



Engineering Tomorrow's AI Economy: Roundtable Backgrounder

Led by Michael Serbinis, Founder and CEO of League

How Canada can win at AI in the next 10 years

AI is rapidly changing virtually every sector and line of work. Canada is not ready. Our workforce broadly lacks AI skills and training. AI research and enterprise collaborations are limited. Talent is often moving abroad for better paying, high growth opportunities.

AI is fundamentally reshaping work—automating tasks, redefining roles, and boosting productivity. Entry-level jobs are being reconfigured or replaced, shifting the pathways through which talent is developed and deployed. To address this requires coordinated action between industry, government, and educational institutions.

Session Goal: Enable our post-secondary institutions and companies to produce cutting-edge AI research and globally competitive AI firms, and drive economy-wide adoption.

Why Now?

- Companies and organizations around the world are moving quickly to adopt AI to achieve productivity gains and become more efficient. Canadian organizations are moving comparatively more slowly—and we are already in a productivity slump.
- Canada's position relative to peers (US, UK, Australia) in AI research, commercialization, and talent is at a critical juncture - and in many cases not headed in the right direction.
- Coordinated action between postsecondary institutions, government, and industry is essential to capitalize on a near-term opportunity window for public & private investment in our country. Only through this coordinated action can we maximize R&D and economic impact, reverse the productivity decline, and protect Canada's future.

SWOT Snapshot: The Canadian AI Context

Strengths

- Global AI research reputation: 10% of world's top-tier AI researchers are in Canada
- Strong public trust in institutions (compared to international levels)
- \$4.4B federal AI and digital funding since 2016
- Includes \$2.4B federal investment in AI compute over 5 years (2024-2029)
- Growing AI startup ecosystem (670+ startups; \$15.3B in private investment since 2013)
- Cohere and other leading enterprise-focused AI companies including Ada, Blue J, Clio, OpenText
- Increasing international STEM student enrollment (28% of STEM grads in 2021)
- Strong universities and PSE system

Weaknesses

- Low AI commercialization and patent retention: Only 3% of global AI market share, 75% of AI patents developed in Canada are owned by foreign entities
- Only 12.2% of Canadian businesses use AI meaningfully for goods/ services production
- Limited enterprise-academic collaboration
- Significant brain drain: 23% of computer science grads from top universities leave the country
- Severe compute deficit: Only 0.6% of global compute - 1/8 to 1/10 of G7 per capita average
- Regulatory fragmentation across federal/provincial bodies, creating uncertainty and hampering SME adoption
- Low AI training: Less than 25% of Canadian employees have received AI training; 79% of Canadians concerned about negative AI outcomes.

Opportunities

- Invest majorly to close the compute gap and have sovereign infrastructure for critical applications
- Rethink and redesign PSE programs for an AI-driven economy (e.g., co-developed curricula, work-integrated learning, micro-credentials)
- Lead in responsible AI development and public trust
- Bridge academia-industry gap through partnerships (e.g., research chairs, corporate AI academies)
- Improve attraction and retention of top global AI talent

Threats

- Accelerating talent exodus, especially to the US
- Fewer Canadian venture capital deals in AI/ML than prior years (2024 vs. 23/22)
- AI could reduce the number of entry-level positions across various sectors of the economy
- Global competition intensifying: by some measures, Canada produced 0 of the top 40 AI foundation models in 2024
- Energy and climate challenges of data centres
- Risk of becoming an AI consumer rather than a producer nation

Strategic Focus: People and Ideas, Now to 2035

Let's reflect on where we are now and systems we must build to lead globally by 2035.

AI talent competitiveness will depend on our ability to produce, attract, and retain the right volume and mix of talent. We likely need structural reforms, **which could include:**

- Integrate AI literacy across all disciplines, not just computer science
- Create stackable credentials allowing continuous upskilling
- Develop work-integrated learning specifically for AI applications
- Establish clear pathways from college diplomas to university AI programs

Making choices on commercialization is essential, because we don't have the capacity to win on everything. We'll have to prioritize. **We could for example:**

- Focus AI compute on the highest-impact research and commercialization areas
- Create regulatory sandboxes for AI experimentation
- Establish IP retention strategies to keep innovations in Canada
- Build sector-specific AI strategies (e.g. healthcare, finance, energy, manufacturing)

Key Questions for Discussion

This session is not about consensus. It's about surfacing high-impact opportunities for action. **The chair will guide discussion around critical questions, such as:**

- **Talent Pipelines:** How do we build talent pipelines that integrate technical skills, human capabilities, and applied research experience to ensure graduates can both use and shape emerging technologies?
- **AI-Embedded Education:** What new models of program design, delivery, and credentialing will meet this moment? And how do we ensure that education remains but a core driver of Canada's AI innovation and workforce capacity?
- **Compute Infrastructure:** What are the next steps to close our significant AI compute gap with other G7 nations? How do we invest the AI compute that we have and are building most effectively, for the highest impact?
- **Metrics & Accountability:** What clear accountability metrics should we establish for 2025-2035? Consider:
 - 5xing meaningful business AI adoption from 12% to 60%
 - Improving STEM graduate retention from 86% to 95% and aiming to retain 90% of elite school computer science (and AI specialist) graduates
 - Generate \$100B+ in AI-driven economic activity and public sector savings

The core challenge remains: how do we ensure Canadian-developed AI and talent stay and build in Canada when competitors and competing institutions offer superior infrastructure, clearer regulations, and higher compensation and growth opportunities?