and builds out smart communities, high skilled immigration reform, advancing STEM education and CTE, moving smart cybersecurity policies forward, unleashing the potential of emerging technologies like autonomous vehicles, drones and AI, and continued investment in ground breaking and new technologies are among those priorities.

IT Industry Outlook 2018

A scan of the 2018 horizon reveals a year that appears to be on the cusp of profound change. And yet, the closer a major leap forward seems, the more one is reminded of the last-mile challenges associated with next generation innovation. While there continues to be a sense of excitement for a future that is rapidly becoming reality, increasingly, questions and concerns are part of the mix as well. The trends unfolding will do so in an environment of higher expectations; namely, for business value, security, transparency, and equal access to opportunity. Against this backdrop, CompTIA explores the forces shaping the information technology industry, its workforce, and its business models in the year ahead.

The information technology (IT) sector is poised for another strong year, 5 percent growth projected

CompTIA's IT Industry Business Confidence Index notched one of its highest ratings ever heading into the first quarter of 2018. Executives cite robust customer demand and the uptake of emerging product and service categories as key contributors to the positive sentiment. Revenue growth should follow suit. CompTIA's consensus forecast projects growth of 5 percent across the global tech sector in 2018; and, if everything falls into place, the upside of the forecast could push growth into the 7 percent-plus range. According to IDC, global information technology spending will top \$4.8 trillion in 2018, with the U.S. accounting for approximately 31 percent of the worldwide market.

An evolving tech labor market will continue to present challenges, as well as opportunities

With employer demand for tech talent routinely outstripping supply, the year ahead will force more organizations to rethink their approaches to recruiting, training, and talent management. Additionally, questions surrounding skills gaps, diversity, alternative education/career paths and the future of work will demand more meaningful attention and resources.

Balancing incrementalism and transformations

Most organizations pursue incremental transitions, upgrading or adding technology piecemeal, followed by adjustments to workflows. CEOs and boardrooms across the economy are waking up to the fact that this approach is often inadequate in the face of rapidly changing industry and customer dynamics. This doesn't necessarily mean chasing the latest shiny object or moonshot idea, but rather embracing an organizational mindset of proactively planning for a digital future.

12 Trends to watch for 2018

Building on previous iterations of CompTIA's IT Industry Outlook, the trends to watch for 2018 revolve around technology, but that is really only one facet of the bigger picture. Complementary trends covering the business of technology, workforce dynamics, and macroeconomic conditions provide context and grounding.

- 1. The Democratization of Technology Leads to Breakthrough Models** – A new era of open source, open toolbox technologies are enabling new players to build applications around blockchain, natural language processing, or context-aware computing, drones, robotics, and 3D printing.
- 2. Cloud Enters New Phase of Maturity** – Organizations are increasingly entering the final stage of cloud adoption, whereby their architecture has been rebuilt to maximize cloud characteristics rather than simply being forklifted. Unlike the first two stages, later-stage challenges are not primarily technical. Instead, companies must build or reconfigure the appropriate policies and workflow for a cloud-based approach.
- 3. Internet of Things Expands Technology Footprints** – Adding digital capabilities to everyday components drastically increases the scope of IT responsibilities. Additionally, new skills are needed for the different types of data streams being generated and the advanced analysis that companies want to perform. Automation will certainly help ease these burdens, but IoT strategies will still further complicate the already-difficult redefinition of the IT function.
- 4. Artificial Intelligence Adds a New Layer to the Solution Stack** – AI stands out as the emerging technology most likely to change the IT ecosystem. By adding a layer of intelligence to the technical solutions they are building, companies can both manage a more extensive IT architecture and solve a broader range of problems.
- 5. Businesses Adjust to the New Normal of Security** – With security incidents continuing to rise, it is clear that attackers are finding new sources of profit even as companies prioritize the protection of their digital assets. At a high level, the situation is not likely to change dramatically in 2018. However, there will be subtler shifts in methodology as companies consider their approach to security.
- 6. Growing Up: Tech May No Longer be Given the Benefit of the Doubt** – It has come to be expected that technology gets better, faster, more capable, and of course, less expensive. Because of the scale and scope of benefits provided, the tech industry generally gets the benefit of the doubt. However, signs point to changing expectations and a different environment unfolding.
- 7. The Insights Economy Comes Into Focus** – Built on the raw material of data, what can be characterized as the insights economy, is growing in scale and importance. Companies are the forefront of this trend are leveraging AI and machine learning for the purposes of pattern recognition, predictive analytics, natural language processing, and computer vision, to drive the insights economy.

- 8. Businesses Race to Upgrade Digital Expertise in the Boardroom** – The value of a tech-savvy C-suite and boardroom is on the rise. This doesn't necessarily mean having deep technical knowledge, but rather having a feel for the tech landscape, knowing the types of questions to ask, and being able to push back on pursuits that may be a poor fit for the organization. Additionally, with the consequences of a single digital misstep becoming more severe, board-level engagement with cybersecurity and data governance is no longer optional.
- 9. 'New Collar' Jobs Mindset Gains Momentum, but Challenges Persist** – The concept of 'new collar' jobs originated with IBM CEO, Ginni Rometty. It was a call to action to recognize the changing nature of middle-skill jobs and the need for new approaches to training and preparing the workforce of tomorrow. This change is largely a function of the intersection of technology and just about everything in the economy, from products and workflows to supply chains and job roles.
- 10. Online Marketplace: Friend or Foe of the Channel** – With more options than ever for customers to buy technology solutions, are traditional channel partners on their way out? Or are there options to survive and even thrive in this new marketplace?
- 11. Subscription Pricing Gets Harder to Figure Out** – New accounting rules and standards are complicating the way managed service providers and cloud service providers do business.
- 12. Primed and Ready for the As-a-Service World** – Customers want their technology providers to deliver true "as a service" solutions. Lip service will no longer cut it. As 2018 marches on, technology providers have a tremendous opportunity to crack into new markets, such as authentication-as-a-service, analytics-as-a-service, artificial-intelligence-as-a-service, drones and more. But they will need to invest in skills training, workforce development, and more to take advantage.

Championing Apprenticeships for New Careers and Employees in Technology (CHANCE in TECH) Act (S. 1518/H.R. 3174)

The information technology (IT) industry relies on an innovative and evolving workforce with a specific set of skills and training. However, IT jobs don't necessarily follow the traditional path of a four-year degree. Instead, pathways to these high-paying jobs can begin in high school and continue through training programs and apprenticeships.

Apprenticeships allow IT companies to directly train and hire the workers they need while ensuring that participants have the specific skills employers are looking for upon completion. Alternative education models that include industry-led, work-based learning will help fill the job openings currently available and spur economic growth.

The Championing Apprenticeships for New Careers and Employees in Technology (CHANCE in Tech) Act, introduced by Representatives Seth Moulton (D-MA), Jaime Herrera Beutler (R-WA), Derek Kilmer (D-WA), and Mia Love (R-UT), and Senators Cory Gardner (R-CO) and Martin Heinrich (D-NM) will help provide workers from all backgrounds with the skills and knowledge they need to fill good-paying tech jobs. This legislation will better align workforce training in the IT industry to better meet local and regional workforce demands.

Specifically, the CHANCE in Tech Act:

- Instructs the Department of Labor to award contracts to industry intermediaries to develop apprenticeships in IT.
- Defines industry intermediaries as entities that serve as a conduit between employers, training partners, and government bodies. These intermediaries have the capacity to help broker new IT partnerships and identify workforce trends. Intermediaries would form collaborations between private sector industries and training programs.
- Makes apprenticeships available to high school students, early college STEM students, and post-secondary students.
- Establishes the "CHANCE in Tech Act for 21st Century Schools" award that would go to schools that demonstrate high achievement in providing students with the necessary skills to compete in the 21st century workforce.

Why we need the CHANCE in Tech Act:

- Too many young people are saddled with college debt and entering the workforce without the necessary skills to compete in the new economy.
- Many IT professions do not require a four-year college degree and can be filled with a skilled workforce that has sought varied forms of training and education.
- Many of tomorrow's jobs will be a part of a growing knowledge economy that demands employees be problem solvers and critical thinkers.
- Job creators should be provided with support and incentives to help educate our technology workers and to create new workforce pipelines that cater to non-degree employees.

Championing New Careers and Employees in Technology (CHANCE in Tech) Act

Frequently Asked Questions (FAQs)

What are you asking for?

We are asking that members of Congress cosponsor the bipartisan, bicameral CHANCE in Tech Act (S. 1518/H.R. 3174). The bill was introduced in both the House and Senate on July 10, 2017.

Increasingly, work-based learning activities like apprenticeships are being included in education and training programs of study for IT. Galvanizing educators, students, workforces with outmoded skills and employers to adopt alternative education models that include industry-led work-based learning will help fill job openings and jumpstart economic growth.

What does this proposal set out to achieve?

The CHANCE in Tech Act is designed to address several critical issues. Most importantly, the proposal would provide hands-on, real-world upskilling to American workers. At a time when the rhetoric surrounding automation and technology is white hot, and not enough Americans have the skills that today's economy demands, the proposal would create educational and job opportunities for workers around the country.

Second, the proposal addresses some concerns that many employers have with the traditional U.S. Department of Labor Registered Apprenticeship Program: that it is too cumbersome, too prescriptive, and too process-oriented. There have also been challenges around cultivating a pipeline of eligible candidates that could take advantage of apprenticeships, as well as difficulties recruiting employers for this pipeline.

We believe that this proposal would lessen the compliance burdens employers must meet by creating an intermediary body that will drive industry-led, public-private partnerships to prepare a bigger pipeline of tech professionals.

Finally, the CHANCE in Tech Act encourages high schools to redouble their career training efforts, ensuring students are provided with a strong STEM and IT career tech curriculum and diverse career pathway counseling that aligns to recognized tech career cluster pathways.

Why is this tech specific? Does it have to be?

The proposal is tech specific because our industry cuts across nearly all other industries and touches every corner of the country. The gross output of the technology sector exceeds that of the legal services industry, automotive industry, airline industry, motion picture industry, hospitality industry, and restaurant industry, to name just a few examples. Additionally, tech skills are highly transferrable, as 80% of tech jobs are standard to related jobs in healthcare, manufacturing, financial services, and much more. The proposal is not an "either/or" idea, but rather a foundation that other industries can emulate or build upon.

What does the bill cost?

The bill would not cost a dime in new taxpayer money. In the last budget, \$90 million was set aside for apprenticeship activities, which could be used to help fund the bill.

Isn't this just another program to expand the government?

No. The CHANCE in Tech Act is a public-private partnership that is industry-led. Too often government programs are “top down” and don't do enough to address industry concerns.

Is this stand-alone legislation, or will it amend existing legislation?

The CHANCE in Tech Act could be effective on its own or as an amendment to existing legislation. How Congress decides to consider the proposal is less important than its efforts to address very real problems surrounding American apprenticeships.

Does the CHANCE in Tech Act impact education (Perkins Act), labor (WIOA), or both?

Both. Employers and employees don't see a difference –nor do they care –that Congress has erected arbitrary lines to separate education and labor issues. In an age when these lines are blurred, and upskilling workers is critical to jumpstarting job and economic growth, it would be shortsighted to limit our proposal to just one bucket of issues. The CHANCE in Tech Act is a holistic approach to a very serious problem.

With so many proposals to cut discretionary spending is it realistic to advocate for a program like the CHANCE Act?

As the voice of the information technology industry, CompTIA has an obligation to ensuring our domestic pipeline of workers is deep and job-ready. It is in our best interest – and the nation's – to upskill Americans to ensure the United States remains a hub for upward mobility and innovation.

Who are the Democratic and Republican leads in the House? In the Senate?

Representatives Moulton (D-MA) and Herrera Beutler (R-WA) are leading the efforts in the House, and Senators Gardner (R-CO) and Heinrich (D-NM) are leading the efforts in the Senate.

Who has already cosponsored the bills?*House of Representatives*

Rep. Kilmer, Derek [D-WA-6]	Rep. Welch, Peter [D-VT-At Large]
Rep. Langevin, James R. [D-RI-2]	Rep. Eshoo, Anna G. [D-CA-18]
Rep. Rice, Kathleen M. [D-NY-4]	Rep. Himes, James A. [D-CT-4]
Rep. Maloney, Sean Patrick [D-NY-18]	Rep. Blunt Rochester, Lisa [D-DE-At Large]
Rep. Soto, Darren [D-FL-9]	Rep. Esty, Elizabeth H. [D-CT-5]
Rep. Beyer, Donald S., Jr. [D-VA-8]	Rep. Herrera Beutler, Jaime [R-WA-3]
Rep. Cicilline, David N. [D-RI-1]	Rep. Love, Mia B. [R-UT-4]
Rep. Delaney, John K. [D-MD-6]	Rep. Emmer, Tom [R-MN-6]
Rep. Quigley, Mike [D-IL-5]	Rep. Cole, Tom [R-OK-4]
Rep. Perlmutter, Ed [D-CO-7]	Rep. Kinzinger, Adam [R-IL-16]
Rep. Murphy, Stephanie N. [D-FL-7]	Rep. Meehan, Patrick [R-PA-7]
Rep. Swalwell, Eric [D-CA-15]	Rep. Comstock, Barbara [R-VA-10]
Rep. Peters, Scott H. [D-CA-52]	

There are no additional cosponsors in the Senate.

What if the member I am visiting with has already signed on to cosponsor the bill?

Wonderful! If the member you are meeting with has already cosponsored the legislation, thank him or her and ask if there are other offices they think may be interested in cosponsoring the legislation as well.

2018 Policy Priorities

Advance Tax & Regulatory Policies that Spur Innovation and Grow Our Economy

The U.S. technology industry is a \$1 trillion market and employs nearly 7 million Americans. Fiscal discipline and targeted funding for investments in innovation are essential to continue economic growth. We support reasonable tax policies that promote innovation, entrepreneurship, and capital investment.

- *Ensure simplicity and fairness in interstate taxation:*
 - o Interstate sales tax legislation should not result in additional compliance burden to businesses, and any legislation should include a small business exemption;
 - o Reduce compliance burdens on today's digital workforce by enacting the "Mobile Workforce State Income Tax Simplification Act;"
 - o Support certainty in sales tax applications by enacting the "Digital Goods and Services Tax Fairness Act;" and
 - o Support fairness in interstate business activities by enacting the "Business Activity Tax Simplification Act."

Lead in Secure Internet Based Platform Technologies

Economic expansion in IT rests on the creation of new and innovative business models that leverage trusted, secure and accessible internet based platforms. We support common sense data and cybersecurity policies that secure our networks and promote responsible use of consumer data so the technology experience can continue to expand and improve.

- *Enhance national cybersecurity and critical infrastructure protection through support for an environment that fosters real time threat sharing between the government and the private sector and addresses the bad actors.*
 - o Support an incentive-based voluntary approach to cybersecurity (articulated in Executive Order 13636 and its directive to the National Institute of Standards and Technologies (NIST) to develop a framework) that utilizes industry best practices and promotes voluntary adoption; and
 - o Establish greater penalties for cybercriminals to deter and combat bad actors, and punish criminals.
- *Support a national standard for data breach notification that pre-empts the patchwork of state laws to allow entities to focus on notification and resolving the breach instead of compliance with a myriad of conflicting laws;*
- *Develop sensible definitions around nascent technologies such as biometrics and geolocation to ensure neutrality while still allowing for technological advancements;*

- *Encourage Congress to support industry-led standards for consumer data security and privacy for both IoT devices and the broader tech industry as opposed to passing legislation mandating specific regulations on data collection, usage and storage;*
- *Support continued innovation in encryption technologies and working with Congress and law enforcement to establish frameworks for securing data while exploring collaborative approaches to helping law enforcement keep Americans safe; and*
- *Support surveillance reforms to continue to rebuild trust across the Atlantic and promote even enforcement of the GDPR and continued renewal of the EU-U.S. Privacy Shield.*

Support New and Emerging Technology Platforms through Thoughtful Policies

Advancements in cloud computing, mobility, machine to machine (M2M), and unified communications platforms, the growing commercial significance of unmanned aerial vehicles, and other applications such as mobile payments are rapidly creating new opportunities for economic advancement while also raising a host of new public policy considerations.

- *Work to establish the investment, regulatory and legal environment that will allow broader adoption of the Internet of Things (IoT):*
 - o Promote Congressional passage of the DIGIT Act (S.88);
 - o Work with the stakeholder community to continue to develop and strengthen the DHS and NIST IOT Security Frameworks;
 - o Work within the NTIA IOT Security Updatability working groups, seek a common set of IOT related standards; and
 - o Monitor and address any IOT security related legislation.
- *Work with the CompTIA stakeholder community to help define and advocate for the role of smart technology in the 21st century infrastructure ecosystem;*
- *Work with the smart community stakeholder community to continue to seek advancements that will lead to more widespread adoption of smart technology products and services;*
- *Seek policy advancements and best practices around cloud, mobility, big data, open data, data analytics, blockchain and unmanned aerial vehicles (UAVs). Continue to support and collaborate with the Big Data Regional Innovation Hubs;*
- *While remaining mindful of legitimate privacy and safety implications, resist over-regulation of unmanned aerial vehicles that would unnecessarily curtail legitimate commercial uses; and*

- *Monitor the ongoing discussions on artificial intelligence and automation as they pertain to both the 21st century technology workforce and the Internet of Things.*
- *Continued advocacy efforts for the two Smart Cities Bills: the Smart Cities and Communities Act of 2017 (HR 3895) and the Smart Technology for Resilient, Efficient, Economic and Reliable Transportation in Cities and Communities Act (HR 4151);*
- *Work to establish a nurturing regulatory and legislative environment that will allow the broader adoption of autonomous vehicles and other vehicle technology. In particular, strongly advocate for the SELF DRIVE Act and AV Start Act.*

Support Skills for the 21st Century Workforce

CompTIA uniquely sits at the intersection of innovation, education and economic growth. We support policies that expand life-long education in the computer sciences and basic IT skills, and promote a skilled workforce that spurs job growth and our ability to compete globally.

- *Support the workforce by enacting the “Championing Apprenticeships for New Careers and Employees in Technology Act,” as well as the “Carl D. Perkins Career and Technical Education Act;”*
- *Advocate for policies that emphasize early academic support for science, technology, engineering, and math (STEM) instruction and carry these efforts through higher education institutions, to prepare students and workers for lifelong learning opportunities;*
- *Support the reasonable use and responsible stewardship of student data by schools, districts, and service providers, such as analyzing student data to deliver personalized learning experiences and improve products for use;*
- *Support and develop initiatives that encourage minorities, veterans and under-represented communities to pursue IT career paths;*
- *Recognize that the ability to recruit and retain the strongest workforce means supporting an inclusive workplace – one that welcomes people of all faiths, race, ethnicity, sexual orientation and gender identity;*
- *Ensure the government workforce has necessary IT security skills:*
 - o *Support the National Initiative for Cybersecurity Education (NICE); and*
 - o *Seek adequate awareness support and funding for government IT workforce recruitment, training, certification and retention.*

- *Support high-skilled immigration reform:*
 - o Increase green cards for high-skilled STEM graduates;
 - o Create new visas for U.S. educated students and entrepreneurs to lessen the demand on the H-1B category;
 - o Adopt market-based visa caps; and
 - o Grow domestic sources of talent through support of STEM at all levels of education.

Address Availability and Delivery of Broadband Communications

The internet is the infrastructure of the global economy. To ensure innovation, economic growth and social interaction, it is imperative that we keep the internet open, encourage deployment of new, faster broadband networks and find ways to get more Americans online.

- Support an open internet through rules prohibiting blocking, throttling, commercially unreasonable paid prioritization, and other anticompetitive behavior by ISPs.
- Support policies that improve broadband competition and the growth of IoT by removing barriers to the deployment of broadband infrastructure, including wireless infrastructure such as small cells.
- Promote policies to get more Americans online and to increase broadband adoption.
- Advocate for policies to make more spectrum available for licensed, lightly licensed, and unlicensed use to support 5G, IoT, and rural broadband. Specifically, advocate for implementing incentives to encourage government spectrum users to share, sell or lease their spectrum.

Encourage Broadband Deployment and Improve Broadband Access

The Issue:

The internet is at the heart of today's global economy, but many Americans still don't have access to "broadband" internet under the FCC's new definition of 25 Mbps up and 3 Mbps down, and most Americans don't have a choice of broadband providers. Additionally, the rapidly-expanding Internet of Things (IoT) market necessitates a robust broadband infrastructure to support it.

Deploying broadband infrastructure is a massive undertaking, one that requires significant up-front investment that companies may not recoup for decades. And yet, deployment is made even more difficult by regulatory barriers at every step of the process. These barriers to deployment keep companies from investing more into infrastructure, and potentially keep new entrants from entering the market. Competition is the key to better broadband access, and to increase competition, government should be encouraging private investment, not discouraging it.

What CompTIA Supports:

At the local, state and federal levels, government should work to remove regulatory barriers to broadband deployment. Specifically, CompTIA supports:

- **Improved and Consistent Access to Local Utility Poles and Rights of Way:** Deploying broadband networks is expensive enough without companies having to pay extraordinary costs for necessary access to utility poles and rights of way. At the federal level, the FCC should implement a one-touch, make-ready rule and limit make-ready fees to reduce pole attachment costs and speed access to poles. It should also lay out guidelines for best practices for access to rights-of-way. At the state and local level, governments should work with broadband providers, not against them, to encourage deployment. Consistent practices across (and within) states would also improve predictability.
- **Transparency About Existing Infrastructure:** Information about existing broadband infrastructure is often hard to find, incomplete, and inconsistent across cities and states. We would encourage the creation of both national and local databases for this information, which would save broadband providers time and money when trying to deploy infrastructure.
- **Dig-Smart Policies:** Dig-smart policies, which refer to coordination between government agencies that provides opportunities for broadband for broadband deployment when roads are excavated for other reasons, help lower costs for deployment and minimize disruption time. On the Federal level, we would encourage the Department of Transportation's Federal Highway Administration to adopt a dig-smart policy for federal highways. We would similarly encourage state and local governments to develop such policies, and also to explore blanket-permitting policies to encourage faster deployment.

- **Permanent Extension of Bonus Depreciation:** An additional 50% bonus depreciation allows for companies to more quickly receive tax benefits for investment in property such as broadband infrastructure. Bonus depreciation reduces the risk of long-term investments because it accelerates payment recovery time and thus lowers the average cost of capital for long-term assets. A permanent extension would thus provide companies with more certainty about their ability to recover costs on investments like broadband infrastructure, which can take decades to recoup. More certainty would incent companies to make these types of major investments.
- **Small Cell Deployment:** Next generation wireless networks will incorporate more small cells, private LTE networks, and DAS antennas than ever before. Unfortunately, most federal and state laws and processes regulating tower siting don't make sense when applied to small cells because wireless providers often need to deploy hundreds of small cells at a time. These laws need to be updated quickly on both the federal and state levels to prevent cities and states from missing out on next generation wireless.

The Facts:

According to the FCC's 2016 Broadband Report, 34 million Americans (10%) live in areas unserved by broadband, down from 55 million in 2015. Most of those people (23 million) live in rural areas where 39% of the population doesn't have broadband access. Only 38% of Americans live in a household with access to more than one broadband provider.

Free Up Spectrum for Innovation, Rural Broadband, and the IoT

The Issue:

Wireless broadband use has skyrocketed in recent years, and demand for wireless data is expected to continue to grow exponentially in the coming years. Wireless speeds are increasing too, and in some rural areas, it may be a better long-term solution to broadband access than wireline broadband. However, there simply is not enough available spectrum to meet this coming demand, even as unlicensed spectrum begins to carry more and more of the wireless traffic. The growth of the Internet of Things (IoT) market is creating even more demand for spectrum, and the number of IoT devices in use will continue to increase.

Auctioning more spectrum licenses alone cannot meet the ever-growing demand for day. Unlicensed spectrum is an essential complement to licensed spectrum. It is used for Wi-Fi, Bluetooth, offloading wireless traffic, and providing broadband in rural areas. It also allows companies who cannot afford to purchase spectrum licenses to use spectrum in new and innovative ways.

What CompTIA Supports:

Congress, the FCC, NTIA and other government agencies must do everything within their power to make more spectrum available for licensed, unlicensed, and lightly licensed use. Specifically, CompTIA supports:

- **More Federal Spectrum Available for Both Licensed & Unlicensed Use Without Technology-Specific Restrictions on its Use:** The Federal Government is the largest holder of spectrum suitable for wireless use, and even they will admit that they are not using their spectrum efficiently. Clearing and auctioning spectrum (as we saw in the AWS auction) is one effective way to get spectrum to market, but it is too costly in many situations. We must come up with new, creative ways to get government spectrum in the hands of those who need it most, be it for licensed or unlicensed use, without placing technology-specific restrictions on how it may be used.
- **Moving Forward on 5 GHz:** The FCC has already made great strides on freeing up unlicensed spectrum in the 5 GHz band, but the Commission should continue to work towards making spectrum available for unlicensed use in the U-NII-4 band.
- **Continuing to Pave the Way for 5G:** The FCC took a major step towards making 5G a reality with their Spectrum Frontiers Order, which opened up nearly 11 GHz of licensed and unlicensed spectrum for flexible-use wireless broadband, but there is still work to be done. The Commission also recently released a Notice of Inquiry on making mid-band spectrum for both licensed and unlicensed use, and we hope that they expeditiously move the proceeding along to an NPRM.

The Facts:

Cisco projects that mobile data usage will increase nearly fivefold in the U.S. from 2016 to 2021. Ericsson projects an eightfold increase in mobile traffic from 2016-2022. Ericsson projects that by 2018, there may be more IoT connections than mobile connections worldwide. They also project that in 2021, more than 90% of IoT connections will rely on unlicensed spectrum. The last major spectrum auction for the foreseeable future, the Broadcast Television Incentive Auction, concluded in 2017 and yielded \$19.8 billion. 84 MHz of spectrum were made available, 70 MHz for licensed use and 14 MHz for unlicensed use. The auction marked the last known source of sub-3 GHz spectrum suitable for licensed wireless use. There are no incentives in place currently to encourage federal agencies to share their spectrum.

Work to Reform the Electronic Communications Privacy Act (ECPA)

The Issue:

The Electronic Communications Privacy Act (ECPA) was originally passed in 1986, when email and text messaging were still nascent technologies, and deemed all stored electronic communications over 180 days old to be “abandoned.” Under ECPA, law enforcement and government agencies can acquire these abandoned emails and text messages from a service provider without a warrant, simply needing a subpoena to obtain access. The House unanimously passed the Email Privacy Act, an ECPA reform bill, in both April 2016 and February, 2017, but the bill has repeatedly stalled in the Senate Judiciary Committee and hasn’t received a floor vote.

What CompTIA Supports:

ECPA must be reformed to require government agencies and law enforcement to obtain a warrant to compel service providers to disclose the contents of emails, text messages, and other private communications stored by a service provider. Specifically, CompTIA supports:

- **Congress Should Pass the Email Privacy Act as Passed by the House:** The Email Privacy Act (H.R. 387), which unanimously passed the House in February, 2017, was the product of a carefully negotiated compromise between industry, public interest groups and House Judiciary Committee staff. Despite overwhelming support for the bill, several members of the Senate Judiciary Committee have continued to hold up the bill with unrelated amendments opposed by both industry and the public interest community. The Committee should re-consider this bill early in 2018.
- **No Civil Agency Exceptions:** Some civil agencies, such as the SEC, have asked for an exception to the warrant requirement because they do not have the ability to issue warrants. Such an exception would destroy the benefits gained by ECPA reform. It would erode privacy by codifying new powers for civil agencies that they do not already have. Civil agencies can still get access to emails and texts by serving subpoenas on users, not service providers.
- **No Emergency Exception:** Under current practice, the government may request digital content from providers by declaring an emergency situation. Providers may then decide whether or not to comply based on the circumstances. However, there has been a push to require providers to comply any time the government declares an emergency. This has dangerous potential for abuse. Service providers don’t want to be responsible for derailing criminal investigations, but requiring compliance with “emergencies” means that the government simply needs to declare an emergency to get the information it wants.

The Facts:

On April 27, 2016 the U.S. House of Representatives passed the Email Privacy Act (H.R. 699) with a vote of 419-0. A reintroduced version of the bill (H.R. 387) passed the House by voice vote on February 6, 2017. The Sixth Circuit Court of Appeals ruled in a 2010 case (U.S. v. Warshak) that, under the 4th Amendment, law enforcement must use a warrant to acquire email content from providers. Most large email providers are already treating this as the law of the land and refusing to comply with subpoenas. Despite asking for an exception to ECPA, the SEC has testified that it does not currently obtain emails from service providers, nor has it in recent history. One email provider (Google) has publicly announced they already complying with ~75% of emergency requests. Another (Yahoo) has said that they have procedures in place to comply with most emergency requests within one hour.

Encryption

The Issue:

The widespread adoption of encryption among consumers and businesses has created a difficult policy dilemma. While advances in encryption have vastly improved information security for consumers and businesses, law enforcement and national security officers are faced with significant new challenges to preventing and investigating crimes and terrorism as a result.

What CompTIA Supports:

CompTIA supports better cybersecurity practices both domestically and abroad by encouraging continued innovation in encryption. Congress, the administration and state legislatures can rebuild trust in the U.S. tech sector through strong data security practices at home, providing law enforcement with financial resources to recruit new technologists and implement new tools to uphold the law, and projecting the United States' firm commitment to data security to the world.

CompTIA opposes, through either legislation or court orders, mandated encryption backdoors and requirements for companies to “unlock” their products on demand. Industry, legislators and law enforcement must instead work together to establish frameworks for securing data, and explore cooperative approaches to helping law enforcement keep Americans safe. Any changes in law and policy should only come after a collaborative dialogue between the relevant stakeholders.

The Facts:

Any decisions to weaken or limit encryption will have harmful effects on the overall digital economy, including making digital systems more vulnerable; increasing costs for consumers (as risks increase and companies pass on greater operational expenses); decreasing competitiveness of U.S. businesses seeking international market share; and diminishing U.S. leadership in setting policies to improve cybersecurity.

The debate over encryption has gained more attention recently as some law enforcement agencies have complained about their lack of access to data. These complaints have been spurred by decisions by some mobile and cloud-based service providers to upgrade their security controls so that their customers can retain the keys used to encrypt their data, thereby locking out third parties, including law enforcement.

However, these complaints are not new. The past few decades have seen a steady stream of advancements in encryption, and many companies have integrated encryption into popular products and services to improve security for users. Some government agencies have pushed back on these kinds of improvements, citing law enforcement and national security concerns. But while advances in encryption, along with more widespread adoption, certainly will make it harder for law enforcement and intelligence agencies to access some kinds of data, the overall impact on fighting crime and terrorism will be difficult to measure.

As the debate continues, CompTIA will oppose federal and state legislation that creates encryption backdoors or other decryption policies that may threaten innovation and the protection of consumer privacy.

Federal Agency Privacy & Data Security Enforcement

The Issue:

Over the last several years, the Federal Trade Commission (FTC) has used its authority under the unfair and deceptive practices of Sec. 5 of the FTC Act to sanction companies for failure to adequately protect consumer data. This authority was upheld by the Court of the Appeals for the Third Circuit in the *Wyndham* case.

The FCC's 2015 reclassification of broadband internet access service as a telecommunications service means that the FTC no longer has authority over broadband ISPs. Instead, the FCC now has authority to enforce data privacy and protection practices for ISPs. The FCC passed new privacy and security rules in late 2016, but they were overturned by Congress earlier this year through the Congressional Review Act. The FCC is currently in the midst of another net neutrality rulemaking, and we are awaiting the final version of the rules that could restore the FTC's authority over ISPs' privacy and data security practices.

What CompTIA Supports:

We would prefer that authority is returned to the FTC to enforce data privacy and protection practices across the entire tech sector including ISPs. Should the FCC choose not to reclassify broadband internet access service as an information service in their Restoring Internet Freedom rulemaking, we would advocate that Congress remove the common carrier exemption in the FTC Act and allow the FTC to regulate ISPs' data privacy and protection practices, harmonizing rules across the industry.

If Congress does not act, and the FCC does not reclassify broadband service, we would encourage the FCC to pass rules that function as close to the FTC's rules as possible to preserve consistency in enforcement.

U.S.-China ICT Trade Policy

The Issue:

China is one of the world's largest markets for the information and communications technology (ICT) sector, and one that American technology companies cite as a priority for their global operations and competitiveness. China is currently undergoing a moment of rapid and potentially profound change in its ICT policy, which have created challenges stemming from the incomplete transition of China to a free market economy.

Specifically, U.S. technology companies have experienced a persistent uptick in protectionist policies in the ICT sector designed to nurture domestic technology champions at the expense of international competition and to secure China's global dominance in strategic emerging technologies. Despite numerous attempts by the U.S. to engage China to alter these practices, they not only continue to spread, but have become more sophisticated, more institutionalized, and more distributed.

Message Points:

1. There is growing concern that these policies could cause long-term damage to U.S. businesses – and the U.S. jobs they support – as those businesses try to sell ICT products into China, a market estimated to be worth about \$465 billion.
2. A 2017 study by the American Chamber of Commerce in China (AmCham China) found that 81% of respondents said foreign businesses in China were less welcome in China than before, compared to 41% who asserted that in 2013. Further, 45% of respondents said lack of IP protection was a significant barrier to increasing innovation in China.¹
3. China's broad Cybersecurity Law (CSL) and implementing regulations, along with existing and proposed restrictions on cloud and internet services, limit the ability of U.S. companies to sell products and services in China.
4. CompTIA encourage the U.S. wherever possible to negotiate outcomes with China through bilateral and multilateral engagement, including through dialogues such as the Comprehensive Economic Dialogue (CED) and multilateral fora such as the WTO as well as to forge new forms of alliances for cooperation with China, including the EU, Japan, etc.

¹ The American Chamber of Commerce in the People's Republic of China, 2017 Business Climate Survey, April 2017.

Current Status:

The Trump Administration is developing a policy towards China. On August 18, 2017, the United States Trade Representative (USTR) Robert Lighthizer initiated an investigation of China under section 301 of the Trade Act of 1974 which seeks to evaluate whether acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation are unreasonable or discriminatory and burden or restrict U.S. commerce. CompTIA filed comments to this investigation on September 28, 2017.

On September 20, through the United States Information Technology Office (USITO), CompTIA along with fellow parent associations, submitted comments in response to the Federal Register Notice Regarding China's Compliance with its Accession Commitments to the World Trade Organization.

What CompTIA Supports:

- Secure commitment that China will refrain from any measure that requires U.S. companies to disclose source code or other intellectual property as a condition of doing business in China.
- Secure commitment that China will not restrict cross-border data flows for business purposes and will grant U.S. cloud service providers with full and nondiscriminatory market access.
- Secure commitment that Chinese government support of China's technology industry will be consistent with its international trade obligations.
- CompTIA supports an open investment regime, both inbound and outbound, as well as the activity of The Committee on Foreign Investment in the United States (CFIUS) to determine the effect of inbound transactions on the national security of the United States as it relates to China. CompTIA supports sanctions and export controls when they are required to meet U.S. national security and foreign policy goals, as further outlined in CompTIA's Export Legislation policy.
- CompTIA encourages the U.S. wherever possible to negotiate outcomes with China through bilateral and multilateral engagement, including through dialogues such as the Comprehensive Economic Dialogue (CED) and multilateral fora such as the WTO. Forges new forms of alliances for cooperation with China in these areas of common interest, including the EU, Japan, etc.
- CompTIA supports encouraging China's integration into the global ICT ecosystem and the global institutions and agreements that support it.

Modernizing the North American Free Trade Agreement (NAFTA)

The Issue:

The Trump Administration seeks to modernize North American Free Trade Agreement (NAFTA) to reduce the trade deficit, support higher-paying jobs in the United States, and to grow the U.S. economy by improving opportunities to trade with Canada and Mexico.

The United States Trade Representative Robert Lighthizer notified Congress in May 2017 of the intent to renegotiate NAFTA. CompTIA issued a press release welcoming a modernization of NAFTA to reflect the digital economy and innovative technology sector that has evolved since NAFTA was negotiated 25 years ago. In June 2017, CompTIA submitted comments to the Federal Register Notice on the intent to modernize NAFTA and testified at the public hearing at the USITC.

CompTIA members stress that NAFTA should remain a trilateral agreement and one that rises to the objectives established by Congress in the Bipartisan Congressional Trade Priorities and Accountability Act of 2015 (TPA 2015). Priority negotiating objectives for CompTIA members include: market access, customs and trade facilitation, rules of origin, digital trade, government procurement and intellectual property.

Message Points:

1. Since NAFTA entered into force in 1994, trade with Canada and Mexico has nearly quadrupled to \$1.3 trillion.
2. Trade with Canada and Mexico supports nearly 14 million American jobs and nearly 5 million of these net jobs are supported by the increase in trade generated by NAFTA.
3. Since NAFTA was negotiated nearly 25 years ago, the role of the internet, e-commerce, and digital trade in international trade has expanded significantly.
4. Modernizing NAFTA presents an opportunity to update the agreement in order to account for the significant growth of digital trade and trade in services that has moved beyond trade in traditional goods.
5. Additionally, we urge the Administration to preserve those provisions that have worked well and ensure that U.S. businesses are not disadvantaged by any modifications. These include continued elimination of the merchandise processing fee and rules of origin.

Current Status:

Renegotiations between the U.S., Canada and Mexico launched in Washington, DC, on August 16, 2017, and continue on a swift time-line with negotiators meeting every three weeks, alternating locations between of the three countries. Several important dates limit the time for the negotiation and the ambition to conclude the agreement by 2017, or early 2018. However, President Trump continues to threaten a withdrawal from NAFTA and that looms large in the renegotiations.

What CompTIA Supports:

- Continue to exclude NAFTA originating merchandise from the merchandising processing fee and all other border or customs processing fees.
- Adherence to WTO Information Technology Agreement (ITA, ITA2, and those under ITA 2018 review).
- Duty Free treatment for goods entered for repair or alteration.
- No restrictions on remanufactured, refurbished or like-new goods.
- Parties to comply with the Import Licensing Agreement with respect to any new or modified import licensing procedure.
- Export licensing notification procedures shared with parties.
- Allow goods produced in a Foreign Trade Zones (FTZs), meeting rules of origin, to qualify for preferential treatment.
- Adherence to the WTO Trade Facilitation Agreement (TFA) Adherence to WTO Valuation Agreement.
- Utilize the current version of the Harmonized Tariff Schedule (HTS) nomenclature for classification purposes.
- Streamline the process for certifying that imported products qualify for NAFTA originating status.
- Adhere to the Valuation Agreement (Article VII of the GATT).
- Avoid value-content thresholds, avoid process-based rules, and confer origin based on classification changes (TPA 2015 statute).
- Prevent barriers to e-commerce trade and cross-border data flows.
- Ensure a free and open internet and protect the free flow of information through cross-border data flows.
- Prevent forced localization requirements of data centers and facilities, technology, intellectual property, and other assets.
- Prohibit local content requirements or technology transfers as a condition of market access.
- Prohibit parties from requiring the transfer of private keys for commercial encryption products or software source code as a condition of market access.
- Prohibit customs duties, taxes, and other barriers to digital products (e.g., software, music, video, e-books, etc.) and services.
- Ensure non-discriminatory treatment of digital products transmitted electronically as well as intermediary liability protections.
- Robust provisions providing for reasonable network access for telecommunication suppliers.
- Maintain the current provision in Government Procurement.
- Update provisions governing copyright in the digital environment, criminal penalties for trade secret theft, customs seizure of counterfeit and pirated goods, and provisions that ensure strong support for innovation.
- Include provisions requiring strong enforcement of Intellectual Property Rights (IPR) and prevent government involvement in IPR infringements, including piracy and cyber theft.

Immigration Reform

The Issue:

Our current immigration system is broken and causing the United States to lag behind in a competitive global marketplace for talent. By not addressing the failings of our immigration system we are threatening our future productivity, ingenuity and the competitiveness of key sectors of our economy, including and especially technology.

What CompTIA Supports:

- **Increase Green Cards for High-Skilled STEM Graduates:** CompTIA supports increased access to Green Cards for high-skilled STEM graduates by expanding the exemptions and eliminating the annual per country limits for employment based Green Cards.
- **Create New Visas for U.S. Educated Students and Entrepreneurs:** These new visas will help fill the thousands of IT-related jobs currently open, furthering opportunities for starting and growing new businesses in the United States.
- **Market-based Visa Caps:** Using market-based caps on H1B visas are the best way to adjust to the supply and demand in the U.S. economy.
- **Growing Domestic Sources of Talent:** CompTIA, our member companies and our affiliated Creating IT Futures Foundation are strongly committed to improving U.S. science, technology, engineering and mathematics (STEM) education and encouraging more young Americans to choose careers in those fields. Key to that effort is encouraging federal, state and local investment in STEM curriculum for students from kindergarten through high school with a structured pipeline to higher education. CompTIA uniquely sits at the intersection of innovation, education, and economic growth. We support policies that expand life-long education and promote a skilled workforce that spurs job growth and our ability to compete globally. Quality education, worker training – and retraining – will help ensure the availability of a skilled and competitive workforce.
- **Advancing a Diverse Tech Workforce:** The safety and prosperity of the United States rests not only on sensible border security measures but also in equal measure on the integration of diverse peoples that bring cultural, educational, scientific, and religious perspectives and knowledge that strengthen the fabric of our society. We feel this most profoundly in the tech industry, where so many iconic American companies and major employers were all founded, at least in part, by foreign nationals. CompTIA supports the DACA program and policies that keep our borders and our businesses open to the best and brightest.

The Facts:

- The brightest scientists, researchers, innovators and engineers in the world, whether American or foreign-born, will always be in demand and will always drive economic growth and job creation. U.S. employers, be they small businesses or large multinationals, must be able to recruit and retain highly educated foreign-born professionals –particularly after they graduate from a U.S. university – as an important complement to domestic sources of talent. The reality is that 50% or more of those graduating from U.S. universities at the master’s and Ph.D. levels in STEM fields are foreign nationals.
- Future growth and job creation will be led by innovation, whether it’s new technologies, new cures or new sources of energy. For every foreign STEM worker who stays in the United States and works, an additional 3 jobs are created. America does not have a monopoly on brainpower, and in an increasingly competitive global environment, we have to retain the talent that will keep us leading worldwide innovation.
- America benefits from the contributions of highly educated, entrepreneurial professionals, regardless of where they were born. More than 40% of Fortune Five Hundred companies were founded in part by immigrants, or children of immigrants. Iconic American companies – and major employers –such as Intel, Sun Microsystems, eBay, Yahoo! and Google were all founded, at least in part, by foreign nationals.

STEM Education

The Issue:

STEM education is more important than ever as the IT industry continues to grow. Currently, more jobs in the tech sector exist than talent to fill those jobs.

What CompTIA Supports:

CompTIA supports efforts to make STEM a fundamental component in elementary, secondary, and postsecondary education. Making STEM a fundamental component in education will enable students to better understand our 21st century economy, and enhance our domestic talent pipeline. We believe educators should emphasize the “T” in STEM –technology –and provide increased experiential learning surrounding the subject. CompTIA also supports efforts to increase the racial, gender, and socioeconomic diversity of our STEM talent pipeline.

Message Points:

- To remain globally competitive, policymakers must emphasize STEM education.
- Nearly half of all STEM jobs do not require a four-year college degree.
- STEM jobs are high-paying and in-demand.
- Middle skill jobs that require technology grew 2.5 times faster between 2003 and 2013 than middle skill jobs that don't.
- Over the next decade, more than 50% of all manufacturing jobs will go unfilled because workers lack the skills needed to fill the positions.
- More than 600,000 tech occupations went unfilled in Q4 2016.

Workforce Development

The Issue:

IT jobs are plentiful, yet IT employers often struggle to fill vacancies because of a dearth of qualified talent.

What CompTIA Supports:

CompTIA supports state and federal policies to upskill American workers. In helping workers acquire the skills today's economy demands, workforce programs can help shrink the skills gap, open career pathways, and ensure our nation remains the global economic engine. Examples include:

- **Job Training and Placement Programs:** Programs like Creating IT Futures' IT-Ready can help the un- and under-employed pursue their first IT careers.
- **Work-Based Learning:** Hands-on, experiential learning enable students to contextualize their classroom learning. Earn-and-learn programs like apprenticeships allow students to continue their education while simultaneously earning an income.
- **Career and Technical Education (CTE) and Certification Programs:** Community colleges and other post-secondary institutions, along with industry-recognized certifications, are in providing career pathways for many non-traditional students. Portable, industry-recognized certifications are especially critical in today's workforce. The Carl D. Perkins Career and Technical Education Act is an example.

Message Points:

- IT jobs are high-paying and in-demand.
- Over the next decade, more than 50% of all manufacturing jobs will go unfilled because workers lack the skills needed to fill the positions.
- Nearly half of all STEM jobs do not require a four-year college degree.
- Four-year college pathways are just one avenue to shrinking the skills gap.
- IT education programs should be competency-based, not time-based.

Affiliate Nexus

The Issue:

The debate around the Marketplace Fairness Act may be dead, but Congress hasn't completely given up on the idea of taxing internet sales across state lines. In September 2016, the Chairman of the House Judiciary Committee, Congressman Bob Goodlatte (R-VA), released the long-anticipated discussion draft of the Online Sales Simplification Act of 2016 (OSSA), which differs significantly from the Remote Transactions Parity Act introduced by Congresswoman Kristi Noem (R-SD) and the Marketplace Fairness Act introduced by Senator Mike Enzi (R-WY).

The proposed Online Sales Simplification Act (OSSA) is a hybrid system, which would collect sales taxes at a single rate of the state where the consumer resides, but remit those taxes to the state where the seller is located. Overview of OSSA:

- The bill implements the Chairman's much-discussed 'hybrid-origin' approach.
- The bill removes the Quill physical presence requirements for sales tax collection obligations under certain circumstances.
- States may impose sales tax on remote sales IF the state is the origin state and it participates in a statutory clearinghouse AND the tax uses the origin state base and the destination state rate for participating states (the origin state rate is used if the destination state does not participate in the clearinghouse).
- A remote seller will only have to remit the tax to its origin state for all remote sales.
- A destination state may only have one statewide rate for remote sales.
- Only the origin state may audit a seller for remote sales.
- States that do not participate in the clearinghouse have significant restrictions on the ability to extract the tax from the remote seller.

However, while congress is still debating a national approach, sales tax nexus legislation is emerging as a national trend with over half the country considering some form of legislation, which is similar to that outlined in the Federal Marketplace Fairness Act. With little action at the Federal level and Justice Kennedy's recent opinion in *DMA v. Brohl*, in which he suggests that Quill may no longer represent the appropriate nexus standard for sales tax collection, states are attempting to challenge Quill by introducing state specific legislation. In an effort to collect state sales taxes for online remote transactions, a number of legislative proposals would require all remote sellers to collect sales taxes and remit them the state where the consumer resides.

What CompTIA Supports:

CompTIA supports solutions that would (1) not increase the compliance burden on medium and small businesses, (2) not create systems that would force sellers to abandon internet sales into other states, (3) continue to foster on-line commerce, (4) create a small seller exemption for small business, and (5) protect businesses from new and costly regulations or taxes.

The debate on the collection of sales taxes on remote transactions should be refocused to balance the needs of states to collect these taxes with the ability of businesses to cover these new compliance costs. States need to collect sales and use taxes owed, but the costs associated with moving this compliance burden from individual taxpayers onto businesses must also be weighed.

Digital Goods and Services

The Issue:

According to recent data, 88% of Americans are using the internet and over 200 million internet users will make an online purchase this year alone.⁸ The digital economy continues to play a strong role in both the growth of the internet and the ability for businesses to better deliver digital goods and services. Given the importance of the digital economy to our member companies and the need to ensure we can continue to foster innovation and economic growth within this sector, we strongly support the Digital Goods and Services Tax Fairness Act. This legislation will prevent hurdles to growth and create a much-needed tax framework that will provide certainty to consumers, providers, and state/local governments, while preventing duplicative and discriminatory taxes.

CompTIA opposes taxes on digital products. However, for those jurisdictions that have opted to impose these taxes, we recognize the need to provide consistency and simplicity across state borders. There should never be a situation when multiple jurisdictions can tax the same digital good or service and a framework must be established to ensure that a single purchase is sourced in one state and not multiple states.

What CompTIA Supports:

CompTIA supports legislation such as the Digital Goods and Services Tax Fairness Act. This legislation would (i) provide consistency in determining which jurisdiction can tax a transaction (at the appropriate sales tax rate), and (ii) prohibit unfair and unrelated discriminatory taxes. While CompTIA opposes taxes on digital products, we do support legislation that would provide consistent treatment across state lines when digital products are taxed by state or local jurisdictions. The Digital Goods and Services Tax Fairness Act addresses our concerns by accomplishing two key objectives:

- First, the legislation sources the purchase of a digital good or service to the consumer's home address (not the location of the consumer at the time of downloading a product or the location of the server). Therefore, only one state would have the ability to tax the transaction – if that state chose to do so. Congress took a similar approach in 2000 when it passed the Mobile Telecom Sourcing Act, which essentially sourced wireless and mobile telecommunications services to the consumer's home address to eliminate confusion around which taxing jurisdiction had the right to tax wireless services.
- Secondly, the legislation would prohibit discriminatory taxes. If a state decides to tax a downloadable song, for example, the rate should be the same as if that same song was purchased in a “brick and mortar” store. Prohibiting discriminatory taxes simply brings parity between digital products and their tangible counterparts.

Consistent with our support for the Digital Goods and Services Tax Fairness Act, CompTIA calls on states to reject new taxes on electronically transferred digital products and electronically delivered services such as data processing, hosting and related services. Such a broad expansion of the sales tax base to include electronically transferred goods and services, particularly those that are actually business inputs, is bad public policy and will result in multiple and discriminatory taxation.

⁸ Pew Research Center “Internet/Broadband Fact Sheet.” January 12, 2017. <http://www.pewinternet.org/fact-sheet/internet-broadband/>

Mobile Workforce

The Issue:

Some states are imposing income taxes on non-residents after very brief work-related stays. This makes tax compliance more complicated for individuals and their employers; it also deters business-related travel.

What CompTIA Supports:

CompTIA supports H.R. 1393/S. 540, the Mobile Workforce State Income Tax Simplification Act of 2017, which would establish national standards for state income taxation of non-residents. The House passed this legislation on June 20, 2017. This legislation would allow employee wages or compensation to be taxed by only the (i) state of the employee's residence, and (ii) the state within which the employee is present and performing employment duties for more than 30 days during the calendar year.

Employees who are required to move from state to state should not be required to file and pay state income taxes for brief periods of work, i.e., 30 days or less. This legislation does not exempt the employee from state taxes; it just provides that only the employee's state of residence or any state in which the employee worked for more than 30 days are permitted to require the employee to file and remit state taxes.

CompTIA supports legislation at the state level that simplifies nonresident employee and employer requirements to report and withhold state income taxes. CompTIA supports the balance between the business needs of today's mobile workforce and each state's authority to determine its own tax law.

Message Points:

1. The Mobile Workforce State Income Tax Simplification Act of 2017 would establish a fair and uniform 30-day threshold to help ensure the appropriate amount of tax is paid to state and local jurisdictions without placing undue burdens on employees and their employers.
2. Most individuals are unaware of the current patchwork of non-resident state income tax filing rules, and many employers must incur extraordinary expenses to comply with withholding requirements.
3. Each state has its own set of requirements for filing non-resident individual income tax returns and commensurate rules for employer withholding on those employees.
4. The legislation would enhance compliance with state personal income tax laws while significantly reducing the onerous burdens placed both on employees who travel outside their resident states for temporary periods and on employers who have corresponding withholding and reporting requirements.

Internet of Things

The Issue:

The Internet of Things (IOT) is a series of smart devices connected to one another and to analytics and hosting platforms via the internet. As the IOT continues to grow, challenges and opportunities will arise. Central to the continued growth of IOT are policy principles that are transparent on privacy issues, highlight security in the IOT lifecycle, and stress open standards.

Recently, Congress has taken several positive steps to help facilitate the IOT discussion. In August 2017, the DIGIT Act was passed out of the Senate. In 2016, the House Energy and Commerce Committee established a bipartisan IOT working group. In 2015, Representatives DelBene and Issa created the congressional IOT Caucus. CompTIA urges policy makers and regulators to tread lightly in this space, which is still in an early stage of development, so that innovation and the attendant societal benefits will continue to flourish.

What CompTIA Supports:

- **Regulatory and Legislative Moderation:** CompTIA supports a federal strategy for IoT that harmonizes guidelines for IoT devices across all agencies and industries. To accomplish this, Congress must pass legislation that will direct one agency to lead the discussion. (The Developing Innovation and Growing the Internet of Things (DIGIT) Act, for example, would place the Department of Commerce in this role). Congress should, however, avoid broad legislation regulating IoT, particularly regarding privacy and data security practices. We already have federal and state privacy and data security laws on the books, and passing IoT-specific legislation at this point in time will only serve to stifle innovation in a nascent industry. Instead, multi-stakeholder groups involving actors from government and industry should work together to develop guidelines and industry best practices in this space based on existing privacy and data security laws and frameworks. CompTIA supports both the NTIA IOT security multi-stakeholder process as well as the NIST IOT Cybersecurity Framework.
- **Broadband:** CompTIA supports the deployment of a robust broadband infrastructure to support the IoT. To accomplish this, we need support from federal, state and local governments to assist in facilitating broadband deployment (see our Broadband Deployment one-pager on page 18 for more detail).
- **Spectrum:** To support the growth in IoT devices, CompTIA believes that the federal government needs to make more spectrum available for both licensed and unlicensed use without placing technology-specific restrictions on how it can be used (see our Spectrum one-pager on page 20 for more detail).
- **Privacy & Data Security:** Congress should avoid broad IoT-specific legislation regarding companies' privacy and data security practices. A number of federal and state privacy and data security laws and guidelines are already on the books and provide a sufficient framework to regulate IoT at this time. That said, industry can and should lead with respect to "design by security" best practices and risk mitigation to provide businesses, government and citizens with maximum trust in IoT.

- **Standards:** We support a multi-stakeholder approach for setting voluntary IoT standards for interoperability. We are concerned that without agreed-upon standards, we could encounter a problematic piecemeal regulatory approach that stifles innovation in the industry.
- **Research and Development:** We support a federal government position that emphasizes research and development in the form of federal grants to help facilitate public-private partnerships. Of particular interest are grants focusing on cyber related IoT R&D.
- **Governance:** A key component of the federal IoT ecosystem is a well-structured governance model. Following the Senate’s DIGIT Act, we support a governance structure which is led by the Department of Commerce, that incorporates all of the federal agency stakeholders.

The Facts:

According to the CompTIA “Sizing Up the Internet of Things” report, projections estimate 50.1 billion connected devices by the year 2020 and \$1.9 trillion in global economic value-add. The dramatic rise in computing power and storage capacity offered at ever-lower prices, coupled with the miniaturization of sensors and chips, robust wireless networks, IPv6, and a software-defined world, to name a few enabling factors, make this iteration of the Internet of Things different than prior eras. The information being generated by IoT devices has the ability to connect everything to everything else. Not just communication between the different devices, but across industries.

Research and Development

The Issue:

We are living in an era where innovation, agility and imagination are all essential in order to keep pace with exponential technological transformation taking place in our society. In government, federal agencies are playing catch-up from years of underfunded research and development (R&D) impacted by economic constraints and sequestration, while other nations have increased their public and private R&D investments at a faster rate. There is a longstanding notion that R&D is the backbone of a globally competitive, knowledge-driven economy. In 2010, economist Gary Becker stated that "modern economies are based on the command of knowledge and information." It is essential that the U.S. sustains its investment in R&D.

Based on recent budget trends, there are reasons for optimism. Since FY 15, the federal R&D budget has grown from \$138.2 billion to \$151 billion in the FY 18 President's budget request. This is good news as the government invests and partners in programs and solutions for some of our greatest challenges, including cybersecurity, smart cities, big data, quantum computing, space exploration, health and medicine, and the Internet of Things.

What CompTIA Supports:

CompTIA supports increases in R&D funding that support advancements in big data, cloud computing, high performance computing, automation, artificial intelligence, biometrics, blockchain technology, and cybersecurity (as it relates to emerging technologies and services). In particular, we support increases to the following federal R&D budgets:

- **The Networking and Information Technology Research and Development (NITRD) Program:** NITRD is a federally funded program designed to increase coordination, productivity and effectiveness among federal agency R&D efforts in networking and IT. According to the White House, the NITRD budget request for FY 2018 is \$1.1 billion. This program can be successful in helping to drive innovation.
- **The Defense Advanced Research Projects Agency (DARPA) R&D Budget:** DARPA has helped drive innovation on a number of issues, including connected vehicles, spectrum, cybersecurity, the Internet of Things, and blockchain technology.
- **The national labs and Federally Funded Research and Development Centers (FFRDCs):** These are the nation's R&D incubators and have compiled a treasure trove of technologies and applications for defense and the civilian interests. The benefits of the labs' role include experienced capability in rapid prototyping of new technologies ready for transitioning; showcasing; and commercialization
- **Funding of the Small Business Innovation Research (SBIR) Program:** SBIR enables small businesses to explore their technological potential and provides the incentive to profit from its commercialization.

The Facts:

Government R&D investment has a rich history of driving technological innovation. Where would we be without the Global Positioning System (GPS) to guide our way? Without the \$4.5 million in National Science Foundation grants, two Stanford University graduate students would have never stumbled upon a new algorithm that later turned into the Google search engine. The list of innovations goes on and on.

R&D investment that helps drive private-public sector collaboration is critical. The government funds research programs that directly provide grants to academia and institutions, especially for basic and applied research that will create the next generation of ideas and inventions. Many government agencies, especially the Department of Defense, NASA, the Department of Energy, and the Department of Health and Human Services all have critical R&D functions. The research arms of the Department of Defense, the Defense Advanced Projects Agency (DARPA) and the Intelligence Advanced Projects Agency (IARPA) have also invested greatly in the development of technologies, especially related to national security and the warfighter. The Science & Technology Directorate at the Department of Homeland Security helps fund lab programs with a priority on "leap-ahead technologies" for homeland security. According to the National Human Genome Research Institute, a \$3.8 billion federal investment to launch the Human Genome Project, jointly conceived and executed by the National Institutes of Health and the Department of Energy, has resulted in an estimated economic impact of \$965 billion between 1988 and 2012.

Smart Cities and Communities

The Issue:

While cities and communities are making progress toward improving living standards and social and environmental sustainability, the impact can be limited by narrow project scopes and obsolete systems. Cities and communities can accelerate and enhance the results of their efforts by adopting a smart cities and communities approach with supporting technologies.

What CompTIA Supports:

CompTIA supports the Smart Cities and Communities Act of 2017. The legislation would provide \$220 million of smart city infrastructure investment per year over five years, and help coordinate all of the various federal agency smart city initiatives as well as create a technology demonstration grant program. As cities grow their smart technology and services capabilities, CompTIA also believes that there can be several emerging employment opportunity sectors:

- **Infrastructure.** Cities will need to have large teams to help deploy the vast array of sensors that will constitute the Internet of Things (IOT) smart city and community ecosystem.
- **Cybersecurity.** With internet-connected sensors, best-in-class cybersecurity solutions and applications are an absolute necessity. A well-trained workforce will need to implement the cyber solutions across the infrastructure ecosystem.
- **Analytics.** An immense amount of data coming off the IOT sensors will need to be analyzed. City governments will need to beef up their analytical capabilities in order to ensure that citizens gain the most benefits from the analyzed data.

The Facts:

According to the CompTIA “Building Smarter Cities and Communities” report, anticipated benefits of smart city solutions include cost savings from operational efficiencies; optimizing use of resources; improved government services and interaction for citizens; better stream of data to improve decision-making; and the opportunity to attract tech-savvy workers and businesses. Government personnel remain optimistic about the promise of smart cities. Nearly three-quarters of the 350 government officials surveyed in the report have a positive view of smart city developments.

The report also outlined barriers to adoption. The number one concern of both government personnel and citizens is obtaining funding for a smart city project. Most cities are under tight budget constraints, and it is difficult to allocate funds for new projects. Another top concern is cybersecurity. With thousands of sensors being embedded into the cities infrastructure, cities will have to ensure the physical cybersecurity of the infrastructure. There is also the question of an adequate cyber workforce. According to the study, 40% of government officials and personnel cite skills gaps and a lack of necessary expertise as a primary area of concern affecting the expansion of smart cities initiatives.

The interest amongst citizenry is strong. The report showed that six out of 10 Americans are interested in living in a smart city. Citizens have reason to be optimistic. The report stated that 13% of municipalities in the survey reporting a fully operational smart cities initiative, and 31% have some sort of pilot underway.

Blockchain and Cybersecurity

What is Blockchain technology?

Blockchain technology has a large potential to transform business operating models in the long term. The use of blockchain technology promises to bring significant efficiencies to global supply chains, financial transactions, asset ledgers and decentralized social networking. What is blockchain technology?

Blockchain technology enables the storage of information across a network of personal computers, making the network that only decentralized but distributed. This means that no central company or person owns the system yet everyone can use it and help run it. The use of NSA level encryption in the blockchain makes it very difficult for any one person to take down the network or corrupt it.

Where are some of the market opportunities for Blockchain technology?

According to Grand View Research, the global blockchain technology marketplace is expected to reach \$7.74 billion by 2024. Here are a few of the verticals that will be leading the way:

- **Smart Contracting.** Financial derivatives to insurance premiums, breach contracts, property law, credit enforcement, financial services, legal processes and crowdfunding agreements
- **Supply Chain Auditing.** Blockchain based tags on products and goods to prevent tampering
- **Internet of Things.** Autonomous vehicles
- **Healthcare.** Disaster relief, recordkeeping, network connectivity and information, and privacy
- **Finance.** Infrastructure for cross border transactions, digital assets as a class, regulatory reporting and compliance
- **Energy.** Verifying transactions on the edges of the electrical grid

What role does Blockchain technology play in cybersecurity?

Our national security and national economic growth ecosystems have become increasingly reliant on technology (especially internet connected technology). The infusion of technology has allowed us to make great strides in those ecosystems. With reward comes risk. The increased dependency on technology has created gaps and opportunities that cyber attackers can exploit. Blockchain technology provides great promise to help address these cyber concerns.

What role does blockchain technology play in cybersecurity? By storing data across its network, the blockchain eliminates the risks that come with data being held centrally. Blockchain security methods use encryption technology. The technology is based on the concept of public and private “keys”. The public key (a long series of random numbers) is the users’ address on the blockchain. The private key is equivalent to a password which gives its owner access to digital assets. Utilization of the private key eliminates the human factor from the authentication process, ensuring that a significant attack target is now not part of the equation. All of this can help secure internal communications, which are prone to leaks and hacks. The metadata that represents the internal communication is spread throughout the distributed ledger. Widely adopted blockchain technology can reduce the rapid growth of data breaches. Blockchain technology self-audits every 10 minutes by reconciling every transaction in these intervals.

Blockchain technology also helps with the integrity of the data because only people within the chain can access the data. Since there is a public history of all transactions, it is virtually impossible to go back to fraudulently impact the data. The decentralized network provides consensus between parties for their identification. What is the potential of blockchain technology? The bitcoin blockchain, operating since 2008, has not had a significant disruption.

The U.S. military is considering incorporating blockchain technology to help prevent mega-hacks, tampering and cyber-hijackings of vehicles, aircraft or satellites. The U.S. military has a significant reliance on foreign supply chains so the utilization of blockchain technology can alleviate a lot of the uncertainty regarding the foreign supply chain ecosystem.

An increasingly open and transactional electric grid edge is forcing the U.S. Department of Energy to bolster electricity network defenses with blockchain technology. Last month, DOE embarked on a multi-million-dollar effort to develop blockchain cybersecurity technology to help secure distributed energy resources at the grid’s edge. One of the key goals of the initiative will be to develop a keyless signature infrastructure (KSI) based on ClockChain. The KSI would be used to verify exchanges within a grid edge energy-delivery system.

How to Leverage Press & Social Media

Dear CompTIA DC Fly-In Participant:

An important part of the DC Fly-In is informing your local community about your advocacy efforts on key issues. After all, policymaking and advocacy takes place in communities around the country, not just in the Capitol. To that end, we have prepared the following draft and template materials that you can use as a guide for your own efforts:

- **Local press release** to announce to your local business and technology reporters your participation and recap key issues affecting the tech sector and your local economy.
- **Sample letters to the editor** that you can submit to your local paper and business journals to express your advocacy of key policy issues impacting the tech sector and your local economy.
- **Sample blog posts** that you can post to your company website or submit as a guest post to local newspapers, online hubs and blogs (including our issue one-pagers that can be found within this briefing book.)
- **Sample social media posts** for you to post to your corporate or individual Twitter, Facebook and LinkedIn accounts or groups to let others know about your activities and views. These can link to CompTIA white papers, blog posts and other information explaining policy positions in more detail.

As you know, our top issues as we prepare for the 2018 legislation season are: the CHANCE in Tech Act, cybersecurity, privacy, tax reform, broadband access, the use of new and emerging technologies and global trade issues that are central to our industry.

If you are interested in active media outreach and need more assistance, please contact Preston Grisham pgrisham@comptia.org. We will be happy to talk more with you about how you can leverage the Fly-In for more press coverage.

Thank you for being an advocate for the tech sector. See you at the 2018 CompTIA DC Fly-In!

Sample Press Release

[LOCAL BUSINESS LEADER] Heads to DC to Advocate for [LOCALITY OR STATE] Tech Industry

Workforce Development, Cybersecurity, Privacy, Tax Reform, Broadband Access, New and Emerging Technologies and Global Trade are central to our industry

CITY, STATE, February 12, 2018 – This week, [BUSINESS LEADER] from [COMPANY: hyperlink company name to company website] joined the CompTIA DC Fly-In to advocate for [STATE OR LOCALITY] technology sector priorities on Capitol Hill during the association’s annual fly-in to Washington, D.C. CompTIA, the Computing Technology Industry Association, through its advocacy arm, champions member-driven business and IT priorities that impact all information technology companies – from small managed solutions providers and software developers to large internet companies, equipment manufacturers, and communications service providers.

As a CompTIA DC Fly-In participant, [LEADER] will meet with [If more than one meeting, “Congressional representatives including NAMES OF LOCAL REPRESENTATIVES or if only one meeting, NAME OF LOCAL REPRESENTATIVE] to focus their attention on policies that develop skills for the 21st century workforce; advance tax and regulatory policies that spur innovation; establish U.S. leadership in secure internet-based platform technologies; support new and emerging technology platforms; address availability and delivery of broadband communications; and expand markets and advocate for sensible rules of global trade.

“Innovation in the tech sector is a key force behind a strong 21st century economy and Congress should prioritize issues that affect technology companies in our region,” said [LEADER of COMPANY]. “One of the most important issues facing the technology industry today is the availability of a skilled workforce. CompTIA has been strongly supportive of the CHANCE in Tech Act, that streamlines the skilled apprenticeship program for the technology industry. We will share with our elected officials the importance of internships and apprenticeships as an avenue to train the next generation of IT workers and incentivize educators, students, and employers to adopt alternative education models that will spur economic growth.”

“We look forward to the 2018 legislative agenda and remain encouraged by the conversations on Capitol Hill about issues critical to our membership,” said Todd Thibodeaux, president and CEO of CompTIA. “We will work closely with congressional leaders to push legislation that boosts the digital economy and fosters American innovation.”

[This section is for including more personalized information about a specific issue area that you may want to focus on.] In addition, [LEADER] is concerned about [SPECIFIC ISSUE] that directly affects [COMPANY].

The Fly-In runs February 13-14, 2018. For more information on CompTIA’s advocacy efforts, visit <https://www.comptia.org/advocacy>.

About [YOUR COMPANY]

[Insert short summary of the company]

CompTIA: Building the Foundation for Technology's Future

The Computing Technology Industry Association (CompTIA) is the world's leading technology association, with approximately 2,000 member companies, 3,000 academic and training partners, over 100,000 registered users and more than two million IT certifications issued. CompTIA's unparalleled range of programs foster workforce skills development and generate critical knowledge and insight – building the foundation for technology's future. Visit CompTIA online, Facebook, LinkedIn and Twitter.

About CompTIA Advocacy

Through its advocacy arm, CompTIA champions member-driven business and IT priorities that impact all information technology companies – from small managed solutions providers and software developers to large equipment manufacturers and communications service providers. CompTIA gives eyes, ears and a voice to technology companies, informing them of policy developments – and providing the means to do something about it.

Sample Letters to the Editor

Dear Editor,

The information technology industry relies on a robust and innovative workforce that allows companies like mine to grow and stay ahead of the curve. Many of these companies across the country as well as right here in [LOCALITY OR STATE] struggle to find the qualified talent needed to fill open positions. With the growing demands on cybersecurity, the Internet of Things (IoT), and our overall reliance on technology, these skilled workers are going to be in even higher demand in years to come. Next week, I will be in Washington, D.C for a “fly-in” organized by CompTIA which advocates on behalf of the tech community. I will have the opportunity to meet with our elected members of Congress and share my concerns about our next generation of IT workforce.

We will talk with members of Congress about the importance of the CHANCE in Tech Act. This legislation will streamline the skilled apprenticeship program and make it easier for organizations to train the next generation of technology workers. Many of the skills necessary to fill these high-skilled positions do not require a four-year degree but rather can begin in K-12, continue into community college and include a variety of industry-recognized certifications. I am looking forward to working with our congressional leaders to find a solution to our growing IT skills gap problem.

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Dear Editor,

As Congress works to boost the economy, it is important they understand the importance of high-skilled immigration reform. In addition to training and educating our own citizens, being able to recruit from top talent around the world is one of the elements that has kept the U.S. IT industry competitive here and abroad. Yet, our colleges and universities continue to educate and train some of the best and brightest in the world only to send them back to their home country to develop future technologies that could have been built in the U.S.

Next week, I will be in Washington, D.C for a “fly-in” organized by CompTIA which advocates on behalf of the tech community here in [LOCALITY OR STATE] as well as around the country. I will have the opportunity to meet with our elected members of Congress and share my concerns about this growing problem and a need for a permanent solution.

Any immigration reform legislation should make it easier for businesses to recruit and retain high-tech workers in an effort to close the skills gap and remain globally competitive. Our current immigration system is severely limiting our ability to attract and retain the high-skilled talent who are a key part of driving innovation and growth for our nation’s economy. The preferred and lasting path for Congress and the White House is to work together to both increase training and education for Americans as well as address the insufficient number of temporary work visas and employment-based green cards. Additionally, such an effort also must recognize the role that foreign-born entrepreneurs play in our ecosystem and encourage them to thrive and create new businesses and jobs right here in America.

Dear Editor,

IT economic expansion rests on the creation of new and innovative business models that leverage Internet-based platforms that are trusted, secure, and accessible.

As Congress considers cybersecurity legislation during 2018, it is critical that [\[YOUR STATE'S FEDERAL LAWMAKER NAMES\]](#) keep our needs in mind. Next week I will be in Washington, D.C for a “fly-in” organized by CompTIA which advocates on behalf of the tech community. I will have the opportunity to meet with our elected members of Congress to make sure our leaders understand that it is important for the U.S. to be the leader in secure internet-based platform technologies.

The threats to our nation’s critical infrastructure are continually growing, and our capacity as a nation to protect critical U.S. infrastructure from cyberattacks must remain at the forefront of the minds of policymakers in Washington. Recent high-profile attacks promulgated by nation-states and terror organizations only increase the urgency to improve our national threat awareness and cybersecurity readiness.

As Congress starts to consider cybersecurity legislation, we urge them to adopt a more robust approach to punishing criminals by giving law enforcement the tools needed to deter and defend against identity theft, as well as the pilfering of proprietary and financial information. We support the inclusive nature of a plan that will extend threat-sharing beyond organizations with adequate resources and reach small- and medium-sized businesses that support the critical infrastructure supply chain.

We also believe that organizations acting in good faith should be incentivized to partner with the federal government — which has the ultimate responsibility of safeguarding personal data when disseminating threat codes.

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Dear Editor,

Advancements in cloud computing, mobility, M2M, unified communications platforms, and other internet-based applications are rapidly creating new opportunities for economic advancement while also raising a host of new public policy considerations.

As Congress supports new and emerging technology platforms through thoughtful policy during 2018, it is important that Congressional leaders keep our needs in mind. Next week I will be in Washington, D.C for a “fly-in” organized by CompTIA which advocates on behalf of the tech community. I will have the opportunity to meet with our elected members of Congress to make sure our leaders understand that it is important to support new and emerging technology platforms.

We encourage Congress to support industry-led standards for consumer data privacy as opposed to passing legislation mandating specific regulations on data collection, usage and storage.

Dear Editor,

The internet is the infrastructure of the global economy. To ensure innovation, economic growth, and free flow of information, it is imperative that we keep the internet open, encourage deployment of new, faster broadband networks and find ways to get more Americans online.

As Congress considers broadband legislation during 2018, it is critical that [YOUR STATE'S FEDERAL LAWMAKER NAMES] keep the IT industry's needs in mind. Next week I will be in Washington, D.C for a "fly-in" organized by CompTIA which advocates on behalf of the tech community. I will have the opportunity to meet with our elected members of Congress to make sure our leaders understand that it is important to address the availability and delivery of broadband communications.

We support transparency, no-blocking and non-discrimination rules Under Sec. 706 of the Communications Act or through Congressional action. We support policies that improve broadband competition by encouraging and removing barriers to the deployment of high-speed broadband networks.

We promote policies to wire more American communities and to increase broadband adoption and advocate for policies to make more spectrum available for both licensed and unlicensed use. Specifically, we advocate for implementing incentives to encourage government spectrum users to share, sell or lease their spectrum.



Dear Editor,

Approximately 95% of the global market for goods and services resides outside of the United States and yet just 1% of U.S. businesses export to other countries. The rules of trade – export and customs regulations, fair and reciprocal treatment, transparency – impact the flow of goods and services that make up the supply chain of technology products that meet the needs of businesses and consumers.

As Congress considers global trade legislation during 2018, it is critical that [YOUR STATE'S FEDERAL LAWMAKER NAMES] consider the impact trade has on the tech industry and on the U.S. jobs it supports. Next week I will be in Washington, D.C for a "fly-in" organized by CompTIA which advocates on behalf of the tech community. I will have the opportunity to meet with our elected members of Congress to make sure our leaders understand the need for trade deals that expand markets and establish sensible rules of global trade.

We support trade policies that create a level playing field for technology companies to compete in the global marketplace and provide their goods and services to consumers at home and abroad.

Sample Social Media Posts

Hashtag: #CompTIAFlyIn

Twitter

Before Fly-In

- I'll be at the @CompTIAAdvocacy #CompTIAFlyIn Feb 13-14 to talk #tech policy priorities. Stay tuned for updates.
- Heading to #DC tomorrow to the @CompTIAAdvocacy #CompTIAFlyIn to advocate for the #CHANCEinTech Act, among other key tech issues.
- Looking forward to the @CompTIAAdvocacy #CompTIAFlyIn Feb 13-14 to meet lawmakers who make long-lasting impact on #tech jobs
- Excited to meet with @CONGRESSIONAL LEADER to discuss #CHANCEinTech, #ITSkillsGap, #workforcedevelopment, #cybersecurity, #broadband, #globaltrade, #CompTIAFlyIn

At Fly-In

Feel free to tweet a picture you may take at the Fly-In along with these tweets.

- Just kicked off the #CompTIAFlyIn. Excited to champion vital #tech policy priorities like #CHANCEinTech.
- Working with @CONGRESSIONAL LEADER @CompTIAAdvocacy #CompTIAFlyIn to advocate for #tech & tech jobs
- I'm at the @CompTIAAdvocacy #CompTIAFlyIn with @CONGRESSIONAL LEADER advocating on behalf of #tech jobs
- At the @CompTIAAdvocacy #CompTIAFlyIn meeting with other #tech advocates and Congressional lawmakers.
- At the @CompTIAAdvocacy #CompTIAFlyIn. Great opportunity to chat with fellow colleagues about #tech policy issues.

After Fly-In

- Back from #DC after the @CompTIAAdvocacy #CompTIAFlyIn. Great conversations about issues affecting #tech jobs
- Appreciate the time taken by @CONGRESSIONAL LEADER last week to meet with us on key #tech policy issues. #CompTIAFlyIn



LinkedIn/Facebook

Note, that LinkedIn doesn't support hashtags, so you can delete the "#" in the posts.

For use before the Fly-In:

- While at the @CompTIAAdvocacy #CompTIAFlyIn in DC [NEXT WEEK], I plan on meeting with @CONGRESSIONAL LEADER to discuss [ISSUE].
- I'm going to the @CompTIAAdvocacy #CompTIAFlyIn on behalf to discuss the CHANCEinTech Act, and making it easier for organizations to hire workers and train them for 21st century jobs. #ITSkillsGap #innovation



Sample Blog Posts

[COMPANY/NAME AND/OR TITLE OF FLY IN ATTENDEE] Visits Washington to Champion IT Industry Priorities

Businesses like mine are the lifeblood of our national economy. They employ more than half of the country's private sector workforce.

[COMPANY] is proud to be part of the economy right here in [LOCALITY or STATE]. We employ professionals with [SECTOR EXPERTISE AREA] and contribute to our local economy through [EXAMPLE].

I was thrilled to join forces with fellow IT colleagues to advocates in Washington, D.C., on February 13-14, to speak with Members of Congress about issues that are critical to the future of my business and the overall tech industry.

The annual "fly-in" is organized by CompTIA to advocate on behalf of the tech community. CompTIA, the Computing Technology Industry Association, represents technology companies of all sizes and is committed to expanding market opportunities, helping companies create jobs, and enhancing the competitiveness of the U.S. technology industry around the world.

Innovation is a key force behind a strong 21st century economy, and our leaders should prioritize issues that affect growing companies like [COMPANY].

While in Washington I visited [CONGRESSIONAL LEADER]'s office to advocate on tax reform, workforce development, cybersecurity, broadband communications and digital privacy—all are central to our industry. These legislative issues are key ingredients for helping technology firms like ours to become more competitive.

I particularly discussed with my elected officials the importance of:

[CHOOSE FROM THE ISSUE ONE PAGERS BEGINNING ON PAGE 18 TO INCLUDE IN YOUR BLOG POST, BUT PICK JUST ONE PER BLOG POST SO AS NOT TO OVERWHELM YOUR READERS]

Hill Meeting Best Practices

During your visit to Washington, D.C. you will attend numerous meetings on the Hill. Whether these meetings are with staff or Members of Congress, it is important to remember a few important tips:

The dress code is business professional.

- When Congress is in session, the office dress code is business professional.
- Most people attending meetings follow that same dress code.

You will be provided a schedule of all your meetings – make sure to arrive to the offices a few minutes early.

- The detailed schedule will contain locations of all your meetings.
- There are three House office buildings – Cannon, Longworth and Rayburn.
- There are three Senate office buildings – Dirksen, Hart and Russell.
- Remember, there are security screenings at each building entrance. Plan for extra time to get through security.

Be prepared.

- Read over the biography of the Member, where they are from, and their key issues and positions.
- Detailed information on the Members will be provided by CompTIA.

If the Member of Congress is in attendance, address them as “Congressman,” “Congresswoman,” or “Senator.”

- In many cases you will be meeting with a member of the staff; however, these staff members are responsible for representing their boss and providing them will all necessary information on important topics.
- Remember to stay on message throughout the meeting; focus on the issues you came to discuss.
- You will be provided with all the necessary messaging information prior to your meeting by CompTIA staff.

Leave contact information and any materials you have brought with you as leave-behinds.

- You will be provided any necessary leave-behind materials prior to your meetings.

Remember to thank them for the meeting as you are leaving!

- Also, thank them again via email or a handwritten note later.
- A second thank you allows you to not only show your appreciation for their time, but to remain in contact.

Provide CompTIA staff with any outstanding questions or follow-up materials requested by the staff.

Frequently Asked Questions

Q. How do I identify the buildings where my meetings are located?

A. We will be providing you with a comprehensive schedule of all your meetings. Meetings in House offices will be in the Rayburn Building, Longworth Building and Cannon Building. Meetings in the Senate will take place in the Hart Building, Dirksen Building and Russell Building. All of these buildings have security procedures that include metal detectors. Therefore, plan for some additional time to enter buildings. All Senate buildings are connected internally and all House buildings are connected internally. Therefore, if you have multiple meetings in House offices, for example, you will not have to reenter security. One thing to note: House offices have a numeric system that identifies not only the room number but the building as well. Room numbers in the Cannon Building are three digits (e.g. 234, located on the second floor). Room numbers in the Longworth Building are four digits and begin with the number 1 (e.g. 1234, located on the second floor, as the “1” only signifies the building, not the floor). Room numbers in the Rayburn Building are four digits and begin with the number 2 (e.g. 2434, located on the fourth floor, as the “2” only signifies the building, not the floor).

Q. Am I able to watch the House and Senate floor proceedings live?

A. Yes. All visitors to the Capitol complex can visit the House and Senate chambers to watch debates and votes whenever the House and Senate are in session. In order to gain access to the viewing galleries, you must obtain a “gallery pass” from your Member of Congress or Senator. Simply visit their office and ask a member of their staff for a House or Senate gallery pass. They also should be able to guide you toward the appropriate entrance to the Capitol.

Q. I need some additional information on an issue. With whom should I speak?

A. The CompTIA Public Advocacy team is happy to provide you with a further briefing or briefing materials on policy issues prior to your D.C. visit or after you arrive. Please contact Mary Artes at martes@comptia.org if you need additional information or data on any issue. Additionally, CompTIA staff will be providing in-person briefings prior to the meetings as part of the DC Fly-In program.

Q. How long do meetings traditionally last on Capitol Hill?

A. Meetings are generally scheduled in 15-30 minute blocks with staff. However, meetings are sometimes shorter based on votes and Committee hearings, which can be very unpredictable.

Q. Will I be attending meetings alone?

A. No. We have set up meetings in a manner that sends small groups of CompTIA members to multiple meetings together in an effort to increase our voice and allow our issues to be elevated on Capitol Hill.

Q. Who should lead the meeting?

A. Members of Congress, Senators, and their Staff are primarily focused on the opinions and priorities of their constituents. Therefore, if there is a constituent in the meeting, they should lead the meeting and identify himself or herself as a constituent at the start of the meetings. It will then be important for all of the other attendees to introduce themselves and provide a very short background on their company and where they are located prior to a discussion on the issues.

Q. Are there issues we should not mention in a Congressional office?

A. Yes. Congressional offices are legally separated from campaign offices and, therefore, Members of Congress and their staff are prohibited from discussing or coordinating any campaign activity from their offices. Therefore, it is important that you not mention their campaigns and/or discuss any interaction you may have had with their campaign offices.

Q. Why am I scheduled to meet with a staff member instead of a Member of Congress or Senator?

A. When Congress is in session, Members of Congress and Senators have a variety of responsibilities, including: votes, committee hearings, and numerous policy and constituent meetings. Therefore, obtaining a meeting with the Member of Congress or Senator is often not possible due to scheduling conflicts. However, staff members are responsible for representing their boss and providing Members of Congress and Senators with senior-level guidance on policy issues. They play a significant role in the Congressional office, working on the issues that are important to our industry. Therefore, meetings with staff are important and your message will be appropriately communicated to the Member of Congress.

Q. How do I address a Member of Congress or Senator in a meeting?

A. Traditionally, you address a Member of Congress a “Congressman” or “Congresswoman.” You address a Senator as “Senator.” However, if the Member of Congress or Senator is the Chair of a Committee (which will be noted on your schedule), you address them as “Chairman” or “Chairwoman.”

Q. What if I get asked a questions that I don't know the answer to?

A. This is not a problem. You can simply tell the Member of Congress or their staff that you will go back, discuss the matter with CompTIA staff, and provide additional follow up on the question. This also provides you with an excellent opportunity to continue the dialogue with that office.

Q. Would it be possible to attend other meetings if there are gaps in my schedule?

A. Yes, all participants will be provided with a master schedule will all meetings throughout the day. You are welcome to join a meeting that you are interested in as long as it doesn't interfere with your own schedule. Make sure to connect with the group early and make sure they are aware you will be attending the meeting with them.

Q. What should I do if a policymaker either commits to supporting an issue or highlights his or her opposition to the issue?

A. All information from a meeting is helpful to CompTIA staff as they continue to work on these issues throughout 2018. Intelligence from a meeting – including support or opposition to a meeting – is critical information that will ensure we follow-up with the office and know where they stand on our issues.

Q. How should I dress for my meetings on Capitol Hill?

A. As you will be visiting Congress while the House and Senate are in session, offices will be dressed in business attire. Most people attending meetings in these offices generally follow those same guidelines.

Q. If I have a medical issue on Capitol Hill, who should I call?

A. All House and Senate buildings have a nurse that attends to medical issues of staff and visitors. Should you need to visit the nurse while on Capitol Hill, call (202) 224-3121 and ask to be connected to the nurse's station in the building you are currently located.

Q. Are there areas to purchase food and drinks in the House and Senate office buildings?

A. Yes. In the House, there are cafeterias located in the Longworth and Rayburn Buildings on the basement levels. The cafeteria on the Senate side is located in the basement of the Dirksen Building. All buildings in the House and Senate have additional food options, which are usually located in the basement.

Q. Where is the closest Metro to my meetings?

A. On the House side, the Capitol South metro station (Orange/Blue Lines) is located just outside of the Cannon Building. On the Senate side, the closest metro station is located within Union Station (Red Line).

Q. If I need to do some work between meetings, where should I go?

A. The House of Representatives has Wi-Fi in their cafeterias and eating locations in each building.

Important Contacts

Below is important contact information during your stay in Washington, D.C. Please don't hesitate to contact CompTIA staff at any point for general information, additional briefing materials or scheduling questions.

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Thank you to participating State Technology Councils
and TECNA for your support of this year's event!

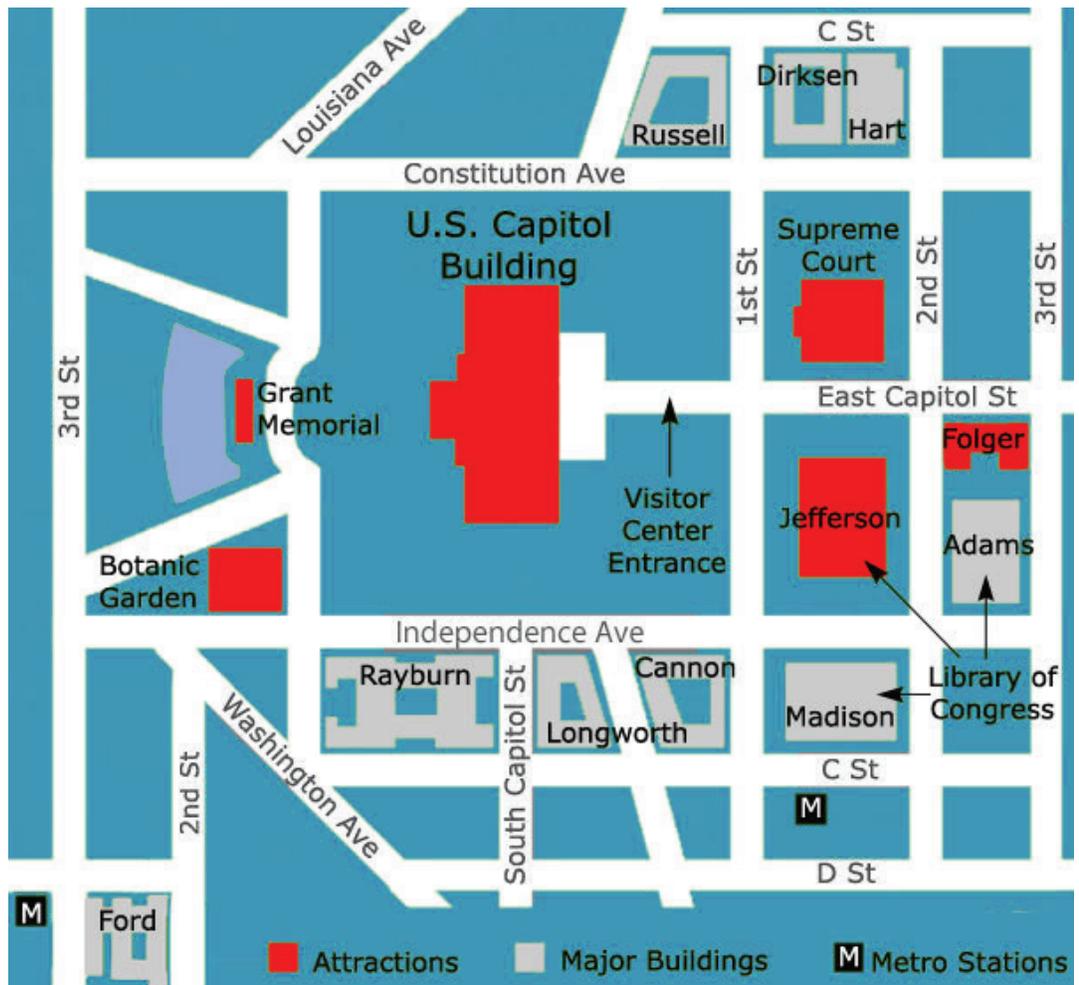
Transportation to Washington, DC

There are a number of transportation options for sightseeing and traveling throughout the city or heading to the airport.



Capitol Hill

The map below is an outline of Capitol Hill. Please note the Senate buildings in the top right hand corner and the House Offices in the bottom center of the map.



Meet the DC Fly-In Speakers

Amanda Ahlstrand

Administrator for the Office of Workforce Investment at the Employment and Training Administration, Department of Labor



Amanda Ahlstrand is the Administrator for the Office of Workforce Investment at the Employment and Training Administration. In this role, she is responsible for overseeing five divisions and their programs with the goal of implementing an integrated national workforce investment system that supports economic growth and provides workers with the information, advice, job search assistance, supportive services, and training in demand industries and occupations needed to get and keep good jobs. Before becoming Administrator in December, 2013, she served as the Acting Administrator for the office starting in October 2011.

Ahlstrand joined ETA in January 2003 as part of the Performance and Results Office, working across program offices to implement the common performance measures and providing training to the field on that topic. She joined OWI in Spring 2006 as part of the Business Relations Group, working with her team to facilitate employer engagement with the workforce system and implement a number of competitive grant programs including the Trade Adjustment Assistance Community College and Career Training grants, H1B Technical Skills Training grants, the ARRA competitive grants, and Community Based Job Training Grants.

Prior to joining ETA in 2003, Ahlstrand worked for a private consulting firm, the U.S. Government Accountability Office, and the American Society for Training and Development. She has a Bachelor of Arts degree in Economics and Sociology from the University of Notre Dame and a Master of Public Policy degree from Georgetown University.

Christopher Bates

Senior Counsel to Senator Orrin G. Hatch on the Senate Judiciary Committee



Christopher Bates serves as Senior Counsel to Senator Orrin G. Hatch on the Senate Judiciary Committee with primary responsibility for technology issues and intellectual property. Prior to working in the Senate, Bates was a litigation associate at Sidley Austin LLP in Washington, D.C., where he focused on commercial litigation, white collar, and appeals. Prior to joining Sidley, he served as a law clerk to the Honorable Thomas B. Griffith of the U.S. Court of Appeals for the D.C. Circuit. He graduated magna cum laude from Harvard Law School, where he served as the Managing Editor of the Harvard Law Review. He holds a B.A. in Political Science from Brigham Young University.

Charles Cooper

Executive Vice President, Signal Group



At SIGNAL, clients entrust Charles Cooper with solving the toughest challenges they face before government. He's earned that trust, after more than a decade of senior experience on Capitol Hill, helping clients understand the political landscape so they can effectively position their priorities in front of Congress and the Administration. As the leader of SIGNAL's retail practice, Cooper advises his clients on how to successfully navigate complex policy and regulatory challenges. He also helps a broad variety of Fortune 100 companies, trade associations and non-profits protect the reputations of their brands on Capitol Hill and with consumers.

Before joining SIGNAL in 2010, Cooper served as Chief of Staff to Rep. Adam Putnam (R-FL) and worked in several senior roles within Republican leadership, including Policy Director at the House Republican Conference and Chief of Staff to the Republican Policy Committee. As Legislative Director for Rep. Mario Diaz-Balart (R-FL), he oversaw the Congressman's input on the Budget Committee and the Transportation and Infrastructure Committee. Cooper began his career in the U.S. Senate. A native of Naples, FL, he holds a BA in political science and history from the Southern Methodist University in Dallas, TX. Here at SIGNAL, he also heads up our charitable initiatives.

Steve Coran

Attorney Member, Lerman Senter PLLC



Stephen Coran is the Chairman of the firm's Broadband Practice Group and serves on its Management Committee. His practice focuses on the representation of broadband providers, equipment and technology companies, and new technology firms, serving their policy, transactional, compliance and licensing needs. He actively represents a trade association before the FCC, Congress and other federal agencies in matters involving spectrum policy, internet regulation, the Universal Service Fund and other proceedings affecting wireless broadband service providers and other wireless technology interests. Coran has extensive experience in negotiating complex, multi-party transactions for the purchase, sale and financing of established and start-up communications businesses, and also drafts and negotiates spectrum lease, tower lease, dark fiber and other agreements. He has also represented financial institutions and foreign companies in connection with public and private investments. Coran also advises on regulatory compliance and FCC enforcement matters.

David Goldman

Chief Counsel

House of Representatives Communication and Technology Subcommittee



David Goldman has been the Chief Counsel for the House of Representatives Communication and Technology Subcommittee since January 2015. Before that he served as the Senior Legal Advisor for FCC Commissioner Jessica Rosenworcel. He was the Commissioner's chief advisor on issues of policy, strategy, public relations, and office operations. In addition, he had primary substantive responsibility for wireless, international, and public safety issues.

He joined Commissioner Rosenworcel's office from the United States Senate Committee on Commerce, Science, and Transportation, where he served on detail as Counsel to the Subcommittee on Communications, Technology, and the Internet.

Prior to serving on Capitol Hill, Goldman served in a number of positions at the FCC, including in the office of Chairman Genachowski and as a Policy Advisor to the Chief of the Wireless Telecommunications Bureau. He joined the agency as an Honors Attorney, serving as Attorney Advisor in the Spectrum Competition and Policy Division of the Wireless Telecommunications Bureau. Before this, he served as Staff Law Clerk at the United States Court of Appeals for the Seventh Circuit in Chicago. He also worked as an associate at the law firm Hughes Hubbard & Reed in New York. He received his law degree from the University of Pennsylvania and his undergraduate degree from the University of Florida.

Kelsey Guyselman

Telecommunications & Technology Policy Advisor

White House Office of Science & Technology Policy



Kelsey Guyselman is the Telecommunications and Technology Policy Advisor in the White House Office of Science and Technology Policy, responsible for advancing the President's technology and innovation priorities. Her portfolio includes broadband, spectrum, and other telecommunications issues. Previously, she was counsel to the U.S. House of Representatives Committee on Energy and Commerce, where she advised the Chairman on communications and technology matters, and law clerk at CTIA-The Wireless Association. She graduated from Ohio Wesleyan University with a degree in Journalism and Political Science, and has her JD from the Catholic University of America's Columbus School of Law, where she also received a Certification in Communications Law Studies.

Amy Davine Kim

Global Policy Director and General Counsel, Chamber of Digital Commerce



Amy Davine Kim is the Global Policy Director & General Counsel for the Chamber of Digital Commerce. Prior to joining the Chamber, she advised financial institutions, blockchain-based companies, marketplace lenders, investors, and innovators on their compliance obligations under financial services laws, in particular, the Bank Secrecy Act and anti-money laundering requirements, the regulations and sanctions programs administered by the Office of Foreign Assets Control, state money transmitter laws implemented by state banking departments, and related consumer financial protection laws administered by the CFPB. She is a regular speaker on these issues, particularly as they relate to blockchain-based businesses and technologies.

David Logsdon

David Logsdon, Senior Director, Public Advocacy at CompTIA



David Logsdon is the senior director, public advocacy, CompTIA. In this role, he runs the association's Space Enterprise Council. He also represents the aerospace industry on the Department of Commerce International Trade Advisory Committee on Aerospace.

Logsdon also runs CompTIA's New and Emerging Technologies Committee (focused on the policy surrounding social, mobile, big data/data analytics, cloud, internet of things, and smart cities). He was also the staff lead for TechAmerica's federally focused technology convergence commission which examined the impact on the public sector when social, mobile, analytics, and cloud converge. Logsdon was instrumental with the creation of regional big data collaboration hubs, bringing together federal/state/local government, private industry, non-profits, and academia to work with big data to help address issues of national importance.

Prior to TechAmerica, Logsdon ran the Space Enterprise Council, based at the US Chamber of Commerce. During his time at the Chamber, he served on the National Space-Based Positioning, Navigation and Timing (PNT) Advisory Board, providing independent guidance to both the Secretary of Defense and Secretary of Transportation on policy, planning, program management and funding profiles in relation to the current state of national and international satellite navigation services. Logsdon also worked at the Aerospace Industries Association where he was second in command for the Association's Space Council.

He holds a master's degree from the George Washington University Graduate School of Political Management in political management and a bachelor's degree from the University of Delaware in criminal justice. He is the author of the Brown University Journal of World Affairs article "America's Aerospace Workforce at a Crossroads".

Jeanette Manfra

Assistant Secretary for the Office of Cybersecurity and Communications, Department of Homeland Security



Jeanette Manfra serves as the National Protection and Programs Directorate (NPPD) Assistant Secretary for the Office of Cybersecurity and Communications (CS&C). She is the chief cybersecurity official for the Department of Homeland Security (DHS) and supports its mission of strengthening the security and resilience of the nation's critical infrastructure. Prior to this position, Manfra served as Acting Deputy Under Secretary for Cybersecurity and Director for Strategy, Policy, and Plans for the NPPD. Previously, she served as Senior Counselor for Cybersecurity to the Secretary of Homeland Security and Director for Critical Infrastructure Cybersecurity on the National Security Council staff at the White House. At DHS, she held multiple positions in the Office of Cybersecurity and

Communications, including advisor for the Assistant Secretary for Cybersecurity and Communications and Deputy Director, Office of Emergency Communications, during which time she led the Department's efforts in establishing the Nationwide Public Safety Broadband Network. Before joining DHS, Manfra served in the U.S. Army as a communications specialist and a Military Intelligence Officer.

Michael O'Rielly

Commissioner, Federal Communications Commission



Michael O'Rielly was nominated for a seat on the Federal Communications Commission by President Barack Obama and was sworn into office in November 2013. In January 2015, he was confirmed and sworn into office for a second term, which extends until June 30, 2019. Prior to joining the agency, Commissioner O'Rielly spent almost 20 years working in prominent Republican communication policy and leadership positions for the U.S. House of Representatives and the U.S. Senate. Most recently, he served as a Policy Advisor in the Office of the Senate Republican Whip, led by U.S. Senator John Cornyn (R-TX). Commissioner O'Rielly received his B.A. from the University of Rochester.

Brent Parton

Deputy Director, Center on Education and Skills, New America



Brent Parton is the deputy director of the Center on Education and Skills with the Education Policy program at New America. The Center is dedicated to building learning-based pathways to economic opportunity that can begin inside or outside of formal higher education. His work focuses on federal and state policies to scale those pathways, and ensure their quality and relevance within an evolving economy. Prior to New America, Parton served as a senior policy advisor at the U.S. Department of Labor. There he advised leadership on a range of skills issues including the expansion of apprenticeship, the design of investments in regional industry-workforce partnerships, and enhancing federal interagency coordination on skills initiatives. Parton has a bachelor's degree in history and a master's degree in international education policy, both from Vanderbilt University, where he is also an adjunct professor.

Charla Rath

Vice President, Wireless Policy Development
Verizon



Charla Rath joined Verizon in January 2010 as Vice President – Wireless Policy Development, where she leads a team engaged in the development of Verizon's public policy positions on long term spectrum policy issues. Previously, as Executive Director – Spectrum and Public Policy at Verizon Wireless, Rath worked with the company's business development and network planning groups to address policy and regulatory issues related to the acquisition of spectrum.

Prior to joining Verizon Wireless, Charla was Vice President – Strategic Affiliations, of NextWave Telecom Inc. and Vice President of Freedom Technologies, Inc., a Washington, DC-based telecommunications consulting firm. Rath also served as advisor to FCC Chairman Alfred C. Sikes on common carrier and spectrum policy issues and as a primary specialist in spectrum and internet policy at the National Telecommunications and Information Administration.

Charla is a member of the Commerce Spectrum Management Advisory Committee, which advises the Assistant Secretary for Communications and Information at NTIA on a broad range of spectrum policy issues. She has an M.A. in science, technology, and public policy from The George Washington University and a B.S.F.S. (Foreign Service) in international economics and finance from Georgetown University.

Jeremy Robbins

Executive Director, New American Economy



Jeremy Robbins is the executive director of New American Economy, a bipartisan coalition of more than 500 CEOs and mayors making the economic case for immigration reform. Robbins previously worked as a policy advisor and special counsel in the Office of New York City Mayor Michael Bloomberg, a judicial law clerk to the Honorable Robert Sack of the United States Court of Appeals for the Second Circuit, a Robert L. Bernstein International Human Rights Fellow working on prisoner rights issues in Argentina, and a litigation associate at WilmerHale in Boston where, along with working on general corporate litigation matters, he was part of the firm's team representing six Bosnian men detained at Guantanamo Bay, Cuba, in cases before the U.S. Supreme Court, the European Court of

Human Rights, and federal courts in Washington, D.C., and Massachusetts. He received a JD from Yale Law School and a BA in political science from Brown University.

Seth Robinson

Senior Director, Technology Analysis, CompTIA



Seth Robinson joined the CompTIA Research team in January 2011 as the Director of Technology Analysis. In this role, he focuses on the technology trends that are shaping the IT industry, as well as participate in research on macro trends and channel activity. The goal of this research is to produce intelligence that will help CompTIA member more accurately predict market behavior and align their business models and offerings. From a technology standpoint, he is particularly interested in the three trends of cloud computing, mobile technologies, and social applications are working together to change IT in the future.

Prior to joining CompTIA, he worked in processor design at IBM. His team build the chips for the gaming industry (Xbox360, Wii, and Playstation3). Through this work, he was able to see how customers were exploring advances in microprocessor design to capture a growing market in consumer electronics. This consumerization of technology is now making its way into the enterprise, making for a challenging environment for traditional IT departments.

Matthew Starr

Director, Public Advocacy, CompTIA



Matthew Starr leads CompTIA's Federal Privacy and Broadband & Telecom Committees. He advocates on behalf of the tech industry to members of Congress and federal agencies on issues such as data security and privacy standards, broadband and spectrum access, and net neutrality. Prior to joining CompTIA, Starr served as a legal fellow at TechFreedom and the International Center for Law & Economics where he focused on issues such as net neutrality and access to wireless spectrum. Before working at TechFreedom and ICLE, he was a public policy fellow at Comcast.

Starr is a member of the New York State Bar, and received his J.D. from Catholic University in 2011 where he was enrolled in the Institute for Communications Law and was heavily involved in a number of organizations dedicated to legal issues in the Internet and technology sector. He received his BA in Economics from the University of Virginia.

Joel Waterfield

Director, State and Local Tax Practice, Grant Thornton



Joel Waterfield is a Managing Director within Grant Thornton's Atlantic Coast Market Territory for the State and Local Tax Practice. In addition, he serves as the National Tax Leader for the firm's Technology Industry Practice (TIP). He is experienced in all areas of state and local taxation with an emphasis on transaction taxes for diverse industries including high tech, manufacturing, utilities, construction, and retail. With over 20 years of experience with state and local taxes, Waterfield is considered the area expert in the District of Columbia, Maryland and Virginia, as well as an industry expert in the high-tech, telecom and government contracting fields. He received a B.A. from Virginia Wesleyan College.

Tracey Welson-Rossman

Founder, TechGirlz



Tracey Welson-Rossman is the founder of TechGirlz. She is also a founding member of, and chief marketing officer for, Chariot Solutions, a Philadelphia-based Java and open source software development and consulting firm. After graduating from Drexel, Welson-Rossman started her career in retail management and advertising sales. She learned about lead development, marketing, and distribution in these roles, but what she really learned was that she's an entrepreneur at heart. In 1996, she bought a New Jersey-based child transportation company called KangaKab. In 1999, with revenues at \$2.5 million and having started a branch in Pennsylvania, she sold KangaKab. As the director of sales and marketing for accounting software provider Skylight Systems, she developed and executed marketing and channel efforts around one of the first-ever hosted accounting products. This program supplemented the existing sales of RFS, Skylight's server based flagship product. It was very early on for the web-hosted software concept, but several firms began to use this product for their clients. Welson-Rossman is also the founder and current chair of the Emerging Technologies for the Enterprise Conference, (ETE), which is held in Philadelphia each year. ETE attracts world-renowned thought leaders in cutting-edge technologies and serves as a community forum for regional technology companies. She is one of the founding board members of Philadelphia Startup Leaders, a regional organization dedicated to growing technology startup businesses.

Darrell M. West

Vice President and Director, Governance Studies

Founding Director, Center for Technology Innovation



Darrell M. West is vice president and director of Governance Studies and holds the Douglas Dillon Chair. He is founding director of the Center for Technology Innovation at Brookings and Editor-in-Chief of TechTank. His current research focuses on educational technology, health information technology, and mobile technology. Prior to coming to Brookings, West was the John Hazen White Professor of Political Science and Public Policy and Director of the Taubman Center for Public Policy at Brown University. West is the author or co-author of 22 books and is the winner of the American Political Science Association's Don K. Price award for best book on technology (for Digital Government) and the American Political Science Association's Doris Graber award for best book on political communications (for Cross Talk). He has delivered many lectures in more than a dozen different countries around the world.

Michelle White

Director, Shared Services & IT Products Contract Operations, GSA



Michelle White has more than thirteen years of federal information technology procurement experience and is currently the Director of Shared Services and Information Technology Products Contract Operations in the Information Technology Category in the Federal Acquisition Services at GSA. She previously served as a contracting officer for multiple IT and telecommunications contracts at GSA. White graduated from N.C. State University in Raleigh, North Carolina and Miami University in Oxford, Ohio. She serves as the program manager for the distributed ledger technology project to automate the IT Schedule 70 FAST Lane proposal review process.



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