



CONTENTS

EXECUTIVE SUMMARY	3
KEY TAKEAWAYS	4
Session I: The State of Canada–South Korea Co-operation on Al	5
Session II: Economic Opportunities Between Industries Through AI	7
Session III: Deepening Partnerships in the Indo-Pacific Region	9
Concluding Reflections: A Roadmap for	1

EXECUTIVE SUMMARY

Canada, a global leader in foundational research and policy governance in artificial intelligence (AI), is a natural partner for South Korea, which has emerged as a frontrunner in AI adoption, legislation, and commercialization. Bilateral relations between the two countries have steadily deepened over the past decade, from the signing of the Canada-Korea
Free Trade Agreement in 2014 to the elevation of ties to a CSP in 2022. The CSP Action Plan, released in 2024, has laid the groundwork for more institutionalized co-operation across academia, industry, and government, including recent high-level agreements on critical minerals, energy security, and strategic defence co-ordination.



Building on this momentum, the Asia Pacific Foundation of Canada (APF Canada), South Korea's Science and Technology Policy Institute (STEPI), and the Canadian Embassy in South Korea convened an inaugural Track 1.5 Dialogue on Artificial Intelligence in Seoul on July 9, 2025. This dialogue brought together senior representatives from government, industry, and academia from both countries to explore avenues for bilateral collaboration on AI governance, innovation, and commercialization. Taking place against the backdrop of intensified U.S.-China competition and rapid technological change, the discussions reflected a shared recognition that AI is central to both countries' economic and strategic futures.

New governments in both Canada and South Korea have identified AI as a strategic national priority. Canada, which holds the 2025 G7 Presidency, has championed an AI-forward agenda focused on innovation, infrastructure, and public-sector adoption. Meanwhile, South Korea is chair of the Asia-Pacific Economic Cooperation (APEC) forum in 2025 and has placed AI and digital transformation at the heart of its regional agenda. This unique convergence of leadership and policy momentum made this Track 1.5 dialogue especially timely.

Key themes included aligning regulatory frameworks, fostering AI talent, expanding energy infrastructure to support AI adoption, and identifying opportunities for joint leadership in multilateral and Indo-Pacific regional initiatives. The dialogue also emphasized the need to move beyond aspirational rhetoric to focused implementation, tangible steps to promote adoption and commercialization, and leveraging the complementary strengths of both countries — Canada's leadership in AI research and Korea's edge in advanced hardware and practical applications.

KEY TAKEAWAYS

- **Energy as an Enabler:** South Korea's growing energy demands to power AI can be met through Canadian liquefied natural gas (LNG) exports and nuclear partnerships.
- **Complementary Strengths, Shared Standards:** Unlocking the full potential of bilateral co-operation requires alignment on intellectual property (IP) protection, data governance, data collaboration, and technical interoperability foundations for joint commercialization and innovation.
- Global Influence Through Partnership: Canada's role as a G7 rule-setter and South Korea's growing leadership in Global South and Indo-Pacific 'minilateralism' can be harnessed to shape inclusive, secure, and forward-looking AI governance frameworks.
- Canada-Korea Commercial Opportunities: Strong opportunities for commercial ties extend beyond energy and include the potential use of South Korea's hardware and AI chips in Canadian data centres and compute infrastructure, and the potential for South Korean firms to license and help globally scale Canadian AI solutions.

SESSION I:

The State of Canada-South Korea Co-operation on Al

Lead Discussants: Gillian Frost, Sean Mullin, Kyounglim Lee, Kiyoon Shin Moderated by: Vina Nadjibulla

KEY ISSUES:

Artificial intelligence (AI) is a top-tier strategic priority for both Canada and South Korea. In 2017, Canada became the first country in the world to launch a national AI strategy, while South Korea, in 2024, became the first Asian country to enact a comprehensive AI Basic Act. In 2025, with Canada holding the G7 Presidency and South Korea chairing APEC, both countries are well-positioned to lead on the global challenge of balancing innovation and regulation in the AI space. This leadership is backed by significant institutional commitment and investment.

Canada has committed over <u>C\$2 billion</u> to increase access to AI infrastructure for domestic startups and scale-ups, along with up to <u>C\$300 million</u> to support Canadian innovation and commercialization efforts. The appointment of a <u>new federal Minister</u> for AI and Digital Innovation is a key signal of the government's focus on positioning AI as a pillar of economic and national resilience.

South Korea is equally ambitious, aiming to become one of the world's top three AI powers under President Lee Jae-myung's US\$75-billion (100-trillion Korean won) AI investment strategy. Key pillars of South Korea's approach include: (1) expanding domestic AI computing capacity with over 10,000 high-end graphics processing units (GPUs) by the end of 2025; (2) developing world-class, next-generation large language models

(LLMs); (3) attracting and nurturing high-level AI talent; and (4) driving a whole-of-society transformation through AI. To support this agenda, the president has appointed the country's <u>first-ever senior presidential</u> <u>secretary</u> dedicated solely to AI policy, backed by a newly established AI unit within the Office of the President.

South Korea's concept of "sovereign AI" — framed as "AI for all" — focuses on achieving national autonomy across the entire AI value chain, from data access and algorithm development to infrastructure, ethical frameworks, and public trust. This model aspires to deliver an open, homegrown AI platform freely accessible to South Korean citizens.

The dialogue explored the shared challenge of reconciling rapid AI adoption with the need for robust governance. Sovereignty concerns — including compute access, IP rights, data collaboration, and supply chain vulnerabilities — are increasingly shaped by the broader U.S.-China strategic rivalry. At the same time, Canada and South Korea have distinct comparative advantages: Canada excels in foundational AI research, while South Korea leads in hardware development, information and communication technology (ICT) infrastructure, and commercial application.

For Canada, boosting economic productivity is the main driver of its AI strategy, particularly in light of rising defence spending and concerns about competitiveness. Suggestions included offering a 20 per cent tax credit for micro, small, and medium enterprises (MSMEs) adopting AI, expanded funding for workforce training and upskilling, and sustained investment in critical innovation infrastructure such as <u>BOREALIS</u> (Bureau of Research, Engineering and Advanced Leadership in Innovation and Science), Canada's new national research and innovation platform focused on dual-use science and emerging technologies.

South Korea, meanwhile, has been strengthening its ties with Canadian AI institutions. Since 2022, major South Korean tech companies such as Naver, KT, and Samsung have signed Memoranda of Understanding (MoUs) with Canadian leaders such as the <u>Vector Institute</u> and the <u>University of Toronto</u>. South Korea seeks to learn from Canada's expertise in early-stage research and data governance, while Canada has expressed interest in South Korea's public-sector deployment of AI to improve service delivery and institutional performance.

G7 and APEC Platforms

As Chair of the 2025 G7, Canada led the adoption of the "AI for Prosperity" Leaders' <u>Statement</u>, shifting emphasis from regulation and risk mitigation toward AI adoption, particularly by governments and SMEs. It also highlighted the role of AI in addressing global energy demands and supporting inclusive digital development in the Global South.

In parallel, as APEC Chair, South Korea has made AI co-operation a flagship priority for the November 2025 APEC Economic Leaders' Meeting. Under the theme "Building a Sustainable Tomorrow: Connect, Innovate, Prosper," South Korea is advancing proposals on AI transformation, regional capacity building, and sustainable AI infrastructure.

To deepen bilateral AI co-operation, participants emphasized the need to formalize collaboration mechanisms — beginning with targeted initiatives in the public sector and AI platforms for SME adoption. Greater alignment is also needed across regulatory frameworks, especially around IP rights and cross-border data governance in an increasingly intangible-driven economy.

Best practices from the Hiroshima AI Process (HAIP) and the OECD's Global Partnership on AI (GPAI) were highlighted as useful platforms for Canada–South Korea engagement. HAIP's voluntary code of conduct provides a flexible, interoperable framework for public-private partnerships, while Canada's AI Adoption Initiative (CAIAI) offers a menu of policy actions relevant to South Korea's national strategy.

RECOMMENDATIONS:

- Align national strategies through regular policy exchange; Canada could consider establishing a science and tech policy-focused think-tank similar to STEPI.
- Strengthen bilateral capacity-building initiatives in the public sector.
- Explore joint participation in the GPAI, Hiroshima AI Process, and CAIAI platforms.
- To encourage partnership in dual-use AI technology, consider upgrading the current defence-industrial MoU to a higher-level reciprocal defence procurement agreement.
- Strike a middle ground between regulation and enablement, or AI safety and AI adoption.

SESSION II:

Economic Opportunities Between Industries Through AI

Lead Discussants: Jan De Silva, Handol Kim, Bon Tae Koo, Joo-young Kim Moderated by: David Lederhendler

KEY ISSUES:

Al's Growing Energy Demands and the Role of Canada–South Korea Energy Co-operation

By 2030, global electricity demand from AI-intensive data centres is expected to quadruple. Within APEC economies, digital transformation is powered by diverse energy sources shaped by national geography, infrastructure, and investment capacity. This underscores the need for sustainable, reliable, and scalable energy partnerships to support AI infrastructure.

Canada and South Korea are already natural partners in this space. South Korea has long been a key importer of Canada's CANDU large nuclear reactor technology and is emerging as a significant destination for Canadian LNG. Discussions highlighted South Korea's interest in building data centres that leverage LNG for both energy and cooling, offering a potential win-win model for Canada-South Korea AI-energy collaboration.

As both countries scale up AI deployment, additional cooperation areas include responsible AI procurement, safe integration of AI in supply chains, and shared planning for the quantum-computing transition. Establishing a Canada-South Korea working group, holding regular summits, and initiating structured public-private partnerships will be key to managing infrastructure gaps and ensuring inclusive access to compute resources. Canada-South Korea AI co-operation should also be

quantum-ready and address uneven access to compute resources and **infrastructure gaps** through an annual summit and joint working groups.

Hardware-Software Complementarities: A Platform for Deeper Bilateral Collaboration

Canada's strengths in foundational AI research and South Korea's excellence in hardware engineering and information and communication technology (ICT) infrastructure are highly complementary. The two sides agreed that bilateral collaboration must begin earlier in the AI development cycle — starting at the design stage rather than waiting for deployment.

Joint research and development (R&D) projects, crossborder procurement, and co-ordinated regulatory frameworks were proposed as pathways to accelerate collaboration. A key theme was the need for shared standards in data management and interoperability, especially as hardware-software compatibility challenges grow in complexity.

Participants also pointed to South Korea's major advancements in AI hardware — including <u>processim-memory (PIM)</u> semiconductors that are reportedly 100 to 1,000 times more power-efficient than Nvidia GPUs, and neuromorphic chips that mimic human brain functions — as opportunities for strategic alignment with Canada's leadership in large language models (LLMs) and responsible AI.

The two countries were also encouraged to diversify procurement away from U.S.-centric supply chains by sourcing more from each other. For example, Canada could explore partnerships with South Korean tech firms like Naver (often referred to as "Korea's Google"), as well as LG CNS, with which the Canadian firm Cohere partnered recently.

Both sides recognized the need to do more on talent development. While South Korea benefits from a deep pool of affordable AI talent, it struggles with talent retention, particularly as junior experts gravitate toward private-sector roles over positions at research institutes like the Electronics and Telecommunications Research Institute (ETRI). Canada faces its own challenge in scaling talent pipelines and retaining homegrown AI champions.

Boosting MSME Access to AI Infrastructure

A recurring theme was the need to democratize AI adoption for micro, small, and medium enterprises (MSMEs), which often lack the financial and technical capacity to develop in-house AI systems. Many MSMEs face fragmented access to compute resources, making it difficult to participate in the AI economy. The solution, participants agreed, lies in making shared platforms more accessible and affordable. National strategies in both countries should prioritize the creation of common compute infrastructure and services that allow MSMEs to plug into cutting-edge tools — levelling the playing field and stimulating innovation at scale.

Discussants also emphasized shifting away from fearbased or overly top-down regulatory approaches and instead prioritizing industry-led frameworks that stimulate practical adoption. It was also stressed that AI should be treated as a horizontal enabler that cuts across sectors, not as a vertical confined to tech industries.

RECOMMENDATIONS:

- Develop AI infrastructure partnerships (e.g. floating data centres, shared cloud platforms, advances in data centres, and AI compute efficiencies and sustainability).
- Promote joint procurement and standardization for cross-border AI deployment. Prioritize each other's markets for procurement. Formalize engagement to profile and promote Canadian AI solutions to South Korean conglomerates.
- Create measurements like the <u>Burn-to-Earn</u> index to maximize the economic value of the digital economy.
- Join (and AI-enable) <u>platforms</u> similar to APEC's Digital Trade Connectivity, which uses blockchain technology to digitize supply chains.
- Seek opportunities to support each other in quantumreadiness, such as R&D <u>missions</u>, annual Quantum Now <u>summits</u>, and talent <u>exchange</u> programs.
- Learn from each other's best practices for AI
 enablement solutions for Canada's MSMEs, which have
 been traditionally fragmented and difficult to scale.
- Increase demand for AI by emphasizing horizontal instead of vertical AI adoption — facilitating industries' increase in productivity and profit margins with AI enablement.

SESSION III:

Deepening Partnerships in the Indo-Pacific Region

Lead Discussants: Stephanie Carvin, Jean-Francois Lacasse, Yonggi Kim, Ji Yeong Yoo Moderated by: Chi Ung Song

KEY ISSUES:

Shared Priorities in Canada and South Korea's Indo-Pacific Strategies

Canada and South Korea share goals in their respective Indo-Pacific strategies, particularly advancing AI-related infrastructure, early-stage R&D collaboration, and international standards-setting. Both countries are also pursuing a more proactive and strategic posture in the region, moving beyond traditional soft power to targeted, outcomes-driven partnerships.

Canada's status as a G7 member and 'rule-setter' positions it to help amplify South Korea's influence in international governance, while South Korea's extensive experience in minilateral co-operation — especially with the U.S. and Japan — provides a valuable model for Canada as it seeks to deepen engagement in the Indo-Pacific. Joint initiatives, such as shared AI data centres and compute infrastructure, were discussed as practical ways to operationalize this alignment.

Participants emphasized the importance of focusing on tangible, near-term achievements and resisting the tendency to frame every initiative through the lens of U.S.-China competition. A Canada-South Korea AI partnership should be rooted in mutual recognition, complementary strengths, and a shared commitment to regional capacity-building. Participants also stressed the need to deepen broader diplomatic advocacy and

co-operation between South Korea and Canada to support each other's participation in groups such as the G7 (for South Korea) and Indo-Pacific minilateral groupings (for Canada).

Opportunities for Canada–South Korea Leadership in ASEAN

The dialogue highlighted the significant potential for Canada and South Korea to take on a joint leadership role in AI engagement with Association of Southeast Asian Nations (ASEAN) members. This could include investing in locally driven AI innovation, strengthening regional AI infrastructure, and aligning emerging technologies with global ethical and technical standards.

Canada's AI development programming, which has already expanded from Africa into parts of the Indo-Pacific, provides a foundation for future initiatives. Given the increasing global footprint of subsidized Chinese data centres (e.g. by Huawei), Canada and South Korea can jointly offer an alternative by combining Canada's strength in AI software and governance with South Korea's capacity in AI hardware and manufacturing.

Participants also flagged the importance of tailoring engagement to local contexts and disparities and recommended deeper collaboration through embassies, cybersecurity attachés, and other on-theground partnerships.

Digital-only Frameworks as Enablers of Secure Al Collaboration

Digital economy agreements such as the Digital Economy Partnership Agreement (DEPA), of which South Korea is a member and Canada is awaiting membership — offer promising models for advancing secure and rules-based AI co-operation. Participants proposed mapping both countries' institutional AI ecosystems — including government, academia, industry, and think-tanks — as a starting point for building trusted, interoperable frameworks.

There was broad support for Canada more publicly backing South Korea's bids for G7/G8 and CPTPP membership, and for South Korea supporting Canada's deeper integration into regional minilateral structures. Such reciprocal support would not only enhance bilateral trust but also strengthen shared influence across the Indo-Pacific.

The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (<u>CPTPP</u>), particularly <u>Chapter 14 on e-commerce</u>, could serve as a neutral and institutionalized platform to advance AI norms and regulatory

co-operation. South Korea's accession to the CPTPP could open additional opportunities for embedding digital and AI-related collaboration between the two countries within a trusted multilateral framework.

RECOMMENDATIONS:

- Explore the potential of joint Canada-South Korea AI initiatives in third countries.
- Deepen AI collaboration through regional minilateral platforms and working groups.
- Support mutual accession and integration efforts in the CPTPP, DEPA, and G7/G8 processes.
- Map and connect AI policy ecosystems across government, academia, and industry.
- Institutionalize the Canada-South Korea bilateral partnership similar to the Canada-U.K. AI agreement, such as joint statements in 2024 and 2025, and the recent MoU to strengthen semiconductor supply chains.

CONCLUDING REFLECTIONS:

A Roadmap for Strategic Partnership

Moderated Dialogue/Wrap-up Discussion: Ann Fitz-Gerald, Trevor Kennedy, Dongwook Seoh, Hwanil Park

KEY THEMES:

Addressing Canada's Productivity Gap and South Korea's Demographic Pressures Through AI

As like-minded, middle-power democracies with close economic and security ties to the U.S., Canada and South Korea share many structural similarities, yet face different domestic imperatives. South Korea's urgency around AI stems from its rapidly aging population and labour shortages, while Canada sees AI as a critical lever to address its longstanding productivity gap.

South Korea's approach leans more heavily on national champions and state-led investment in AI as a public good, whereas Canada's G7 commitment strategy emphasizes adoption by MSMEs and government sectors to boost productivity and competitiveness. These differing approaches create opportunities for mutual learning and policy alignment, especially around workforce development and AI-driven innovation for public service delivery.

Sharing Talent, Energy, Market Access and R&D Infrastructure to Accelerate Innovation

Participants highlighted the potential for deeper collaboration in talent exchange, energy co-operation, and shared R&D infrastructure. South Korea's chronic energy constraints — particularly in powering

data centres and compute infrastructure — could be addressed through Canadian LNG exports and nuclear technology. Meanwhile, Canada's academic and institutional leadership in foundational AI can be complemented by South Korea's strength in engineering, systems design, and manufacturing. Canadian AI firms could benefit from partnerships with South Korean business conglomerates to help commercialize and scale their solutions globally.

Expanding Bilateral AI Collaboration into Adjacent Sectors

The dialogue also underscored the need to expand bilateral co-operation beyond AI into adjacent sectors such as quantum technologies, biosciences, and aerospace. These areas of emerging innovation offer fertile ground for joint research, commercialization, and regulatory co-operation. South Korea and Canada are also significantly expanding their defence budgets, offering potential opportunities for greater defence industrial co-operation.

As collaboration deepens, both countries will need to remain attentive to possible economic spillovers and prioritize inclusive dialogue involving technical experts, MSMEs, and national champions from both ecosystems.

Regular convening through an annual Canada–South Korea AI summit, the sharing of MSME-focused platforms and best practices, commercialization opportunities and high-level leadership visits tied to concrete deliverables — such as joint projects on semiconductors, low-carbon processing, and AI-enabled health innovations — can help translate shared strategic interests into actionable outcomes.

NEXT STEPS:

- Develop a joint roadmap to implement the recommendations from this dialogue.
- Prepare for a 2026 Canada-South Korea AI Dialogue, with a focus on implementation, monitoring, and scaling partnerships.

- Consider leveraging the 2026 Canada-Korea Forum in Seoul for ongoing engagement.
- Identify a short list of sector-specific initiatives, such as health, climate, aerospace, quantum, and AI solutions in traditional sectors as pilots for collaboration ahead of 2026.
- Identify partners on both sides to collaborate on sovereign large language models and share best practices, including South Korea's outcome-driven approach that is distinct from Canada's processdriven, multi-stakeholder environment.

This report was authored by Vina Nadjibulla, Vice President, Research & Strategy, at APF Canada, and Jeehye Kim, Senior Program Manager, Northeast Asia, at APF Canada.





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