

Going Digital: OECD Insights for a Changing World

March 25, 2019 • Washington, DC

Going Digital: OECD Insights for a Changing World

AT&T Forum for Technology, Entertainment & Policy

March 25, 2019

8:30 am - 7:00 pm EST

Conference Summary

Welcome to the AT&T Forum for Technology, Entertainment & Policy:

Len Cali, Senior Vice President of Global Public Policy, AT&T, welcomed attendees from the OECD, Business at OECD (BIAC), USCIB member companies, U.S. government representatives, press and other to the conference at AT&T's Forum for Technology, Entertainment and Policy in Washington DC. Cali noted that AT&T is proud to host this conference to discuss issues of relevance in the "digital revolution." Cali also acknowledged that this conference was dedicated to the late Joe Alhadeff, who was Chief Privacy Strategist, Oracle, and a long-serving vice chair of the ICT Policy Committee. Cali praised Joe for his intelligence and dedication to the industry.

Peter Robinson, President and CEO, U.S. Council for International Business, thanked Len Cali for hosting the conference and for his leadership role on USCIB's Board of Directors and the USCIB Foundation Board. Robinson noted that this was USCIB's fourth collaboration with the OECD and Business at OECD focused on the digital economy; previous conferences were in 2014, 2015 and 2017. Robinson also thanked the conference sponsors: Facebook, Disney, Verizon, CenturyLink, CCIA -- and especially AT&T.

Robinson reflected on Joe Alhadeff's legacy, noting that USCIB hired Joe part-time in the mid-1990s as its first director of the electronic commerce and quickly became impressed with his background and knowledge. Robinson joked that Joe did his job too well during his time at USCIB because one of USCIB's members—Oracle Corporation—noticed him and made him an offer. Joe would go on to become a leader in the field.

Andy Wyckoff, Director, OECD Directorate for Science Technology and Innovation (STI), added his thanks to USCIB, Business at OECD and AT&T. Wyckoff echoed Robinson's remarks about this conference being the fourth in a series but pointed out that this was the first of its kind in honor of Joe Alhadeff. Wyckoff noted that 20 years ago, he wrote a background report for the [OECD's Ottawa Ministerial](#), which focused on the economic and social impact of e-commerce. The issues are still the same, according to Wyckoff. The 1998 conference explored the potential impact on jobs, issues related to access/usage, the changing nature of competition, and the social impact. He shared that it was at the 1998 Ottawa Ministerial that Joe Alhadeff really impressed him as a thought leader because he "read every word and commented in a very substantive way." Joe not only cared

about what would serve business interests, but also what would constitute better policies for better lives, Wyckoff said.

Russel Mills, Secretary General, Business at OECD (BIAC), echoed Wyckoff's points about the importance of highlighting the opportunities provided by digital transformation of the economy. Mills noted that while we recognize the risks and challenges presented by digitalization, the biggest risk is "missing out." He highlighted BIAC's priorities, pointing out that there has been progress on the "people side" of the digital economy (skills and learning) thanks to the focus of USCIB/BIAC members such as IBM, Google, and Microsoft, among others. Areas that require more attention include digital taxation and data governance, noting differences between Japan, the EU and North America on these issues. "If we don't converge," warned Mills, "then the rules will be set by China."

Opening Remarks

Julie Brill, Corporate Vice President and Deputy General Counsel, Microsoft Corporation and Co-Chair, Business at OECD Committee on Digital Economy Policy (CDEP) noted how wonderful it was to have named this conference after Joe Alhadeff, who she worked with while serving as a Commissioner of the U.S. Federal Trade Commission (FTC) and respected for his intelligence and humor. Brill underscored the importance of turning the OECD's [Going Digital](#) recommendations into policies that will engender trust. "*Going Digital* will serve as a foundation for policy makers around the world to ensure that the technological revolution is a catalyst for inclusive growth that benefits all," she said. "The timing couldn't be more appropriate or more important." Other points made by Brill:

- In recent years, industries have realized ground-breaking technologies like cloud computing, which has reached unprecedented scale. However, the new generation of digital innovations raise questions about trust and transparency. We need a new foundation of laws that balance protection and progress.
- While the OECD *Going Digital* project offers a comprehensive approach, one element -- privacy -- demands our attention above all others. People expect to use digital tools and technology to engage freely and safely with each other and around the world. They must be empowered to control how their information is being used.
- Artificial Intelligence (AI) has become an essential part of our daily lives and has the potential to drive economic growth and alleviate poverty. But if we are to realize its benefits, companies must deploy it safely and responsibly.
- New privacy laws have been passed or are being developed in China, Brazil, and Mexico. The [California Consumer Privacy Act of 2018](#) strives to give consumers more control over their data and the [Washington \[State\] Privacy Act](#) has placed limits on the use of facial recognition technology by law enforcement.
- At a time when business and governments are working to unleash the benefits of a new generation of digital technologies, the United States needs a new legal framework to ensure that digital transformation benefits all. This federal-level framework should include four core elements: (1) transparency; (2) individual empowerment; (3) corporate responsibility concerning the use of personal data; and (4) strong enforcement and rule-making by the FTC.

Keynote Address

Adam Lusin, Director, International Communications, Information, and Emerging Technologies, U.S. Department of State thanked USCIB, Business at OECD and the OECD. Lusin's office leads U.S. engagement at the OECD, International Telecommunication Union (ITU), G20 and

G7. Six months ago, Lusin led the U.S. delegation's preparations for the ITU's Plenipotentiary (PP-18), which included engagement with private sector partners. He noted that the United States enjoyed great success at the PP-18, due in part to the input and collaboration with industry and other stakeholders.

Lusin also attended the [OECD Going Digital Summit](#), an event that highlighted the importance of the OECD's evidence-based work to inform the policy making process. He further noted that not only does the OECD engage all stakeholders and ensure robust analysis, but it advocates for open markets, rule of law, and other liberal democratic values supported by the United States and its allies. "Whenever everyone speaks the same language, it's much easier to advance a mutual agenda," he said. "The OECD is a good venue to advance U.S. priorities internationally." Lusin said the U.S. Government's key takeaways from the [Going Digital Synthesis Report](#) include:

- **Enhancing Access** -- Access is necessary for shaping digital information, infrastructures, services, and data, Lusin emphasized, noting that just over 50 percent of the world's population has access to internet, but just about 60 percent have access to broadband. Bridging the divides on access will have a major impact on economic growth, innovation, and job creation. He highlighted U.S. state-level initiatives to expand rural broadband connectivity as well as efforts to build public-private partnerships to boost cybersecurity capacity. Internationally, the United States is endeavoring to build partnerships based on the multistakeholder framework for Internet governance to counter an authoritarian, top-down approach. Initially this will focus on the Indo-Pacific region.
- **Unleashing Innovation** – The U.S. Government regards AI as the most important technology of the future, with promising applications in everything from autonomous transport to healthcare-related applications. Lusin noted that the Trump administration launched www.AI.gov on March 18 to showcase AI initiatives across the federal government. Key elements include:
 - Public-private investment in AI R&D;
 - Minimizing barriers to promote AI innovation and application while respecting American civil liberties, privacies and values;
 - Reducing regulations; and
 - Investing in "our people" by increasing access to STEM training and using apprenticeships and skills-based programs innovatively.
- **Fostering Market Access** -- Lusin noted that the *Going Digital* report highlights a number of complex policy challenges that hamper market access, such as divergent approaches to the taxation of digital services and competition policy. Concerning the former, the OECD will deliver a consensus-based solution by 2020. With respect to competition policy, the FTC will hold hearings in the near term.
- **OECD Work on Online Platforms** – The U.S. Government values the analysis of online platforms. Lusin highlighted the OECD's analysis of China's online platforms and asked rhetorically if the U.S. stakeholders are devoting adequate attention to the competitive threat from China. This is a successful model, he suggested, which is *not* based on U.S. liberal democratic and open market values. For that reason, China's platform model warrants continued close monitoring.

Conference Prologue: Going Digital: Making the Transformation Work for Growth and Well-Being

Andy Wyckoff, Director OECD Directorate for Science Technology and Innovation (STI):

Wyckoff began by recognizing Molly Leshar, who led the OECD team for the *Going Digital* project. The project attracted interest in 2015 and entered the OECD's normal Program of Work and Budget during the 2017-2018 period. The goal has been to understand how best to realize the immense

potential of digital transformation. Wyckoff noted the *Going Digital Synthesis Report* works on two levels: (1) it serves as a primer for policymakers, explaining how key technologies are affecting policies; and (2) for digital technology experts, the report includes useful details about how digitalization may be applied in certain sectors (agriculture, for example) as well as its impact on employment and skills.

The OECD took a holistic, whole-of-government, multidisciplinary perspective on this topic, which is depicted in this graphic of the integrated policy framework. Just having hardware is not enough, Wyckoff said, because when you push on one element (e.g., access), other elements will be affected (decreased use, innovation, jobs, and so forth). “We have to rethink the old ‘sovereignty view’ and encourage governments to break down policy silos,” he said. Wyckoff then detailed the elements of the framework.



- Access – Noting that about one-half of the global population is “connected,” Wyckoff warned that connecting the remaining half will require active collaboration with business and government. He cited the success of Mexico, Colombia, and Brazil in revamping their regulatory frameworks and focusing on connecting remote areas.
- Data Use – In 2015-2017, mobile data usage more than doubled in two-thirds of the OECD’s membership. Finland, Estonia and Austria, in particular, lead the work in usage. Wyckoff urged development of policies to take advantage of new communications technologies, such as 5G and IPv6¹, and fiber optic connectivity, to increase effective use. Wyckoff expressed concern that SMEs who cannot afford more advanced connectivity will be left behind, observing a bifurcation between frontier firms versus the SMEs who do not have the skills or awareness to master advanced tools. While cloud computing is a “godsend for SMEs,” the *Going Digital* project revealed that that SMEs do not seem to be fully taking advantage of the cloud. Skill development and trust are needed to bring SME’s into the digital economy more effectively, according to Wyckoff.

¹ Internet Protocol version 6 (IPv6) is the most recent version of the Internet Protocol (IP), the communications protocol that provides an identification and location system for computers on networks and routes traffic across the Internet. IPv6 was developed by the Internet Engineering Task Force (IETF) to deal with the long-anticipated problem of IPv4 address exhaustion.

- Unleashing Innovation – Wyckoff observed that “rethinking data” is a thread throughout the report. The *Going Digital Synthesis Report* presents a more expansive view of what constitutes capital investment. Intangible assets need to include organizational know-how and data. Depreciation models must be re-thought to encourage more start-ups and market entrants. In addition, the report suggested that data portability and access to government data is needed to continue to fuel investment in AI and other emerging technologies.
- Ensuring Good Jobs for All –Wyckoff noted that 14 percent of the labor force are at “high risk” from automation, but another 32 percent are a “significant risk.” Thus, half of the labor force is facing significant change. Yet, unemployment rates are at their lowest among OECD members since the 2008 economic crisis, and four out of 10 new jobs created in the past 10 years have been in digitally-intensive sectors. The challenge for OECD economies is enable the transition of the “losers” in the workforce and facilitate job-to-job transitions, portability of benefits, and access to adult learning through the use of new technologies. And most importantly, who will fund this since government budgets are strapped?
- Societal Issues – The Going Digital Project aimed to talk the challenge of understanding how to harness digital technology to address societal issues, such as environmental degradation and energy conservation, improving one’s quality of life, and bridging the digital gender gap so that more women can become active participants in the digital economy.
- Strengthening Trust -- Mistrust in the digital ecosystem has been fueled by hacking and clumsy responses to security and privacy breaches. *Going Digital* research found that 30 percent of Internet users mistrust social networks, some 25 percent of EU users worry about payment security, and only 17 percent read privacy-related terms and conditions fully. Wyckoff pointed out that the OECD has been a strong advocate for a risk management approach to increase trust. Plus, countries need to adopt a national privacy strategy with a whole-of-society perspective.
- Fostering Market-Openness: Wyckoff pointed to the OECD’s development of a Services Trade Restrictiveness Index (STRI), which enables comparative analysis of the economic impact of trade restrictions. The STRI takes all digital components through telecom and computer services, plus domestic regulations and international rules that affect trade in services and consolidates them in one place to create the index. He noted that the United States scores relatively low in the STRI index, with countries like India and Brazil ranking quite high. A high ranking appears to undermine infrastructure development and connectivity, he noted.
- Wyckoff also pointed to the increasing concentration of sales by four global firms. Noting an uptick in M&A activity around information services, he said there appears to be diffusion – but this could also mean that the industry leaders are further solidifying their leadership position via acquisitions, he suggested. Wyckoff said this latter point will be the focus of the work by the OECD’s Competition Committee in the 2019-2020 period.

Q&A:

*Was there anything that surprised you at the **Going Digital Summit**, which took place on 11-12 March?*

Wyckoff was surprised by the number of people who participated in the session focused on the OECD’s measurement work, which served as the foundation for the companion document, [Measuring the Digital Transformation](#). He attributed this to the fact that digital transformation of the economy is moving at breakneck speed, but many individuals, organizations, and governments still are in the dark about how to categorize data and measure its economic impact. On a brighter

note, though, Molly Leshar indicated pleasant surprise by how much consensus what was among the Summit speakers and the nearly 700 people who participated.

One of the challenges we face concerns the treatment of services. There is a lot of talk about the role of technology and software, but role of services is subsumed in discussions about the digital economy. Barriers to services are multifaceted

Wyckoff acknowledged that more work is required on digital services. He cited John Deere as an example of a company that began solely as a manufacturer of tractors and has become a services firm by providing data back to farmers aimed at realizing more precision in crop yields. The provision of services is sold as a package with the farm equipment. Data analytics is what creates value, according to Wyckoff.

How do we educate or diffuse knowledge about digitalization? Retailers see the potential for back-end enablement of stores. Do you see the idea of digital enablement coming through?

Wyckoff noted that the cross-sectoral nature of digital transformation. This will make the current debate about taxation of digital services relevant to a broad cross-section of companies, not just a few technology leaders. Every sector needs to figure out how to use the data at its fingerprints to improve its operation.

A recent McKinsey study maintained that AI will affect 40 percent of all white-collar jobs. In Wyckoff's view, this raises a central issue for the OECD, which to date has not been as strong at determining how investment trends in technology may affect employment opportunities. During the Industrial revolution, he noted, we saw skills-matching and technology, upgrading of literacy of workers but also a refashioning of technology for workers.

"You're talking about skills for the future and your analogy to tools is a good one," Wyckoff observed. He added that the OECD will be undertaking some work in the 2019-2020 period that examines that subset of people who have occupations in the "high-risk group" and considers how far (i.e., the geographic distance) those people would have to move to be in a "safe occupation." Funding for training and re-skilling remains a concern, if a government is serious about implementing initiatives to ensure that workers are not left behind. "Corporate taxes do not provide a big contribution to government coffers, but income taxes and value-add taxes (VAT) do," he said.

Leshar cautioned that the skills that future workers will need are not entirely STEM skills. Rather, what is needed is a mix of complementary skills, "skills for life," that would include problem-solving and communications skills. "We need people to be flexible and adaptable, to transfer what they know into other domains. And that could require a radical change in education systems," Leshar said. Wyckoff added that schools still are stuck in an "industrial 2.0 model," which equips workers for mass production. Importantly, the analytical and communications skills that are needed in addition to STEM and more closely associated with women, which is all the more reason for an inclusive approach to preparing workers for the digital future, he said.

*For business, consistency is most important. How will the **Going Digital** Project continue to shape the narrative and develop the cross-cutting approach needed for a digital ecosystem?*

Wyckoff explained that Phase 2 of the *Going Digital* project has three components. There will be two vertical elements that will focus on AI and blockchain. The third component will be the

horizontal interactions between various OECD committees, facilitated at the directorate level and through a steering group. This will serve as the “glue” and move the work forward to completion, he said.

Session One: Going Digital’s Policy Recommendations: From Paper to Practice

Moderator:

- **Ellen Blackler, Vice President, Policy Strategy, Global Public Policy, The Walt Disney Company, and Vice-Chair, Business at OECD Committee on Digital Economy Policy (CDEP)**

Panelists:

- **Rory MacFarquhar, Director for Global Economic Policy, Google**
- **Molly Leshner, OECD Secretariat, Going Digital Project**
- **Rich Clarke, Assistant Vice President, Economic and Regulatory Policy, Global Public Policy, AT&T**
- **Adam Murray, International Relations Officer, Office of International Communications and Information Policy, U.S. Department of State**

Blackler -- *With respect to the policy recommendations included in the Going Digital Synthesis Report and discussed at the Going Digital Summit, how do we implement them? How do we put them into practice?*

MacFarquhar began his remarks by complimenting Leshner and the entire OECD team for successfully navigating a host of conflicting views and producing “an extraordinary piece of work.” He offered the following points:

- **New Business Models** -- As we witness the very rapid introduction of technologies from AI to robotics, we are seeing the emergence of completely new business models that have enabled small businesses to reach global markets in new ways and the creation of new professions like a YouTube creator. In today’s digital economy, young people can earn a living in ways no one over the age of 35 knows exists. Moreover, sixty percent of views on YouTube are cross-border; the viewer and the creator are in different countries.
 - At the same time, some countries are responding to digital transformation in way that is frustrating the potential of these technologies. These include restrictions on data flows, regulations that force data localization, and attempts to tax the digital economy in various ways. Some of these are completely well-intentioned policies that are aimed at ensuring cybersecurity and privacy but often poorly conceived or executed because the governments do not understand the best way to foster digital innovation.
 - In this globalized digital economy, the consumers and the producers are in different jurisdictions. This means that the usual political economy of regulation breaks down when only one side of the equation is represented in the country. Potentially the consumer interests are regarded as absolute, which can lead to regulations that hamper innovation, MacFarquhar proposed.
- **OECD Value in the Midst of Disruption** -- The disruption of traditional industries is a scary phenomenon especially if you feel you do not have people with their arms around the problem. The OECD can translate what is happening but also provide a toolkit that informs governments how their economies can benefit from digital transformation. Furthermore, there are ways the citizenry of many OECD countries already is benefiting from digital

transformation, but those benefits are not properly captured in that country's economic statistics. OECD economists can do the analysis for member countries.

Blackler – *This is a great segue into the [Going Digital Toolkit](#). Molly please elaborate on what the toolkit will provide.*

Leshner explained that as the OECD began working on the framework, members asked for practical policy guidance, which served as the genesis for the toolkit. Launched on March 15, the toolkit is a web-based product that anyone with access to the Internet can use. Currently, it is strongly focused on indicators that are aligned with the seven dimensions of the Integrated Policy Framework. “It represents the best the OECD has to offer about policy making in the digital age,” according to Leshner. She explained that the Toolkit has three “entry points” to help users find what they’re looking for:

1. **Policy Dimensions** – This dimension includes indicators, related publications, policy guidance (for example, it includes a recent OECD Council recommendation on digital government strategies).
2. **Country Dimensions** – This dimension covers members of the OECD, the EU28, the BRICs, Costa Rica, and Columbia and includes digital national reviews. The overall visualizations enable one to see where a country stands compared to others.
3. **Themes** – This dimension includes themes such as data and data flows, development, digital government, gender, digital technologies, productivity, skills, and SMEs, to name a few.

One cannot interact with the data, but one can see how countries compare with each other. Just as important, one can share all of the data visualizations and download the data. The OECD regards the toolkit as a work in progress, so it welcomes feedback on the user experience, Leshner said.

Blackler – *Rich, now what? What do we need to do to meet the challenges of digital transformation?*

Rich Clarke, Assistant Vice President, Economic and Regulatory Policy, Global Public Policy, AT&T said he views things through an economic lens. Below are some of his points, focused primarily on the “access” element of the integrated framework:

- **Enhancing Access:** Clarke noted that connectivity is key to digital transformation and generally is being addressed satisfactorily in the OECD countries. Seventy-to-ninety percent of all households in OECD countries subscribe to fixed broadband; 92 percent of business enterprises also have broadband subscriptions. Mobile broadband networks and take-up are practically ubiquitous, he said.
- **Rural Problems** – Connectivity in rural areas is significantly less than in urban areas and SME connections lag those for larger enterprises. Clarke said that customers tend to choose basic connections even when more advanced connections are available.
- **Non-OECD Countries** -- Network availability, quantity, and take-up generally are lower in non-OECD countries, Clarke noted. In view of the extent to which the global economy is digital, Clarke proposed that there is a pay-off to increasing the amount of connectivity in non-OECD countries.
- **Going Digital Recommendations** – The *Going Digital* Synthesis Report largely is on point concerning policies that will promote enhanced access, according to Clarke. Such policies include: (1) incentivizing investment; (2) increasing spectrum allocations and reducing impediments to infrastructure deployment; (3) increasing digital literacy; (4) diffusing digital applications; and (5) fostering trust to promote business and residence take-up and use of digital tools.

- Critique – Clarke noted that in a few areas the policy recommendations are “questionable or discordant” as follows:
 - The role of fiber technology over non-fiber appears to be excessively elevated. Cable television provides another technology that is extremely competent. In addition, regulators are in the process of approving multiple satellite networks that will help connectivity in rural areas. In short, networks are very diverse.
 - Wholesale or sharing arrangements for both networks and data are lauded without substantial evidence of their efficacy. When you require sharing of resources you have a form of competitive rivalry. More evidence is needed about the proper role of sharing arrangements.
- Phase 1 of the *Going Digital* project focused on what needs to be done. The key to a successful Phase 2 will be to use further evidence and analysis to determine who should be the lead implementer.

Blackler – *What is the reaction of the U.S. Government to the Going Digital Project and synthesis report?*

Adam Murray, International Relations Officer, Office of International Communications and Information Policy, U.S. Department of State said the United States generally is pleased with the project and its outputs, but noted that Washington wants to see further work aimed at (1) finalizing the AI recommendation, (2) continuing to build evidence-based work focused on online platforms and measuring the economic impact of data, and (3) developing the *Going Digital* Toolkit and portal into a useful one-stop shop on the digital economy. He zeroed in on the following:

- AI Recommendations – Murray noted that about one year ago, the OECD Committee on Digital Economy Policy (CDEP) established an AI Group of Experts. The Group produced a report that formed the basis for policy recommendations, which were approved on 14 March 2019. Following further internal review, the recommendations will be forwarded to the OECD Council for approval in early May. Murray said the U.S. Government supports the recommendations, which he described as striking a good balance between values (AI must be transparent, accountable, safe, robust, and have level of fairness) and actions (i.e., actions governments must take to drive the development of AI and prepare the workforce for transformations in the labor market).
- OECD Report on Online Platforms: While challenging to develop, the U.S. Government regards the OECD’s report as a positive contribution to the evidence base on the platform sector. Murray acknowledged there will be continuing questions about the operation of platforms and competition in the sector, which makes it all the more important for the OECD to continue its objective, evidenced based analysis of this sector.
- Data and Data Governance – Murray urged the OECD to “help us dig in” in understanding the economic impact of data.
- Horizontal Nature of Going Digital Project – He emphasized that the horizontal nature of the Going Digital work is a priority for the U.S. Government, which sees great merit in the “all of house” effort. CDEP ably coordinated the inputs of 14 OECD committee through a steering group. This approach kept the United States and other OECD members properly looped in, he said.

Blackler -- *How can we attain growth and well-being?*

Leshner pointed out that the growth piece is only one element. There must be a societal dimension to ensure that digital transformation has a positive impact. All seven of the different policy

dimensions should lead to well-being and growth, she said. The “society section” has indicators for “skills for life” and gender, which drive home the point that there is a gender digital gap. Lesher highlighted the well-being aspects to the “access section,” noting the need to close the rural-urban digital divide. Finally, the OECD produced a report, *Well-Being in The Digital Age*, that provides quantitative analysis focused on health and environmental issues, the latter of which will be the focused of more in-depth analysis in Phase 2.

Q&A:

How does the U.S Government encourage other governments to be more open to dialogue about digital transformation of the economy, and how can we leverage that pool of information?

Murray highlighted the value of the OECD’s multistakeholder approach. The AI Experts Group, for example, included not only business experts, but also experts from the technical community, labor organizations, academia, government, and civil society. “The OECD is an important convener for different voices around the table,” he said.

Let’s redirect the focus to cross-border traffic from country A to country B. What are the barriers that limit the movement of data and information across borders?

Lesher: The cross-border movement of data is very important. Measuring cross-border data flows is the holy grail. Doing that well is difficult, but we all agree that we should endeavor to measure cross-border data flows, including developing a taxonomy for data.

Going Digital Phase 1 was a massive push, involving a lot of resources. *Going Digital Phase 2* will be a different endeavor involving far more in-depth analytical work, conducting national reviews, and other initiatives requiring coordination. In Phase 2, it is my personal hope that all 14 of the participating OECD committees will be able to contribute practical guidance to the Toolkit; the cross-border dimension will be tremendously important in the work of many of these committees. But Phase 2 will not entail the incredible push required to complete Phase 1.

The OECD is excited about the *Going Digital* Toolkit, which will be designed to help countries know in real time where they stand in terms of digital transformation. The toolkit really is the future.

AI principles are very important, and we look forward to the companion document for AI that will be issued in the 2019-2020 period following the adoption of the OECD Council Recommendations on AI. The blockchain component will have a strong capacity-building element – something the OECD does not ordinarily undertake – focused on educating and informing members governments about how to make the best use of blockchain.

Clark: Business would like cross-border data flows to be as little fragmented as possible. However, we recognize there are different concerns from countries about cross-border data flows. In the end, we’ll probably have to disagree. Important for business, though, is that whatever rules are developed, they must be very clear.

MacFarquhar: There are countries at different points with respect to privacy or whatever problem they are trying to solve. If the outcome is a completely diverse patchwork of solutions, then we will sacrifice much of the potential for scalability enabled by the Internet. The OECD is a forum for governments to think through these issues together.

If you were to pick one trust indicator, policy relevant, what might that be? Why is fiber the main thing? Adam and Molly: what would you do differently, Adam as consumer and Molly as producer?

Murray: I would like to highlight two things:

1. We need concise information for policy makers, distilled to its essence. I saw some shorter brochures at the *Going Digital* Summit that included infographics and visualizations that went to the heart of the matter quickly; and
2. On the coordination side, we should consider ways to utilize digital technology to make it easier for everyone to convene as a group for discussions. This would help OECD members and stakeholders dealing with limited travel budgets.

Clarke: With respect to the hype around fiber optic cable technology, if that, indeed, was the only game in town, we would see high take-up. If there are other networks available, however, it becomes more challenging. When fiber optic networks were first deployed, they struggled to get 45-50 percent penetration in the United States. Eighty percent of households have access to that service, but providers rarely get half of those households to select the fiber option because cable broadband is very effective, which may well serve their needs. In addition, people like having just one bill. It is not the case that once a fiber network is deployed, everyone will want it. Australia established a national fiber network—cable networks were paid to shut down -- and this forced more people onto fiber networks.

Blackler: I worked at the Federal Communications Commission (FCC) when it prepared the first broadband report. For a lot of consumers who can afford the services but do not select them, it is because they do not see how the technology is relevant to them. It is a value proposition, and many people do not see the relevance. We have seen progress up the adoption curve by working on the “demand side” and developing more local content. Then the technology becomes more relevant to the consumers’ needs because they want to access the local content that has more meaning for them.

MacFarquhar: Trust is at once incredibly important and difficult to conceptualize right. Trust is absolutely critical for business — people will not use your products if they do not trust you or your products. But trust is not just an on/off switch; there will be indicators of greater or lesser trust with certain products. In that context, I do not think there will be a single indicator because trust is not a single thing. We are constantly surveying our users to try to assess their trust in our products and reassure them, but inevitably there will be moments we fall short and lose trust because of technical or design reasons. It is probably best to draw out the nuance rather than casting this in black/white terms of trusting – or not trusting – a product or a company.

How do we increase entrepreneurship? There’s a bit of inertia in certain parts of the economy. Are we thinking too small? How do we break out of this stagnation question?

Leshner: The report discusses the importance of having an enabling environment to drive innovation. There is not a separate digital economy; the entire economy is digital. The toolkit will provide information that examines those issues through a digital lens. It will note the importance of having the right skills across firms and individuals to use digital technologies to the maximum. Addressing some of the gaps in access is very important as is the need to implement basic reforms, such as liberalizing the telecommunications market. The *Going Digital Synthesis Report* includes basic, orthodox recommendations as well as policies that push the envelope. We need to look beyond the OECD membership as well. Many countries have not yet done most of the things in the *Going Digital* report.

MacFarquhar: There are two parallel conversations in dramatic tension: (1) the paradox of slow productivity amidst amazing technology innovation; and (2) the prospect that huge swathes of workers will be rendered redundant by automation. We should be careful what we wish for. If we realize dramatic growth and productivity by tapping these technologies, then we would have to address the challenges of automation and the “future of work” problem.

Tom Dailey, Senior Vice President and General Counsel, Verizon International introduced the luncheon keynote speaker:

Luncheon Keynote Address:

David Redl, Assistant Secretary for Communications and Information and Administrator of the National Telecommunications and Information Administration (NTIA), U.S. Department of Commerce

Redl’s prepared remarks may be accessed [here](#).

Highlights include:

- Collaboration -- Around the world, there is great stress placed on the open, interoperable Internet and U.S. technology firms. Despite the differences we have with our allies and adversaries alike, there is still great opportunity for consensus building and collaboration.
- Barriers to Growth and Data Flows -- Some countries are crafting policies that are placing significant barriers—privacy regulations, data localizations, tax laws -- making confusing and conflicting demands. None of these ideas are new but many proposals are focusing on addressing challenges. Solving these will require trade-offs and hard decisions.
- NTIA Request for Comments on International Internet Policy Priorities -- Last summer, NTIA asked for input about how the U.S. Government should set international policy priorities. [USCIB provided [comments](#).] These comments clarified: (1) the importance of the multistakeholder model of Internet governance and the global, consensus-driven management of the Internet’s critical resources; (2) some international organizations (e.g., the OECD, AEPIC) are better than others at having productive discussions about solving critical Internet policy issues; (3) there was overwhelming support for the election of Doreen Bogdan-Martin, a former NTIA staff member, to the International Telecommunication Union (ITU) leadership team; and (4) that American companies are challenged by countries pushing alternative visions for what national sovereignty and responsible governance means for a connected world.
- More that Binds Us Than Divides Us -- The United States has trading partners that broadly share democratic and market-based values. While we might disagree on policy approaches to taxation, privacy, or platform liability, there is much more that binds us than divides us. That is in contrast to countries like China and Russia, whose approaches to regulating data processing and storage are not grounded in the same values.
- The United States Will be Uncompromising -- [I]n its commitment to free speech and will not agree to any best practices that recommend banning broad categories of speech from the Internet. In the same vein, the United States will not agree to any plan that would place multilateral organizations [e.g., the UN] in charge of making important decisions about the Internet or the content and services that move across it and not allow stakeholder input.
- OECD’s Recommendation on AI -- The OECD’s AI recommendation is largely aligned with the Trump Administration’s executive order on AI – see www.AI.gov/.

- Updating U.S. Privacy Regime – The United States has recognized that we can learn important lessons from our allies in updating our privacy regime. The Trump Administration also will work to expand the [APEC Cross-Border Privacy Rules System](#), the value of which was confirmed in the U.S-Mexico-Canada Agreement.

Q&A:

Can you elaborate further on plans to update the U.S. privacy regime? As you know, there is considerable support in the business community for federal legislation that would preempt the patchwork of state-level privacy regulations.

Redl: NTIA [sought comments](#) in September 2018 to explore what would be an American approach that balances prosperity and privacy. NTIA received 200 comments [[USCIB provided comments](#)]. NTIA still is working with interagency colleagues. Some of the themes that emerged from the comments included:

1. As you mentioned, business is looking to the U.S. Government to take leadership in developing an approach that would preempt state-level privacy laws;
2. Most commentators want to see the FTC remain the top enforcement authority, and for those enforcement powers to be strengthened;
3. The National Institute for Standards and Technology (NIST), which also is part of the U.S. Department of Commerce, is involved in its own initiative aimed at creating a risk-based privacy framework and proposing tools to mitigate risks.
4. We must move beyond a “consent model” for an effective privacy regime in the digital economy.

Session Two: Securing the Digital Economy from Cyber-Threats

Moderator:

- **Chris Boyer, Assistant Vice President of Global Public Policy, AT&T**

Panelists:

- **Laurent Bernat, OECD Secretariat, OECD Global Forum on Digital Security for Prosperity**
- **James D. Katavolos, Senior Vice President, Citigroup Cyber Intelligence Center**
- **Miguel Sánchez, Global Chief Security & Intelligence Officer (GCSIO), Telefonica**
- **Makoto (Mac) Yokozawa, Senior Consultant, Nomura Research Institute and Co-Chair, Business at OECD CDEP**

Boyer – *Laurent, please provide an overview of the [OECD's 2015 Recommendation on Digital Security Risk Management for Economic and Social Prosperity](#), which is a legal instrument promoting a risk-based approach.*

Bernat: The recommendation was developed through a multistakeholder process. It includes high-level principles and guidance on national cybersecurity strategies. It also includes a companion document, which provides more detailed explanations for organizations and/or countries that are in the beginning stages of developing security frameworks. Highlights include:

- Clarity – Cybersecurity is a multifaceted area, which encompasses: (1) an economic and social aspect (digital security); (2) a technical aspect (information security); (3) an international/national security aspect (cyber warfare), and (4) criminal and law enforcement (cyber-crime). Each facet comes with a different community, culture,

approach, and competing interests. They often overlap, which can cause confusion. The OECD framework focus primarily on the first facet – digital security.

- Defining the Problem/Tackling the Dilemma -- What is the problem? To ensure security in an open and dynamic environment. Systems became open by default because of Internet. However, systems cannot be 100 percent secure because of the emphasis on interoperability. But closing the parameters limits the potential to use digital technologies for innovation and prosperity because prosperity is driven by openness and the dynamic nature of technologies.
- Digital Security Risk Management– The consensus among OECD members was to develop an approach that would not undermine the dynamic nature of the internet. That approach is referred to as *digital security risk management*. It acknowledges that risk cannot be eliminated from an open environment, but it can be managed— i.e., assessed and reduced. Responsibility should be at the top, but business and government decision-making leaders must work in cooperation with the technical experts.
- OECD Digital Security Risk Management Principles – The recommendation includes four General Principles and four Operational Principles:
 - General Principles:
 1. Awareness, skills, empowerment;
 2. All stakeholders should take responsibility for the management of digital security risk. Individuals should manage the risk, but products need to be designed that can help them do that;
 3. Human rights and fundamental values; and
 4. Cooperation: All stakeholders should cooperate; cooperation should take place within governments and amongst them and with citizens; multifaceted principle; break the silo inside organizations (public-private, internally management – technicians)
 - Operational Principles:
 1. Risk assessment & treatment cycle;
 2. Security measures;
 3. Innovation; and
 4. Preparedness and continuity
- Whole-of Government Approach – The Recommendation provides guidance on how to develop national digital security strategies via a whole-of-government approach that would include all sectors, actors and feature stakeholder consultations.
- OECD Global Forum on Digital Security for Prosperity: The Global Forum was launched in 2018 to gather the international and multistakeholder community in order to expand understanding and awareness about the OECD framework and the value of digital security risk management.
 - The inaugural Global Forum was 13-14 December 2018 in Paris and focused on “Roles and Responsibilities of Stakeholders.”
 - A second event is planned for Q4 2019 in London under the theme, “Encouraging a thriving and innovative cyber security industry.”
 - A report of the Global Forums will cover a new range of areas such as (1) digital security risk governance and how to make digital technologies more secure throughout the lifecycle, (2) security-by-design and security-by-default, including throughout the value chain, (3) how to encourage responsible disclosure of vulnerabilities, and (4) active defense—how far can businesses go in undertaking “proactive security.”

Boyer: *Mac, in view of Japan's hosting of the B20/G20 processes, you have been actively participating in all related meetings. How will the B20/G20 statements address security challenges?*

Yokozawa: Yokozawa said that participants at the 14-15 March B20 meetings in Tokyo highlighted the importance of a risk-based approach to security as the most effective means to ensure the free flow of data. Further, the B20 document emphasized promoting international cooperation in the field of cybersecurity, that includes the following elements:

- Voluntary and Risk Based;
- Harmonization and Simplification;
- Global Supply Chains and Standards (ISO);
- Incentives;
- Information Sharing;
- Public-Private Partnership; and
- Education

Yokozawa also noted that the business association of an Asian country, in particular, advocated aggressively for a more top-down approach that would put governments in control of digital security. U.S. and Japanese business interests opposed such language.

He also highlighted APEC's new framework on digital security, which includes the same elements of the OECD framework, but adds new principles on awareness, responsibility, and cooperation. China also pushed back on these principles (unsuccessfully), on grounds that governments have a sovereign right to ensure the secure flow of data.

Yokozawa also highlighted the [framework developed by the Internet Society](#), which emphasizes a collaborative approach. In addition, he noted the meeting of the so-called [C20 process](#) for civil society participants, which has advocated a "collaborative multistakeholder" approach for security issues. The most important issue for which there continues to be conflicting opinions among governments and other stakeholders is who (or what) should lead the cybersecurity discussion on a global scale.

Boyer: *Miguel, please share with us Telefonica's thinking about new technologies, new challenges, and how to address new security threats.*

Sánchez: Sanchez noted that new technologies, such as 5G, Internet of Things (IoT), AI, big data, and blockchain, have inherent advantages but also security challenges.

- 5G provides greater flexibility in communication and improves peoples' quality of life by making health-related services more accessible, for example. Telefonica believes it has a responsibility to offer customers secure connectivity. Mobile devices are not secure by design.
- AI improves performance and can prevent threats and become more effective in cybersecurity. Data should be treated as a new factor of production and factored into calculation of GDP. People do not feel in control of personal data. For this reason, Telefonica puts customers in control of their personal data.

Sanchez then provided more detail about Telefonica's digital security strategy. He noted that the company operates in 25 countries and has more than 350 million clients. It is a "four platforms" company with a "digital security wrap" around all four platforms. Network connectivity is the first platform, IT and systems digitalization, the second, products and services, the third, and cognitive

intelligence (Big Data and AI), the fourth. Cybersecurity is most intensively focused on the first and second platforms, he noted.

The four elements of Telefonica's digital security strategy are (1) anticipate, (2) prevent, (3) detect, and (4) respond. He underscored the importance of not only anticipating a possible attack, but also resisting, containing, and recovering from an actual attack. He noted the importance of the government's role in helping to create a secure digital environment through rules and ethics guidelines, national legislation and cyber-strategies, and national CSIRT/CERTS. This is complemented by the work of specific companies and private sectors organizations in developing security frameworks, such as GSMA's "Digital Declaration," Telefonica's Telco Cybersecurity Alliance, Microsoft's Cybersecurity Tech Accord, Telefonica's Global CSIRT, and Data Portability arrangements of European telecommunications providers.

He wrapped up by outlining Telefonica's [Digital Manifesto](#), a new cooperative effort to define a New Digital Deal to renew our social and economic policies and modernize our democracies for the digital age. It calls for "human-centric digitalization" to ensure that citizens are the primary beneficiaries and feel in control. The process is guided by the principles of non-discrimination and fairness, inclusiveness, transparency and choice, and accountability.

Boyer: *James, the financial sector faces unique security challenges. Please share those with us. While Citi is not considered a "high tech company," you have become a de facto tech company out of necessity.*

Katavolos: Katavolos highlighted that for Citi, information security is a "team sport," and the team is much larger than any individual firm or government. Citi has broken down barriers internally by creating a security center across different lines of business, which helped it to grasp issues using a multidisciplinary, subject matter approach. Externally, Citi also has sought to collaborate with peer financial institutions, again, taking the view that we are all in this together and can learn from one another's challenges. He outlined current challenges:

- **Risk of Fragmentation** – Katavolos observed that there is great deal happening in approaches to cybersecurity internationally. This increases the risk fragmentation. The challenge is to realize greater harmonization of security strategies. Financial services is one of the most regulated sectors of the economy. It is in no one's interest to have many different approaches to cybersecurity. "When you're responding to 17 different regulator inquiries, and they are all in slightly different formats or approaches, that's going to cause you to spend more time doing that than you would like to," he said.
- **Nationalization of Data** – The efforts of some countries to keep data within their borders, in reality, harms our ability to protect that data.
- **Disrupting Supply Chains** – The efforts of some countries to mandate or strongly encourage the use of indigenous technologies -- versus technologies a company might prefer – also serves as a burden and disrupts smooth operation of supply chains.
- **Role of Government** – The financial services sector has advanced concepts that acknowledge the important roles governments play. At the same time, we have proposed pragmatic approaches that enable us to do business more effectively.

Sanchez: Sanchez noted that the telecommunications sector is the second most highly regulated industry in the economy. He concurred that fragmentation does not ensure the best protection of the "whole."

Yokozawa: Yokozawa pointed out that fragmentation in approaches to cybersecurity is very different from challenges we face in the privacy space. Who is actually controlling cyber security issues? Is it a government? Multiple stakeholders? Most ideally, it should be the individuals. Cybersecurity is very difficult to solve, he said.

Bernat: Previously, cybersecurity was not subject to government regulation. Increasingly, the push for regulation has been driven by two issues: (1) the need to improve the security of digital technologies, driven by advancements in IoT, and (2) the safety consequences. Bernat urged that one should not underestimate the learning curve of governments and businesses. Many governments are driven by national security concerns and do not see the economic consequences of regulations because they do not understand security within the broader context of the digital economy.

Understanding risk management from an economic perspective is not easy, Bernat pointed out. We need more international multistakeholder dialogue so advanced countries can engage with business to better understand what works and what does not work.

Boyer: All governments are struggling with IoT. We should rely on international standards that are being developed for a variety of different use cases. Boyer maintained that whatever governments do in terms of developing regulations -- whether they are mandatory or not -- business will know how to respond because ideally the regulations would be harmonized across the world.

Bernat: Bernat noted a recent shift from a focus on norms of state behavior to the responsibility of actors in conjunction with states. He highlighted French President Emanuel Macron's [Paris Call for Trust and Security in Cyberspace](#). Some 560 entities supported it, which included hundreds of companies and NGOs. It includes language concerning norms of state behavior, but a significant part of the Paris Call focuses on private sector responsibility in helping to increase the quality of security systems and frameworks.

Boyer: *Concerning public-private partnerships, what do you see as the role of the private sector in cybersecurity? How do you work with governments around the world? How do we get more cooperation?*

Katavolos: One of the challenges is that there are a fair number of ingredients in place that would make these partnerships work. That is to say, there are deterrence models, business recognizes the importance of having the right people in the right places, and so forth. It would not be difficult to develop legislation that encourages public-private interaction on some of these elements.

Unfortunately, it is difficult to get traction on any of these issues if not all pieces are in place or on the same level. That is why it is taking so long for some of these initiatives to come to fruition or even to move one mile in a 100-mile long journey. Katavolos emphasized that we need to break the issue down into all the constituent parts and analyze each one specifically to understand what the missing ingredients are.

Yokozawa: The private sector's responsibility is to build up the ecosystem for maintaining cybersecurity. This should not be the government's role.

Sanchez: A contract with the client is supreme especially in the security area. The private sector should reinforce the capabilities to put trust and confidence of our clients as high as possible.

Bernat: Public-private partnerships are everywhere in all OECD instruments. The 2015 security recommendation has a whole section on partnerships. When you look at it from an international perspective, public-private partnerships are a cultural issue. It is easier to have public-private partnerships in the United States, but not the case for other countries. If public-private partnerships work in your country, then you should pursue such partnerships. Otherwise, you will not have outcomes you want, and you will undermine your chance of realizing greater prosperity. Importantly, government needs to separate “offense” from “defense.” That would build trust with the private sector.

Boyer: *Nature of cybersecurity is always changing. How do we put in place the proper mitigations? This is constantly evolving the innovations like IoT and 5G.*

Katavolos: We need a cultural shift. In many cases, the perpetrator of cyber activity is anonymous or unknown and it is hard to deal with that individual from a prosecutor perspective. Consequently, the focus stays on the victim and we re-victimize the victim. When breaches cost many millions of dollars, we often see executives called before Congress and regulators engaged in increased scrutiny. While it is important to have accountability, we also need a conversation about the perpetrator.

Q&A:

In terms of regulatory coherence, how much work is being done on the financial side of harmonization?

Katavolos: Some of the trade financial associations have mapped out how different regulatory regimes or standards models that connect to each other, and others look like a bowl of spaghetti. I do not think the same types of moral hazards are at play with cyber as it is with other businesses. I think the incentives line up well regardless of what capacity you view it from. Because of that we have seen some progress. The more effective you are at maintaining information security means that you are changing things more frequently.

Session Three: Harnessing Artificial Intelligence (AI) for Economic and Social Prosperity

Lynne Parker, Assistant Director for Artificial Intelligence (AI), Office of Science and Technology, The White House delivered a special introductory address to set the stage for the Session Three discussions. She began by noting that on 11 February 2019, President Trump signed an [Executive Order on Maintaining American Leadership in Artificial Intelligence](#). She pointed out that the Executive Order (EO) does not exist in a vacuum but is part of a comprehensive approach to promoting beneficial uses of AI. This is detailed on a special website – www.ai.gov/. Parker then elaborated on the extent to which the EO is aligned with the OECD’s AI recommendations.

Highlights follow:

- The OECD recommendation on AI is all about establishing principles of trustworthy AI and how governments can act to foster such trustworthiness. In the same vein, the EO emphasizes the need for public trust and confidence in AI technologies while protecting civil liberties and privacy. The EO calls on federal agencies to build public trust by exploring non-governmental and governmental approaches to reduce barriers and use AI technology in new and responsible ways so that the American people can be confident.
- The EO includes the scope of OECD Recommendation 1.1. which promotes inclusive growth and sustainable development. The United States must drive technology breakthroughs in AI to promote scientific discovery, economic competitiveness and national security.

- The U.S. Government must make AI a focus when developing budget priorities. The EO called on federal agencies to allocate cloud computing resources to AI and to secure access to federal funding to support our economy and national security. This, too, is consistent with OECD Recommendation 2.1 which calls nations to consider long-term investments in R&D.
- The EO's call for development of AI systems with transparency, robustness, security and safety is consistent with OECD Recommendation 2.2, which focuses on the importance of developing a trustworthy ecosystem for AI R&D.

Parker further noted that the Trump Administration recognizes that we must prepare future generations to understand how best to apply AI technologies to today's economy. The EO therefore establishes Federal education grants to underwrite AI-related education and calls for establishment of apprenticeships and other education programs in STEM disciplines to prepare the younger generation for the jobs of the future. In addition, we need technical standards for AI deployment and development and initiatives that empower existing industries to adopt AI as well as create new industries all together, she said.

Moderator:

- **Carolyn Nguyen, Director, Technology Policy, Microsoft Corporation**

Panelists:

- **Andrew Wyckoff, Director, OECD Directorate for Science Technology and Innovation (STI)**
- **Daniel Castro, Vice President, Information Technology and Innovation Foundation**
- **Eleni Kyriakides, International Counsel, Electronic Privacy Information Center (EPIC)**
- **Craig Stephen, Head of R&D Labs, Oracle**
- **Jordan Zed, Director General, External and Trade Policy Branch, Innovation Science and Economic Development, Government of Canada**

Nguyen: Nguyen opened session by noting that AI has generated much interest because it has great potential to improve our daily lives. However, we may not fully realize its potential if we do not adequately assess its risk, she proposed. In 2017, the OECD began in earnest to analyze AI, and [as of 25 March 2018] was in the final stages of completing its groundbreaking recommendation on AI principles. Nguyen invited Andrew Wyckoff, Director of the OECD Directorate for Science, Technology, and Innovation (STI), to summarize the OECD's work on AI and the draft principles.

Wyckoff said that the OECD has been working on AI for the past three years, beginning with the G7 Digital Ministerial Meeting, April 2016, in Japan. The focus on AI received another boost at an OECD conference, "AI: Intelligent Machines, Smart Policies," in October 2017. From these events and associated scoping analysis, a consensus emerged that:

- First, AI policy is an urgent concern and the rapid growth of AI technologies requires equally fast development and deployment of good policies.
- Secondly, given its development and breadth, a multi-disciplinary and multi-stakeholder approach is needed.
- Thirdly, the universal reach of AI and related technologies requires global dialogue and collaboration across borders

Wyckoff said that these insights have resulted in three different OECD work streams focused on: (1) evidence-based analysis, which serves as a foundation for (2) the develop of principles to foster

trust in and adoption of AI, and (3) the establishment of an “Observatory” or clearinghouse for policy analysis on AI to improve dissemination and enhance coordination.

- **AIGO** – In May 2018, the OECD established an expert group (AI expert group at the OECD “AIGO”) to scope principles to foster trust in, and adoption of, AI. The group gathered more than 50 experts from governments, IOs, business, the technical community, labor and civil society, and included Carolyn Nguyen [Microsoft], among others. A meeting on 15-16 March resulted in a consensus agreement on a draft recommendation of AI principles. This will be forwarded to the OECD Council for approval at the 22-23 May 2019 OECD Ministerial Council Meeting.
- **Draft Recommendation** -- The draft recommendation includes a set of five “value principles” and five recommendations for AI policies. Their objective is to foster a global enabling policy ecosystem that supports trustworthy AI and helps to address global challenges. The principles are as follows:
 - **Principles for responsible stewardship of trustworthy AI**
 - 1.1. Inclusive growth, sustainable development and well-being
 - 1.2. Human-centered values and fairness
 - 1.3. Transparency and explainability
 - 1.4. Robustness, security and safety
 - 1.5. Accountability
 - **National policies and international cooperation for trustworthy AI**
 - 2.1. Investing in AI research and development
 - 2.2. Fostering a digital ecosystem for AI
 - 2.3. Providing an enabling policy environment for AI
 - 2.4. Building human capacity and preparing for labor transition
 - 2.5. International cooperation

Nguyen: Nguyen emphasized that the draft principles were built using an evidence approach process. AIGO members agreed that the explicit objective would be to keep these principles at very high level because the technology is still developing.

Dan, based on the ITIF’s own research on AI, how will the AI principles enable further innovation?

Castro: ITIF’s 2017 report considered the promise of AI, what AI is, and how we are tangibly seeing benefits. We identified practical functions, such as monitoring and discovering, and predicting and discovering.

- **Monitoring:** Examples include monitoring for credit card fraud, early warning systems around health indicators; geo-spatial imagery and looking for potential signs of poaching and sex trafficking.
- **Discovering:** This term refers to new knowledge being generated through simulations. For example, AI can discover the best way to optimize operation of a wind farm.
- **Predicting:** AI can be used to predict crop yields, thereby having a substantial impact on rural livelihoods. The technology uses unstructured data to determine patterns. AI also may be applied to pathology, making predictions and assessments in cases where someone has recently been diagnosed with a serious disease. Doctors will receive the results in a few days stand a better chance of successfully treating the patient.
- **Discovering:** AI technology can be used to process high volumes of unstructured data to discover what kind of disease may be affecting crops.

Castro observed that many of these breakthroughs are “really powerful ways of doing what we’ve always been doing but doing it faster and better. It’s given us opportunities to take things to the next stage,” he said.

Nguyen: *Eleni, would you please provide the civil society perspective on the OECD’s AI principles and the work of the experts group.*

Kyriakides: EPIC thought there should be guidelines for this technology to address some concerns. In October 2018, we released [Universal Guidelines for Artificial Intelligence](#). It sets out 12 principles to maximize the benefits and minimize the risks, emphasizing the importance of fairness, accountability, public safety. Much like the OECD’s 1980 [Guidelines on the Protection of Privacy and Transborder Flows of Personal Data](#), we believe the OECD’s AI Recommendations should be just as enduring and withstand the test of time.

Nguyen: Concerning the issue of fairness, the document accompanying the draft principles notes work that has been done demonstrating how bias can enter into the development, design and deployment of an AI system.

Craig, can you talk about how a company can deliver products and how you are dealing with risk?

Stephen: Stephen runs Oracle’s research lab. He said that Oracle is using machine learning technologies throughout its operations. Highlights of his comments follow:

- Oracle focuses primarily on the “main course” where the companies believe it can help an enterprise most effectively realize economic development benefits. This would include making a database work more efficiently or running your factory floor more effectively, predicting the remaining useful life of a product, or protecting data from cybersecurity attacks.
- [Applied Math is the New AI](#) -- Echoing session speakers, Stephen said that Oracle wants to make sure that AI “can move the world in a positive direction.” He pointed out, however, that the techniques are not new, citing the use of applied math (statistics) 50 years ago to differentiate between nuclear failure and nuclear attack. AI does the applied math infinitely faster and in massive quantities, he explained.
- [It is Not Personal](#) – Responding to privacy concerns, Stephen pointed out that most of the “run of the mill applications” have nothing to do with personal information. How can Oracle explain the results of machine learning systems? Stephen said that Oracle deals with this by using strong review processes on data, which consider the implications of privacy regulations like the EU General Data Protection Regulation (GDPR) and the U.S. HIPPA regulation, and product testing. “We have these processes because we want to ensure the best outcome for the consumer,” he said.
- [Promoting Equal Access](#) – Consistent with the administration’s EO, Oracle believes it has a responsibility to invest in the development of the future workforce. It provides in-kind donations to high schools focused on quantitative reasoning. It also opened a charter school in California to help determine the best STEM curriculum. In addition, Oracle is investing in start-ups overseas to create talent around the world. Oracle is hiring in Africa because that will help develop new talent and result in improved infrastructure and education. “We need smart people and we will teach them how to harness our data,” he said.

Nguyen: *Lynne, can you give us perspective on what’s next for these OECD principles? And what are priorities that governments need to act on?*

Parker: Throughout the OECD’s AI recommendation, there is a phrase, “appropriate to the context.” Parker explained that this captures a sentiment that we do not want to hurt innovation by presuming there is a one-size-fits-all strategy. She noted, however, that we do not have good tools to explain AI. In fact, there are many cases where we want AI to explain itself. This is all the more reason to bring good minds together and work internationally, Parker urged.

Nguyen: *Jordan, how are the OECD principles furthering international cooperation?*

Zed: Zed provided an overview of Canada’s strategy with respect to AI and its focus on fostering international cooperation:

- **G7 and Canadian-French AI Initiative** -- In 2019, Canada was president of the G7 process and viewed this as a great opportunity to frame the AI conversation and narrative that looks at addressing many of the world’s problems and requires a multistakeholder engagement. One outcome of that presidency was the establishment of the [International Panel on AI with France](#). The purpose is to support and guide the responsible adoption of AI that is human-centric and grounded in human rights, inclusion, diversity, innovation and economic growth. The International Panel on AI will facilitate international collaboration in a multistakeholder manner with the scientific community, industry, civil society, related international organizations, and governments. This is all fairly aligned with the OECD’s AI principles.
 - Zed noted that, also like the OECD’s AI initiative, the International Panel on AI will produce an Annual Report. The report, in turn, will feed into the OECD’s AI Observatory – and vice versa. “We can help evolve our conversations in concrete ways that help us ultimately service our citizens and make our societies healthier and more productive,” he said.
- **Digital Group of Nine (D9)** -- In addition, Zed drew attention to Canada’s participation in the Digital Group of Nine (D9), which includes Estonia, Israel, New Zealand, South Korea, the United Kingdom, Canada, Uruguay, Mexico and Portugal. This is a collaborative network of the “digital governments” with a common goal of harnessing digital technology to improve citizens’ lives.
- **Long-Term Focus** – Zed emphasized that through its commitment to the International Panel on AI and the D9 group, Canada wants to help make work on AI global in nature and bring together different sectors on a long-term basis to produce a global reference point on AI. Canada wants to make sure that the work is grounded in common values, such as inclusion, and human rights, according to Zed.
- **Pan-Canadian AI Strategy** – Zed also elaborated on Canada’s efforts to foster AI domestically, noting the emergence of several key hubs.
 - Montreal has become the hub for “AI for good” and grounding Canada’s strategy in that context.
 - Toronto is the godfather of deep learning, focusing on questions around commercializing and understanding how companies better use and adopt AI.
 - Vancouver views AI development through the entertainment and gaming lens.
 - Canada’s Supercluster Strategy and AI in Action represents an attempt to build ecosystems that bring together academia, scientific expertise, and government. The goal is to enable the scaling of AI and to develop projects relevant to industries and economies of local communities, such as for maritime industries, agriculture, and the food industry.

Q&A:

We often read in the media about what is going wrong. How much data are we recording on cost-savings?

Castro: We track a lot of this especially in healthcare studies or in legal studies, lawyers review contracts and see how long that takes and then they compare accuracy versus what is provided by contractors. A lot of benchmarking is taking place. And this is where AI has surpassed human activities.

Wyckoff: The OECD's research has found that AI surpasses the literacy of a huge portion of the human population. Another example -- AI is diagnosing breast cancer better than Massachusetts General Hospital; it is better at differentiating soft versus dense tissue and has decreased time between diagnosis and treatment.

Nguyen: *Jordan, and all speakers, what is the top priority you recommend for all of us to foster broader adoption of AI?*

Zed: We need to be drawing together communities of different interests and technological expertise in a very thoughtful way; process matters. How you get to the principles so you're not excluding people but looking at a diversity of expertise and views on the work you are doing. The key is an ongoing dynamic discussion with the public and the people using AI. We must acknowledge mistakes when they take place but put trust at the center.

Parker: We have a lot of misinformation on what AI is, its benefits and its risks. Often, AI gets wrapped up in technology as a whole. It helps to engage all the stakeholders, including the general public, on what the best pathway forward is.

Kyriakides: In the field of AI, there are some areas where we cannot compete because it would violate human rights or our values. We would like to see the process open more and allow ample public engagement in the development of policies through the Executive Order, the work of the National Science Foundation, and so forth.

Stephen: Education is key. The OECD has made a good start by developing an AI vocabulary and demystifying "machine learning." Education at secondary and primary levels is needed about how to understand data and orient students more toward data-oriented career paths.

Castro: People are very pessimistic about AI -- especially women. Government should not be a roadblock in the advancement of AI. But we should have guardrails in place and move the conversation from ethics to accuracy. That will help to address fears and bring benefits faster. If the United States wants to lead on AI, we must focus on that and deliver value to the consumer.

Wyckoff: We need to bring a polyglot perspective. There is hype on both sides to demystify and remove the politics. We should not make this a sovereign-based race. The broader goal here is to develop this as a tool for poorer countries to use to realize economic development and societal improvements.