



ASIA PACIFIC  
FOUNDATION  
OF CANADA

FONDATION  
ASIE PACIFIQUE  
DU CANADA

TECHNOLOGY  
AND GEOPOLITICS:

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# NAVIGATING A FUTURE OF TECH UNCERTAINTY

CONFERENCE REPORT

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## CONFERENCE SUMMARY

# INTRODUCTION

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The Asia Pacific Foundation of Canada (APF Canada) organized the Technology and Geopolitics: **Navigating a Future of Tech Uncertainty** conference in Toronto, Canada on October 9-10, 2019. More than 60 experts and stakeholders from a broad range of backgrounds, sectors, and nationalities convened to address implications of the rapidly-changing intersections between geopolitics and technology, to identify key opportunities and challenges, and to offer insights into how Canada can and should navigate these issues. Conference panels focused on the national security/technology nexus; the impact of national security on technology supply chain management; data management and governance; and investment and partnerships in R&D in technology and related sectors.

The World Economic Forum's Klaus Schwab coined the term "Fourth Industrial Revolution," underscoring the transformative effects of newly emerging technologies upon our society and economy. Artificial intelligence (AI), one of the key technologies that have become a reality in our daily lives, is expected to add US\$15.7 trillion to the global economy and displace up to 30 per cent of labour by 2030. As our future prosperity and competitiveness increasingly become dependent on these new forms of technologies, geopolitical competitions between nations – most notably China and the U.S. – have become technological in nature. As a result, technology supply chains and people-to-people networks, which are global and interdependent, have come under threat, posing challenges to middle power countries like Canada. APF Canada convened this group of experts and practitioners to facilitate a timely conversation and translate ideas into action.

While panellists expressed a diversity of opinions and diverged on specific issues, there were more points of consensus than disagreement on high-level policy questions, which set the foundation for a fruitful discussion on aspects of Canada's approach to technology, security, and governance.

## NEW TRENDS IN TECHNOLOGY AND GEOPOLITICS

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Participants identified several trends related to **the intersection between technology and geopolitics**. The proliferation of dual-use (used for both civilian and military purposes) and data-driven technologies like AI throughout business and society now pose unprecedented security challenges, and several panellists underscored that the 'industrial age model' of thinking is no longer viable for ensuring the security and prosperity of Canadians. Several speakers emphasized that government and the private sector must provide new leadership and infrastructure that meets the needs of the age of the Fourth Industrial Revolution.

The need for new modes of thinking was evident in the discussion on **data governance**. Working from the premise that data is now a key resource in this new model of economy, panellists examined the lack of consensus on data governance at the global level, and the challenges of facilitating cross-border data flows that meet diverse stakeholder interests. It was raised during the conference that the Office of the Privacy Commissioner (OPC) should focus on enhancing consumer trust in the digital eco-system, versus prescriptive rules, something that can be accomplished through principles-based legislation that is technology agnostic.

Further, panellists stressed that standards and good data governance could be a source of global competitiveness for Canada, which again underscored the need to depart from the industrial age model, which builds on tangible

goods (e.g. manufacturing), and develop a new ‘intangibles’-based economic framework driven by intellectual property, data, etc.

In the context of the ongoing disagreements between Beijing and Washington, a number of participants highlighted that **isolating China is neither desirable nor possible**. One panellist underscored that because there is ‘stickiness’ in the world’s leading technology clusters that leverage and invest in local networks and infrastructure, the development of talent and capacity in tech sectors requires both significant time and resources. Consequently, moving production away from China’s tech manufacturing hubs would be extraordinarily costly and logistically fraught. Chinese leadership in this area and Chinese investments in innovation have made it a global tech manufacturing leader, which forces us to engage with China, whether we like it or not. Other panellists highlighted that the China-U.S. standoff has begun to fragment global technology supply chains and has contributed to increased uncertainty.

## THE NEED FOR CAPACITY BUILDING

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Conference participants agreed that **Canada must develop the capacity to withstand these trends in technology and geopolitics**. Participants agreed that while Canada does not have the geopolitical heft to unilaterally counter these forces, it has the opportunity to be proactive in its adaptation, the responsibility to ensure the security and prosperity of Canadians, and the ability to influence domestic and/or global regimes for succeeding in the Fourth Industrial Revolution.

Throughout the conference, participants echoed the point that **Canada has a special set of advantages when it comes to science and technology.** AI was highlighted as a special area in which Canada is “in the game” to lead globally, thanks in part to early investments in basic research through CIFAR. In this context, Canada’s research institutes and talent were highlighted as key assets. Canada’s strengths in turning research into innovative products and services were highlighted through the success stories of several start-ups and hubs such as Toronto’s MaRS Discovery District. Further attractive assets are the liveability, stability, and diversity of Canadian cities.

Speakers stressed the **importance of a good policy environment for capacity building in the technology sector.** It was stressed that geopolitical and technological shifts do not occur suddenly, and that there is room for proactive policy development that can prepare and build capacity to navigate these greater changes. One panellist emphasized that Nortel’s market demise, for example, was not a surprise as the decline of the company’s profitability happened gradually and in a stable policy environment. Similarly, the purchase and deployment of Huawei hardware by Canadian telecommunications companies was predictable given the understanding and nature of the technology and the approvals received to deploy it. A more agile and proactive policy framework reflective of the changing paradigms is required today, as opposed to falling back on an Industrial Age mindset.

Throughout the conference, speakers and participants encouraged broader government support for building the Canadian tech sector. Investment in new tools such as standards, combined with Canada’s strength in R&D and innovation, were highlighted as keys to building tech capacity. Further, speakers and participants stressed the need to better support Canada’s innovation sector in scaling start-ups to ensure the security and prosperity of Canadians amid the transition to the Fourth Industrial Revolution.

## OUR RECOMMENDATIONS

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APF Canada provides the following five broad recommendations based on the discussions at the conference. These recommendations should serve as starting points for more targeted discussions and action items moving forward.

### 1. IDENTIFY WAYS OF ENGAGING WITH CHINA AS AN UNAVOIDABLE PLAYER

Identify ways of engaging with China as an unavoidable player. China is no longer just the “factory of the world,” but a leading innovator and investor, especially in tech. Considering its deep involvement and market opportunity, bypassing China is neither desirable nor possible. Further, considering the trend of regionalization in the Asia Pacific, Canada’s opportunities in the region are now contingent upon its successful navigation of relations with China. Subsequently, it is necessary to embrace the inevitability of engaging with China, and identify ways of doing so in a smart and pragmatic manner that balances commercial opportunities and national security. One immediate action item would be, in the short term, to increase the ‘China Competence’ – and more broadly, the ‘Asia Competence’ – of Canadian policy-makers through targeted briefings and short-term business and technology education programs. In the long term, Canada should create more work and study opportunities in China for Canadian post-secondary students and early-career professionals.

### 2. DEPART FROM THE INDUSTRIAL AGE MINDSET AND EMBRACE THE FOURTH INDUSTRIAL REVOLUTION.

Success in today’s economy requires different types of talent, policy, and infrastructure. It is imperative for Canadians to embrace the value of ‘intangible’ goods such as data and intellectual property, and to learn how to leverage these assets to increase Canada’s competitiveness on the global stage. Canada today needs to invest in new infrastructure that will allow Canadians to benefit from this transition into the Fourth Industrial Revolution.

This means investment in agile and ambitious policies and infrastructure, cybersecurity, and data governance. In particular, Canadians face the challenge of balancing their right to privacy with the harnessing of data for new technologies. In this regard, defining the appropriate role for the OPC will be key, including ensuring the consistent application of enforcement mechanisms as they pertain to privacy issues. The next federal government should clarify the role of the OPC in balancing support for a data-driven economy and respect for Canadians' privacy rights, and how this will be achieved – i.e. opening legislation versus the OPC adapting to other global frameworks. All in all, innovative thinking is required to design more agile and responsive government organizational structures to cope with rapid change associated with the Fourth Industrial Revolution.

### 3. LEAD THROUGH GOOD, PROACTIVE PRACTICES.

The transition to the digital economy is new for everyone, and countries around the world are trying to identify the best way of governing new technologies. In this context, there are opportunities to exercise leadership by setting standards for good practices in technology governance. Canada, which enjoys a positive reputation in terms of good governance, has a special advantage in this respect. A notable example is Canada's CIO Strategy Council's publication of the world's first national AI standard, which reflects input from public, private, and voluntary sectors. The standard, which reflects Canada's values, will serve as a benchmark for other countries seeking to do the same. Another potential opportunity is to partner or collaborate with countries such as India, which has access to large data sets, on the development of 'data trusts' and bilateral data governance to develop a set of best practices for data sharing among different stakeholders for specific sectors where data is used. Canada should identify similar opportunities, act proactively, and lead at the global level.



#### 4. CONTINUE LEVERAGING CANADA'S WORLD-CLASS RESEARCH CAPACITY TO ATTRACT TALENT

Talent is a key factor of success in the era of the Fourth Industrial Revolution. Canada's world-class research universities already attract international STEM talent and organizations. Organizations such as CIFAR and the National Research Council further add competitiveness to Canada's research capacity. As the U.S. continues to build a wall to exclude researchers from countries that it deems hostile, Canada should not only keep its doors open, but also actively attract and retain international talent seeking opportunities outside the U.S.

#### 5. SUPPORT CANADA'S INNOVATION SECTOR TO INCREASE THE CAPACITY TO NAVIGATE NEW GEOPOLITICAL CHALLENGES.

Recent trends feature politically-driven attempts to disrupt global tech supply chains as technology increasingly becomes intertwined with geopolitics. In this context, a stronger, more globally competitive innovation sector requires a greater capacity within Canada to navigate commercial and geopolitical disruptions. Building a favourable and agile policy and regulatory environment, and proactively setting standards for a stronger innovation sector will increase Canada's ability to attract and retain talent necessary to build scalable and globally competitive companies.

## APPENDIX A: PANEL SESSIONS

**Panel 1:** The Technology & National Security Nexus –  
Opportunities and Vulnerabilities

**Panel 2:** National Security Impact on Technology Supply Chain  
Management

**Panel 3:** Data Management and Data Governance in the G20  
and Beyond

**Panel 4:** Technology Investment and Partnerships in Research  
and Development

**Panel 5:** Navigating a Tech Future

## ABOUT THE ASIA PACIFIC FOUNDATION OF CANADA

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The Asia Pacific Foundation of Canada (APF Canada) is a not-for-profit organization focused on Canada's relations with Asia. Our mission is to be Canada's catalyst for engagement with Asia and Asia's bridge to Canada. APF Canada is dedicated to strengthening ties between Canada and Asia with a focus on seven thematic areas: trade and investment, surveys and polling, regional security, digital technologies, domestic networks, sustainable development, and Asia Competency.



Our research provides high-quality, relevant, and timely information, insights, and perspectives on Canada-Asia relations. Providing policy considerations and business intelligence for stakeholders across the Asia Pacific, our work includes Reports, Policy Briefs, Case Studies, Dispatches, and a regular Asia Watch newsletter that together support these thematic areas.

APF Canada also works with business, government, and academic stakeholders to provide custom research, data, briefing and Asia Competency training for Canadian organizations. This 'micro-consulting' service is available by request and we would be pleased to work with you to meet your business intelligence needs.

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