
2017 Main Conclusions

The Quebec City Conference
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Tech Innovation Platform (TIP)
**Ecosystem
Building Forum**

Message from the Presidents of the Quebec City Conference and the Tech Innovation Platform

The Quebec City Conference (QCC) was created 12 years ago on the belief that, in a world where capital and markets know no borders, joining forces, resources and expertise was the right strategy to maximize value for each participant. We believe that this mission is more essential today than ever.

The QCC is a not-for-profit corporation whose mission is to contribute to the identification and resolution of capital market inefficiencies that lead to underinvestment in activities or sectors that generate societal benefit. In more specific terms, its mission consists of the following:

1. To create customized by-invitation-only forums, each one addressing a specific need in the market place. The main ones are the Public Policy Forum on Venture Capital and Innovation created in 2007 and which in 2016 became the Tech Innovation Platform (TIP), the Institutional Investors Roundtable (IIR) created in 2010 and which has evolved into a community of over 40 sovereign wealth funds and large pension plans interested to improve their capacity around long-term investment activity and finally the Fiduciary Investors Roundtable for Collaboration and Partnerships created in 2016 to address the needs of institutional investors who, because of constraints of scale or governance, do not have significant in-house investment capabilities but are interested to learn from their more advanced peers and collaborate with them to take better advantage of their characteristics of long-term investors.
2. To provide these forums with financial and logistical support and targeted research, thus playing the role of a foundation.

Building on the experience of the Public Policy Forum on Venture Capital and Innovation (“PPF”) and the Institutional Investors Roundtable (“IIR”), the TIP aims to bring together leading stakeholders of tech innovation ecosystems (corporations, universities, investors, governments and ecosystem leadership) in order to foster collaboration and accelerate the development of these ecosystems. It has two components: the leadership roundtable and the Ecosystem Building Forum. This document presents the Main Conclusions of the Ecosystem Building Forum.

The TIP is not a conference, it is a platform. Its objective goes beyond sharing information and best practices: it is to address the lingering productivity and innovation gaps and enhance the innovation agenda across the country.

Such an ambitious objective can only be achieved by joining forces and engaging the leaders of the main groups of stakeholders of the tech innovation ecosystems in structured conversations designed to lead to tangible results beyond the TIP meetings themselves.

Invitations are therefore selective, focusing on high level strategic leaders who are able and interested to contribute to the elaboration of tangible collaborative solutions.

We would like to thank all those who contributed to this forum: our Advisory Committee, as well as the directors of the Quebec City Conference who have enthusiastically supported this initiative.

In closing, we would like to underline the contribution of the Governments of Quebec, Canada, Ontario, British Columbia which partnered with the Quebec City Conference to develop this platform and have provided considerable financial support.

We hope that you will find these Main Conclusions inspiring, notably the calls for action at the end of the Executive Summary.

Further to the TIP Ecosystem Building Forum meeting, many discussions and initiatives are already underway along these lines. TIP organizers will follow up with participants to understand how best they could help supporting these initiatives. We welcome your feedback and suggestions.

Sincerely.



Gilles Duruflé

President

QCC Tech Innovation Platform



Christian Racicot

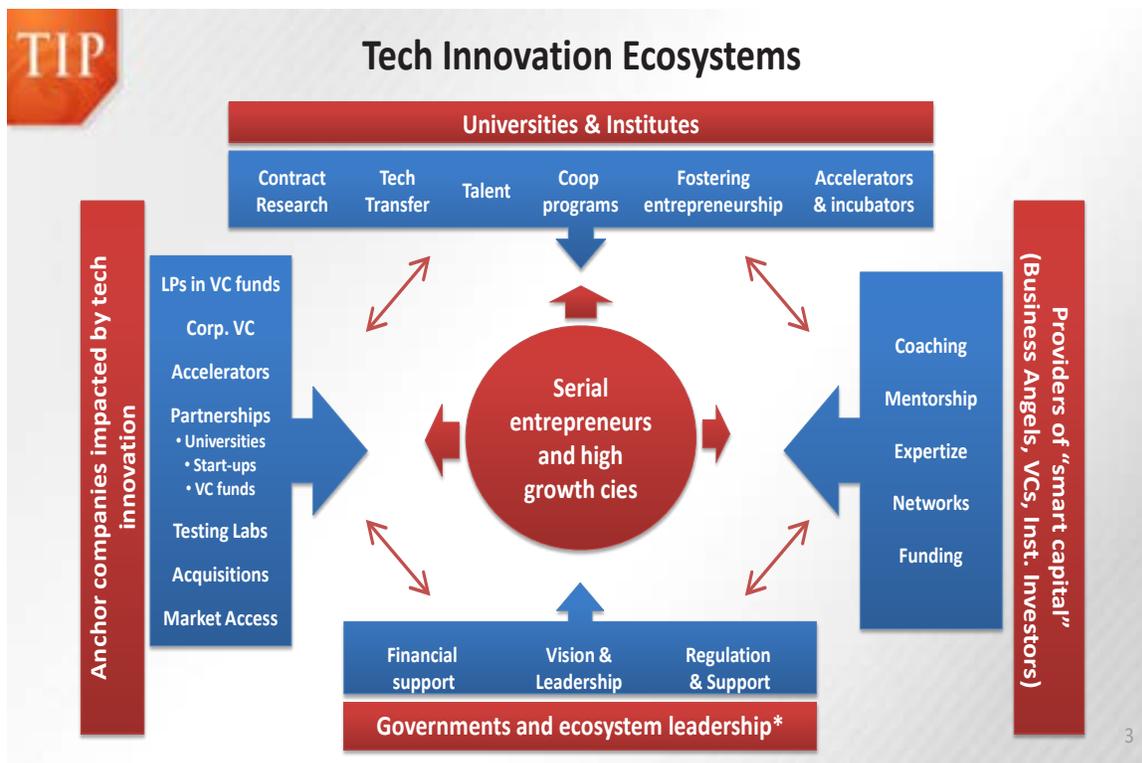
Co-Founder & President

The Quebec City Conference

About the Tech Innovation Platform (TIP) and the TIP Ecosystem Building Forum

The mission of the **Tech Innovation Platform (TIP)** is to foster collaboration on a continued basis among the leaders of the four groups of stakeholders of the Canadian tech innovation ecosystem (corporations impacted by tech innovation, leading universities, investors, policy designers and ecosystem builders) to address the most important opportunities and challenges of this ecosystem by way of structured, continued and result-driven discussions.

The four main groups of stakeholders impacting any tech innovation ecosystem



The TIP has two components:

- The **TIP Leadership Roundtable**, a roundtable designed for senior decision-makers focusing on strategic issues;
- Customized forums positioned at the operational level and focussing on tangible ways: (i) to enhance the effectiveness of organizations and initiatives that are the building blocks of tech innovation ecosystems, and (ii) to foster synergies among them. The first such forum is the **TIP Ecosystem Building Forum**.

The TIP Ecosystem Building Forum

The **Ecosystem Building Forum** is by-invitation only and brings together operators and stakeholders of leading regional tech ecosystems to exchange views on best practices and explore ways to collaborate in a mutually beneficial way. International best practices will also be invited when relevant for the topics that have been selected. Initiatives under consideration include:

- (i) helping start-ups to interface more efficiently with large corporations,
- (ii) helping all stakeholder groups to take advantage of organized tech hubs,
- (iii) initiatives to foster entrepreneurship within universities and accelerate tech transfers,
- (iv) helping tech start-ups understand better the financing chain and access more efficiently suitable sources of capital;
- (v) considering innovative models to address gaps in the regional or national tech ecosystems; and
- (vi) generally, exploring how these regional ecosystems may collaborate on tangible proposals to achieve these objectives.



Main Conclusions of the 2017 TIP Ecosystem Building Forum

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Executive Summary

AI is here and its impact is already very significant, reshaping entire sectors, creating multiple opportunities but also challenges. Canada could take inspiration from a country like Singapore to take full advantage of this transformation, mitigate potential downsides and become an AI hub. Actions to consider, notably to attracting global resources, were discussed.

The development of ecosystems happens by stage and a few triggers help transitioning from one stage to another. Global connectedness is a common thread nurturing these triggers. Therefore, at earlier phases of ecosystem development, ecosystem leaders must make special efforts to connect their start-ups to the global flow of ideas, knowledge, people and organizations. Stockholm, Helsinki and Lisbon are good examples in this regard.

In AI, disruptive business models may have a greater probability to appear with applied AI companies that gravitate around corporations such as Google, Facebook or Amazon. What can be done to leverage Canada's assets in research and attract these large companies and develop applied AI start-ups in Canada? Discussion of the various initiatives related to AI brought elements of answer to this question (see below).

Large Canadian corporations and banks are now becoming serious about their involvement with tech innovation ecosystems and this is very good news. However, there is still a need for (i) attracting more corporations to get involved and (ii) greater collaboration across corporates, particularly to share best practices. Corporate involvement in the ecosystem will be more efficient if corporations collaborate and speak a common language. There is a role for ecosystem builders to facilitate this collaboration.

Academic excellence in AI acts as a magnet to attract best professors and best students and also start-ups and corporations that are attracted both by research and talent. Linking academic expertise and industry needs remains a challenge, particularly for academic organizations.

Best AI accelerators are in a position to take a more proactive stance to create and attract start-up around research assets in AI. Despite their differences, they have in common the following features:

- They are structured to leverage university resources while remaining relatively independent from the university;
- They are building strong partnerships with corporations;
- They have a global perspective, attracting global resources and developing global connectedness for their start-ups;
- They have tall ambitions for the ecosystem: building global AI centers of excellence and clusters.

There are other models than Google, Facebook or Amazon to mix research and industry skills and develop applied AI solutions. Element.ai aims at bridging the gap between AI research and large corporations, attracting like-minded people working on cutting edge problems with a mix of research, start-ups and larger corporations, in an environment that is different from Google, Facebook or Amazon. If successful this model could contribute to attracting and maintaining talent in the Canadian ecosystem.



Finally, AI is not an industry. It is a technology that can be applied in many different verticals. The present ranking of ecosystems is based on the second wave of Internet which relies on platform companies (Facebook, Google, etc.). The next wave will be based on verticals which will leave room for more specialization of ecosystems: hospitality, transportation, fintech, oceantech, etc. CDL is presently replicating its model in several locations: Vancouver, Montreal, and Halifax. This expansion may go along with some sort of regional specialization to reflect regional strengths.

Next steps

Many participants underlined that the EBF brings together stakeholders that do not usually meet, in a setting designed for structured and informal conversations. In so doing, it contributes strongly to the building of the ecosystem.

Next step is to maintain the conversation and prepare for next year's forum in Toronto. Building on last year's and this year's exchanges, themes have already been proposed and will be discussed in greater detail. Ecosystem builders present at the meetings have indicated their willingness to participate.

The 2017 TIP Ecosystem Building Forum

The 2017 TIP Ecosystem Building Forum focused mainly on initiatives and best practices to accelerate the development of stronger ecosystems around Datascience and Artificial Intelligence (AI). International best practices and most Canadian initiatives to build a strong deal-flow around Canadian assets in research were reviewed with investors specialized in this field who were present.

Canada is a hotspot for research in AI with the teams of Yoshua Bengio in Montreal, Geoffrey Hinton in Toronto and Rich Sutton in the University of Alberta, and there is strong will on the part of governments, corporations and universities to leverage these assets to produce economic and commercial value. They are looking for best avenues to reach this goal. The most significant initiatives developed at present in Canada (in Quebec, Ontario, Alberta and BC) were represented at the Forum as well as many policy designers, academic leaders and investors. The TIP was a great opportunity to learn from one another and from international experiences and to foster collaboration.

The day opened with two keynote presentations to set the stage: the first one by Sharad Sachdev, Artificial Intelligence Lead at Accenture, on the opportunities and challenges created by recent advances in artificial intelligence and the second by JF Gauthier, CEO of Startup Genome, on Global Startup Ecosystem development and how this could apply to building ecosystems around AI.

The initiatives related to AI that were reviewed during the rest of the day were the following:

- AI Nexus Lab (New York City)
- Creative Destruction Lab (“CDL”, Toronto)
- Next.AI (Toronto)
- Alberta Machine Intelligence Institute (“AMII”, Edmonton)
- Institute for Data Valorisation (“IVADO”, Montreal)
- Element.AI (“Montreal”)

On the corporate side, RBC shared with the audience the bank’s vision of its involvement with the Canadian Tech Innovation Ecosystem and why and how it is partnering with several of the above initiatives.

On the university side, the President of Concordia University and co-creator of Ryerson DMZ and Ryerson Future shared his vision on how to translate Canada’s research strengths into global competitive advantage and economic value.

The final part of the Forum was dedicated to panels and discussions that followed up on discussions of the 2016 TIP on models to stimulate the development of start-up ecosystems and link corporations with these ecosystems: What have we learnt? What progress have we made? Communitech and Ryerson Futures came with some of their corporate partners to discuss these issues.

Setting the stage

AI challenges and opportunities

Sharad Sachdev, Artificial Intelligence Lead at Accenture

In his keynote presentation, Sharad Sachdev reminded the audience that AI is here and its impact is already very significant. It is reshaping entire sectors of our economies, from life sciences and finance to agriculture and retail, creating multiple opportunities but also challenges as it has the potential of replacing many jobs and layers of middle management and raises many issues of transparency and security. What can governments and countries do to take full advantage from this transformation and mitigate potential downsides?

Singapore is an inspiring example in this regard: the Safe City program is using multiple sensors dispatched through the city and AI to deploy resources in real time and manage the city's environment making the city a living lab for the adoption of innovation. Beyond this specific program, Singapore has embarked in the "Smart Nation Journey" with the ambition of establishing Singapore as a hub for analytical innovation and realizing the broader "Smart Nation" goal. The government acts not only as a consumer of innovation, it also designs policies and incentives to attract large corporations and innovative start-ups to set up operations in Singapore that are serving the local market and the whole Asia. It has also partnered with local and international universities to attract talent, drive innovation and support start-ups with government and private sector funding. GE, Accenture and Visa have open innovation labs in Singapore. The city has become a very hot market for local and international talent and an AI innovation hub.

How could Canada take inspiration from the Singapore experience to become an AI hub?

Looking at the Canadian present situation, Sharad asked the following questions:

- Canada has many resources in AI across the country. How federated or centralized should the model to build a Canadian AI innovation hub be?
- What are the incentives for corporations to invest in Canada and look to Canada as their primary destination to bring their AI innovation lab?
- Should students and professors have ownership of the IP generated within universities and the ability to commercialize it? This is presently the model with MIT, Stanford and many other universities and it seems to provide them with strong incentives to fight for patents and launch start-ups. This contributes to create a StartUp ecosystem and attract private sector investment.
- What are the incentives for universities to collaborate in developing new IP?
- What should the balance between growing local talent and attracting international talent be? Should there be a targeted effort to attract talent from outside? What should the incentives be?
- Given the potential downsides associated with the deployment of AI (job destruction, lack of transparency, issues related to fairness and security), there is a need for principles of responsible AI. How is Canada going to define these principles and abide by them?

The adoption of AI could nearly double GDP growth in industrialized economies through the increase in automation, labor and capital thanks to better decisions, and the diffusion of innovation.. However responsible AI will require concrete action to address the following challenges: governance and

accountability, transparency and fairness, reskilling and security. These questions need to be solved for our economies to fully reap the benefits of AI.

Building AI superclusters: from platforms to ecosystems - an international perspective

JF Gauthier, CEO of Startup Genome

JF Gauthier addressed the question of how to build an AI hub in Canada from a more generic angle: how to build thriving innovation ecosystems that support the development of fast growing start-ups? How does this apply to AI?

At the onset, he reminded the audience how concentrated the creation of jobs and value by tech innovation ecosystems are: 85% of exit value of tech ecosystems is concentrated in the top 10. Hence the importance of getting started and keeping growing in order to become part of the happy few.

The development of ecosystems happens by stage and a few triggers help transitioning from one stage to another. The starting point is the activation of local resources in order to increase the number and density of start-ups. Then comes the first series of sizable exits (\$100M+) that help attract outside resources and support the transition to the globalization stage. Global connectedness, global market reach and larger exits (unicorns, \$ billion exits) feed the progression towards the expansion and integration phases.

Once the wheel gets started, it runs in a virtuous circle. At the company level, global connectedness (connection with leading ecosystems and global customers) gives access to the global knowhow that is necessary to build globally leading products and business models that will produce unicorns. It is highly correlated with global market reach (high proportion of foreign and global customers). Global connectedness and global market reach translate into faster growth rates, higher valuation and larger exits. At an ecosystem level, the presence of unicorns and large exits helps attract global resources that foster global connections.

Therefore, at earlier phases of ecosystem development, ecosystem leaders must make special efforts to connect their start-ups to the global flow of ideas, knowledge, people and organizations. Smaller ecosystems such as Stockholm, Helsinki and Lisbon have been good at that, notably by attracting international conferences and they have reached relatively high levels of connectedness. This should be a leading indicator of future success.

The attractiveness of an ecosystem is relative. It happens first at a regional or national level before happening at an international or global level. Being second or third in a regional or national landscape may be a challenge as concentration may happen at the benefit of the leader.

How is Canada doing regarding global connectedness? Various Startup Genome Reports show that Canadian start-ups are relatively well connected to the US but are lacking focus on going global with the rest of the world. Other issues include talent leakages and lower early-stage funding.

Can Canada leverage AI to create a fast growing ecosystem that will generate unicorns?

It is important noting that unicorns are most often disruptive companies and these companies usually start at the low end of the market with disruptive business models (Christensen). They are usually not research intensive companies. AI is different. Pure AI companies are usually research intensive.

Disruptive business models may have a greater probability to appear with applied AI companies that gravitate around corporations such as Google, Facebook or Amazon. How might it be possible to attract these large companies and applied AI start-ups to Canada?

Can government help young businesses scale up? Most efforts to do so have been a fiasco. Governments can help start-ups to be connected to global customers from year one by supporting connectedness in the ecosystem (conferences, coop programs, etc.). This will create the conditions for some of these start-ups to develop disruptive business models that can be the basis for unicorns. Then scaling up is execution and most people that know how to do so are in Silicon Valley, hence the challenge of attracting global resources.

Can governments nurture connectedness? There are things that governments can do: Lisbon's investment to attract the Web Summit¹ had a huge pay off.

For how many thriving ecosystems is there room in Canada? Concentration is good, which may be a problem in a country like Canada where the regional dimension has always been important. However, the present ranking is based on the second wave of Internet which relies on platform companies (Facebook, Google, etc.). The next wave will be based on verticals which will leave room for more specialization of ecosystems: hospitality, transportation, fintech, AI, etc.

Getting involved with AI tech innovation ecosystems: a bank's perspective

Gabriel Woo, Vice President, Innovation, Royal Bank of Canada (RBC) and Salim Teja, Executive Vice President, MaRS Discovery District

Why should large corporations and banks get involved with tech innovation ecosystems? The panellists identified four generic reasons to do so:

- Improving existing operational efficiency
- Identifying white space opportunities to modernize or develop new products and services
- Reskilling the capabilities of their teams to be a more innovative organization and better problem solvers;
- Being a good steward of innovation in the community, strengthening the ecosystem and pushing Canada forward.

Despite these compelling reasons, initiating the journey and getting involved is not easy. It takes strong leadership and many trials and errors. At RBC, the impulse came from the new CEO. AI was an obvious field

¹ "Web Summit started as a simple idea in 2010: Let's connect the technology community with all industries, both old and new. It seemed to resonate. Web Summit has grown to become the "largest technology conference in the world". No conference has ever grown so large so fast. But we also pride ourselves in organising the "best technology conference on the planet".

Source: https://websummit.com/?gclid=CLbxtqfEmtQCFQcGaQod_VwI9w

of involvement as banks are sitting on so much data: what to do with it and how to build internal capabilities as talent is so scarce and a large bank is initially not perceived as the destination of choice for such talent?

In order to address this conundrum, RBC took the following steps:

- Build an internal research lab, insulated from the bank's operations, that would be able to recruit top tier researchers attracted by the stability, access to data and other resources provided by the bank. For this team the measures of success are the ability to attract and retain talent and the usual metrics of academic research: publications, conferences, etc. Part of the team would also be interested in interfacing with the bank's operations and exploring business applications;
- Partner with Next.ai and Creative Destruction Lab (CDL) in order to get engaged from the very early stage (Next.ai) to more advanced companies (CDL) that could develop applications of interest for RBC or that could benefit from discussions with RBC;
- Partner with other large corporations (Magna, Scotia Bank) and governments to support the nascent Vector Institute and help retain talented researchers;
- Partner with the Alberta Machine Intelligence Institute (AMII) that hosts pioneering research teams in reinforcement learning;
- Partner with innovative teams outside Canada (Orlando, Stanford, London, San Francisco) on specific dimensions such as security and to acquire a global perspective.

Identifying, acquiring and retaining talent is a common thread. Building the Canadian ecosystem is also a very important dimension.

Why would a bank be so involved in building the ecosystem, far more than its US counterparts? One important reason might be the relatively larger importance of the financial sector in Canada in the absence of many large manufacturing and IT corporations.

RBC's involvement with the ecosystem remained initially intentionally under the radar. It has now left the stealth mode and RBC presently wishes to inspire other corporations to build research teams and get involved with the ecosystem. This is a significant change not only for the bank but for the ecosystem as a whole. Canadian corporations are now looking to learn from one another in this regards.

Next step would be to build sandboxes and contribute data to support the development of business applications by start-ups. This is still challenging in the highly regulated environment of banking activities.

Initiatives to build AI centers of excellence

The six initiatives that were presented shared a common objective: leverage AI research assets to build strong economic ecosystems. However, they belong to three different types of organizations:

- Academic organizations: AMII and IVADO
- Accelerators: Next.ai, CDL and AI Nexus Lab
- Commercial company focused on the valorization of AI: Element.AI

Academic organizations: AMII and IVADO

Alberta Machine Intelligence Institute (“AMII») and IVADO are academic organizations building on the excellence of their research teams: reinforcement learning for AMII; machine learning and operational research for IVADO. This excellence has been recognized and both have received government funding to (i) expand their research teams and (ii) contribute to the development of an economic ecosystem around this excellence. Corporate money and partnerships have been attracted by this excellence.

Contrary to other technologies, AI is still very much research driven. Research excellence acts as a magnet to attract best professors, best students and companies around talent and create the ecosystem.

However linking academic expertise with industry needs and expertise remains a challenge. New models are being tested:

- Hire in the lab professionals with strong AI background. Part of their job will be to coach start-ups and SMEs while furthering innovation on the theoretical research side;
- Focus on engineers and computer scientists in companies who could learn from academic teams how to use AI and bring it to market;
- Create post-doc scholarship for PhD student who have an idea to develop a start-ups from their thesis;
- Create a 3 years fellowship program to attract potential candidates to be recruited as professors at the end of their fellowship.

Imagia, a start-up that came out of MILA, a research lab that is part of IVADO, suggested that a good way of linking AI start-ups with academic research is to decompose the problem into fundamental research that can be done with the university and commercial research that stays with the company.

There are still barriers that need to be removed to accelerate the building of an AI hub:

- Delays to negotiate IP,
- Problems for foreign students, professors and experts to enter the country and join Canadian teams.

On the IP side, there was a strong consensus in favor of an open innovation model: the value of AI is with the data; every theoretical development should be published. (This is presently the case at IVADO). University negotiating IP is an unnecessary delay.

Success metrics for organizations such as AMII and IVADO:

- Attract large companies (professors, who tend not to move, act as a magnet)
- Attract 1000 people within 5 years
- Build strong companies
- Adoption of AI in actual companies: SMEs and large companies
- Publications on the application side (biomedical, clinical research)

Accelerators: Next.ai, CDL and AI Nexus Lab

If academic excellence can act as a magnet to attract talent and companies, accelerators take a more proactive stance to create and attract start-ups around research assets.

There are differences among the three accelerators that were presented:

- Next.ai targets very early stage companies, at the idea stage. It is organized by cohorts in a physical place and takes equity for funding.
- CDL targets more advanced companies with a deep science component. It is not an accelerator organized in cohorts in a physical place. It is a longer and very rigorous process that matches start-ups with mentors around well defined milestones that have to be met for the company to stay on course. When mentors invest, it becomes a signal for other investors.
- AI Nexus Lab is a partnership between NYU Tandon School of Engineering and FF Ventures. It is an accelerator, organized by cohorts, that takes equity for funding. It does not end with a demo day but an AI Summit open to academics, corporations and start-ups.

They also have several features in common:

1. *They are structured to leverage university resources*

This dimension is very important given the importance of deep science in AI.

AI Nexus Lab gives access to NYU's academic and computing resources. In addition, it has developed specific ways of building interfaces between the academic world and start-ups: attracting faculty members as entrepreneurs in residence and mentors in the program; attracting students as fellows that can help in the program. In return, faculty members adjust their curricula based on what they learn from companies.

Through AI Nexus Lab, FF Ventures a VC fund that has the business expertise, but not the deep science expertise, can leverage the university tech expertise to derisk companies and build the deal flow.

CDL includes in its process academic researchers as chief scientists that can evaluate the technology for business mentors. It also includes business school faculty members that can help contextualize the business for founders and students and MBA students that can contribute market research for the start-up.

2. *They are relatively independent from the university*

Faculty members help. They do not drive. The accelerators remain independent from the university. In the case of AI Nexus lab, it does not report to the TTO but directly to the dean and it is off campus.

3. *They have build strong partnerships with corporations*

Corporations play a key role in AI as they provide access to data. At AI Nexus Lab, each StartUp is connected to a corporate partner for a pilot program. The corporations are part of the selection and the due diligence process to choose participants in the lab. In return, they get to see the next AI wave and they do not want to be left behind.

Next.ai was started in partnership with RBC, Magna and Scotiabank. These large corporations want to support the development of the AI ecosystem in Canada and have access to a deal-flow of new ideas and new companies.

Similarly, RBC is a founding partner of CDL's machine learning initiative and plays a role on its Advisory Board.

4. *They have a global perspective*

This global perspective affects all dimensions of the accelerators:

- Attracting best start-ups globally;
- Attracting best mentors and funders globally;
- Planting the flag and sending the signal globally;
- Developing global connectedness for start-ups from day one.

The excellence of their research was the trigger for this global reach. They are translating it to the start up ecosystem. This is in line with what JF Gauthier described as key success factors for building successful global StartUp ecosystems.

5. *They have tall ambitions for their ecosystems*

AI Nexus Lab has the ambition of "Guiding New-York City to become the AI center of excellence". CDL and Next.ai have the ambition of "Positioning Canada as a world class AI super cluster".

This level of ambition may be common in New-York. Until recently, it was not in Canada.

Commercial company: Element.ai

Element.ai is an applied research organization in AI, commercially led and research supported. Its objectives are:

- Team up with large corporations and educate them on the AI opportunity, build the first AI models with corporate partners (AI as a service), then transition to research as a service when large corporations are looking to partner with external researchers;
- From specific projects, try and build generic solutions that are reusable; transition from a commercial project to a research project; build transitional points between commercial problems and research;
- Eventually spin-off divisions around reusable solutions.

Element.ai is building bridges between research and large corporations. Large corporations have the data, not the recipe. They need people with AI expertise and knowledge of the industry. Element.ai aims at building a strong anchor to attract like-minded people working on cutting edge problems with a mix of research, start-ups and larger corporations, providing agility and speed in an environment that is different from Google, Facebook or Amazon.

Biggest challenges are the following:

- Build and foster the research network;
- Deliver solutions to the Fortune 1000 with the right expectations: education, early opportunities and solutions, roadmap;
- Quality of thinking and delivering, underpinned by research.

Recruitment needs:

- First research talent;
- Then engineering talent;
- Interface with corporations;
- Program directors: serial entrepreneurs that will look for opportunities to spin out stand alone divisions, start-ups and joint ventures.

What motivation is offered to academics to partner with element.ai?

- Becoming faculty fellows: getting access to corporate problems and data sets; discovering new research problems that could meet their interest.

AI Specificities

Despite differences in their positioning, these various initiatives to build an ecosystem around AI highlight specificities of AI that have implications for how initiatives may be structured.

AI is based on deep science. As a consequence, it is strongly linked to academia and talent. As academics are less mobile, this gives an edge to places where strong research teams are located.

True AI companies are nourished by a continuous link with research teams. These teams are located in large corporations such as Google, Facebook and Microsoft or in leading universities. Finding the right model to develop and maintain this link, allowing researchers to both publish and build companies, is a challenge. The initiatives that have been reviewed highlight both the challenges and avenues for solution.

AI solutions and companies are built on algorithms and data. Corporations are the sources of data. Developing the right models to interface with corporations is an essential part of the challenge to build ecosystems around AI.

AI companies can be platform companies or companies built on verticals. As the domain develops, vertical companies will take a growing importance. They will be based on vertical skills and sources of data which may lead to geographical specialization by verticals: resources in the West, Ocean tech in the Maritimes, etc.

Connecting corporations to tech ecosystems: one year later

Canadian corporations have been very slow in recognizing the importance of interfacing with tech innovation ecosystems, both in their interest (opportunities and mitigation of risk) and in the interest of the ecosystem.

The 2016 TIP had focused on efforts deployed by Communitech and Ryerson Futures to build bridges between the two worlds. Responses were still timid.

Canadian corporations are becoming serious about connecting with StartUp ecosystems

One year later, it appears that more and more Canadian corporations are recognizing the importance of these interfaces and becoming serious about it. Earlier in the day, RBC sharing its strategy to build internal capabilities and partnering with many of the initiatives to build the StartUp ecosystem was a perfect example of this evolution.

Rogers explaining its journey with Ryerson Futures is another example. It entered this journey three years ago with the following objectives that are similar to the ones exposed by RBC:

- Identify white spaces for our company to develop new products and services
- Accelerate our time to value – identify companies that can help us to do so
- Build our employees' skill set and culture

The company scouted globally and found great companies and solutions but realized that it needed collaboration with the local ecosystem to build its own capabilities and this is why it started working with Ryerson Futures and became the founding partner of Zone Startups Sports + Media.

Programs such as those developed by Ryerson (Innovation to hire, Zone Startups) and Communitech help corporations understand how to structure their own organization, how to exploit white spaces and how to scale innovation to compete with global start-ups. Such changes are not possible without the support of the CEO level. At the same time, Communitech and Ryerson work with start-ups to teach them how to interface with corporations.

A common space such as Communitech Hub or spaces at Ryerson is important to create organic cooperation as it creates serendipity but it is not sufficient. It is essential to meet the right person with the right mandate. Creating such opportunities is among the main objectives of the various programs and events developed by Communitech and Ryerson.

Exclusivity: through their experience at Communitech or Ryerson, corporations slowly understand that open innovation is better. Exclusivity kills start-ups. For corporations, being in the front seat is enough. In Communitech hub, corporations and start-ups are in an open space.

What is next?

According to corporations that have already made a first move, there is a need for greater collaboration among corporations. Corporations have to develop a common language around innovation in order to better collaborate and share best practices. Presently, they do not interact efficiently with the ecosystem because we they ask different things. They would be far more efficient if they communicated and collaborated amongst each other. Communitech is a great space to learn this common language.

Corporations should also move faster to open themselves up, open interfaces for internal and external purposes, be swifter to build efficient pilots.

Finally, there is a need for more collaboration between ecosystems, in Canada and internationally. Organize international innovation tours in Silicon Valley, Berlin, Tel Aviv and Stockholm. Get a critical mass globally for Canadian visibility.



MEETING AGENDA

TIP ECOSYSTEM BUILDING FORUM – APRIL 25-26, 2017

Venue & Accommodation: Fairmont Le Château Frontenac, 1 Rue des Carrières, Quebec City, G1R 4P5

Attire: business casual

The **Ecosystem Building Forum** is by-invitation only and brings together operators and stakeholders of leading regional tech ecosystems to exchange views on best practices and explore ways to collaborate in a mutually beneficial way. International best practices are also presented and discussed when relevant for the topics that have been selected.

The 2017 edition is focusing mainly on initiatives and best practices to accelerate the development of stronger ecosystems around DataScience/AI. International best practices and most Canadian initiatives to build a strong deal-flow around Canadian assets in research will be reviewed.

As we all know, Canada is a hotspot for research in AI with the teams of Yoshua Bengio in Montreal, Geoffrey Hinton in Toronto and the team in the University of Alberta, and there is strong will on the part of governments, corporations and universities to leverage these assets to produce economic and commercial value. They are looking for best avenues to reach this goal. The most significant initiatives developed at present in Canada (in Quebec, Ontario, Alberta and BC) will be represented at the Forum as well as many policy designers, academic leaders and investors. The TIP will be an excellent opportunity to learn from one another and from international experiences and to foster collaboration.

The second part of the Forum is dedicated to panels and discussions that will follow up on the discussions of last year's TIP on models to stimulate the development of start-up ecosystems and to link corporations with these ecosystems: What have we learnt? What progress have we made? What are the next steps?



TUESDAY, APRIL 25 – WELCOME DINNER

Time	Event	Venue
ALL DAY	TIP Guests Arrivals	Fairmont Le Château Frontenac
6:00 pm	TIP PRIVATE COCKTAIL	Salon Rose – 2 nd floor
7:00 pm	TIP PRIVATE DINNER Welcome Remarks:  Gilles Duruflé <i>Executive Vice President, Quebec City Conference President, TIP Ecosystem Building Forum</i>	Place d'Armes - Lobby Level

WEDNESDAY, APRIL 26 – TIP ECOSYSTEM BUILDING FORUM

Time	Event	Venue
7:00 am – 8:30 am	BREAKFAST – Buffet-style breakfast available	Champlain Restaurant - Lobby Level
8:30 am	INTRODUCTION TO THE QCC AND 2017 TIP ECOSYSTEM BUILDING FORUM  Gilles Duruflé <i>Executive Vice President, Quebec City Conference President, TIP Ecosystem Building Forum</i>	Ballroom – 2 nd floor
8:40 am	THE AI CHALLENGE AND OPPORTUNITY  Sharad Sachdev <i>Managing Director Artificial Intelligence Lead – North America Accenture</i>	Ballroom – 2 nd floor
9:20 am	BUILDING AI SUPERCLUSTERS: FROM PLATFORMS TO ECOSYSTEMS - AN INTERNATIONAL PERSPECTIVE  JF Gauthier <i>CEO Startup Genome</i>	Ballroom – 2 nd floor
10:00 am	NETWORKING BREAK	Foyer, Ballroom – 2 nd floor



WEDNESDAY, APRIL 26 – TIP ECOSYSTEM BUILDING FORUM

Time	Event	Venue
10:20 am	INTRODUCTION TO THE CANADIAN AI INITIATIVES	Ballroom – 2 nd floor
10:25 am	GETTING INVOLVED WITH AI TECH INNOVATION ECOSYSTEMS: A BANK’S PERSPECTIVE Panelists  Gabriel Woo <i>Vice President, Innovation</i> Royal Bank of Canada (RBC) Moderator  Salim Teja <i>Executive Vice President</i> MaRS Discovery District	Ballroom – 2 nd floor
11:05 am	TRANSITIONING FROM SCIENCE PROJECTS TO HIGH GROWTH COMPANIES: CREATIVE DESTRUCTION LAB AND NEXT.AI Panelists <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  Jesse Rodgers <i>CEO, Volta Labs</i> <i>Former Founding Director,</i> Creative Destruction Lab </div> <div style="width: 45%;">  Jon French <i>Director of Marketing and Communications</i> NEXT Canada </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;">  Moe Kermani <i>Managing Partner</i> Vanedge Capital </div> <div style="width: 45%;">  Michael Helander <i>CEO</i> OTI Lumionics Inc. </div> </div> Moderator  Janet Bannister <i>General Partner</i> Real Ventures	Ballroom – 2 nd floor
12:00 pm	NETWORKING LUNCH: AI, UNIVERSITIES AND THE NEW SOCIAL COMPACT Keynote speaker:  Alan Shepard <i>President & Vice-Chancellor</i> Concordia University	Le Cellier Room – Lobby level

WEDNESDAY, APRIL 26 – TIP ECOSYSTEM BUILDING FORUM

Time	Event	Venue
1:30 pm	AFTERNOON INTRODUCTION	Ballroom – 2 nd floor
1:35 pm	<p>GUIDING NEW-YORK CITY TO BECOME THE AI CENTER OF EXCELLENCE: AI NEXUSLAB</p> <p>Panelists</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>John Frankel <i>Founding Partner</i> ff Venture Capital</p> </div> <div style="text-align: center;">  <p>Steven Kuyan <i>Managing Director</i> AI NexusLab and Future Lab</p> </div> </div> <p>Moderator</p> <div style="text-align: center;">  <p>Alan MacIntosh <i>General Partner</i> Real Ventures</p> </div>	
2:15 pm	<p>BUILDING LINKS BETWEEN ACADEMIC EXPERTISE AND BUSINESS NEEDS, FROM START-UPS TO MULTINATIONAL CORPORATIONS</p> <p>Panelists</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Jean-Marc Rousseau <i>Director, Tech Transfer</i> IVADO</p> </div> <div style="text-align: center;">  <p>Cameron Schuler <i>Executive Director</i> Alberta Machine Intelligence Institute (Amii)</p> </div> </div> <div style="text-align: center;">  <p>Alexandre Le Bouthillier <i>Co Founder & Chief Operating Officer</i> Imagia Cybernetics</p> </div> <p>Moderator</p> <div style="text-align: center;">  <p>Angelique Manella <i>Associate Vice-Principal, Innovation and Partnerships</i> McGill University</p> </div>	Ballroom – 2 nd floor



WEDNESDAY, APRIL 26 – TIP ECOSYSTEM BUILDING FORUM

Time	Event	Venue
3:00 pm	<p>ENABLING AI-FIRST BUSINESSES: ELEMENT.AI</p> <p>Panelists</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>Omar Dhalla SVP Corporate Innovation Element AI</p> </div> <div style="width: 45%;">  <p>Sebastien Paquet Lead Applied Research Scientist Element AI</p> </div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>Sylvain Carle Partner Real Ventures</p> </div> </div> <p>Moderator</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>Jason Brenier Director- Conversational Business Georgian Partners</p> </div> </div>	

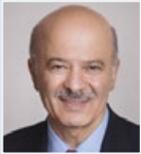
MEETING AGENDA

QUEBEC CITY CONFERENCE – APRIL 27, 2017

Venue & Accommodation: Fairmont Le Château Frontenac, 1 Rue des Carrières, Quebec City, G1R 4P5

Attire: business casual

WEDNESDAY, APRIL 26 – OPENING RECEPTION

Time	Event	Venue
6:00 pm	<p>OPENING COCKTAIL RECEPTION</p> <p>Opening word:</p>  <p>Mr. Christian Racicot President Quebec City Conference</p> <p>Welcome address:</p>  <p>Mr. Reza Moridi Ontario Ministry of Research, Innovation and Science</p>  <p>Mr. Carlos Leitão Quebec Minister of Finance</p>	<p>Verchères – 2nd floor (please make your way through the <u>Lobby</u>)</p>
7:30 pm	PRIVATE DINNERS	<p>Further information will be given upon your arrival/registration at the Fairmont</p>

THURSDAY, APRIL 27 – QUEBEC CITY CONFERENCE

Time	Event	Venue
7:00 am – 8:45 am	BREAKFAST – Buffet-style breakfast available	Frontenac Room – 2 nd floor
9:00 am	PRESIDENT TRUMP’S ECONOMIC PROGRAM: U.S., EUROPE AND PRIVATE EQUITY Speaker	Ballroom – 2 nd floor
	 <p>John W. Snow <i>Chairman – Cerberus Capital Management</i> <i>73rd U.S. Secretary of the Treasury (2003 to 2006)</i></p>	
9:50 am	PRIVATE EQUITY ADAPTING TO A CHANGING ENVIRONMENT Speaker	
	 <p>Tagar C. Olson <i>Head of the Financial Services industry team, Member of the Investment Committee of Americas Private Equity Platform</i> Kohlberg Kravis Roberts & Co. (KKR)</p>	
10:30 am	NETWORKING BREAK	Verchères – 2 nd floor
10:45 am	REVIEW OF THE CURRENT CREDIT LANDSCAPE – ANOMALIES, OBSERVATIONS, AND INVESTMENT IDEAS Speaker	Ballroom – 2 nd floor
	 <p>Michael Fox <i>Partner</i> Apollo Global Management</p>	
11:30 am	WHAT CAN BE ACHIEVED WITH LONGER-TERM CAPITAL; AND WHAT STRUCTURES ARE AVAILABLE TO INVESTORS WHO WANT TO DO SO?” Panelists	Ballroom – 2 nd floor
	 <p>Michael Lee <i>Deputy Director, Head of Investment Origination & Co-Investment Partnerships</i> Ireland Strategic Investment Fund</p>	 <p>Andrew Sheiner <i>Managing Partner</i> Atlas Partners</p>
	 <p>Paul Bishop <i>Investment Director</i> Railpen Investment Management</p>	 <p>Paul Manias <i>Managing Director</i> OMERS Platform Investments</p>

THURSDAY, APRIL 27 – QUEBEC CITY CONFERENCE

Time	Event	Venue
12:15 pm	NETWORKING LUNCH	Frontenac Room – 2 nd floor
1:45 pm	A WORLD RUNNING BACKWARD: HOW TO NAVIGATE WHEN THE "RULES" OF THE LAST 40 YEARS APPLY LESS AND LESS	Ballroom – 2 nd floor
	Speaker	
	 <p>Nelson W. Cunningham <i>President and Co-founder - McLarty Associates</i> <i>Former member - U.S. Secretary of State John Kerry's Foreign Affairs Policy Board, the Department of State's Advisory Committee on International Economic Policy</i> <i>Past Chairman - Export-Import Bank Advisory Committee</i></p>	
2:15 pm	HOW ARE INSTITUTIONAL INVESTORS PREPARING FOR A POLITICAL "NEW NORMAL"?	
	Panelists	
	 <p>Michel Noel <i>Head of Investment Funds, Finance & Markets Global Practice</i> World Bank</p>	 <p>Stephane Marguier <i>Managing Director, Head of EMEA Business Development</i> TIAA</p>
	 <p>Jordan Berger <i>Managing Director, Strategic Relationships & Portfolio Intelligence</i> OPTrust</p>	 <p>Chris Rule CIO Local Pensions Partnership</p>
3:00 pm	NETWORKING BREAK	Verchères – 2 nd floor
3:20 pm	HOW TECH INNOVATION IS DISRUPTING INFRASTRUCTURE INVESTMENT	Ballroom – 2 nd floor
	Speaker	
	 <p>Terry Stuart <i>Chief Innovation Officer</i> Deloitte</p>	
	Special Guest	
	 <p>Sebastien Gendron <i>Co-Founder & CEO</i> TransPod, Inc.</p>	

THURSDAY, APRIL 27 – QUEBEC CITY CONFERENCE

Time	Event	Venue
4:10 pm	ONE VERY BIG IDEA WHOSE TIME HAS COME Speaker  Matthew Bishop <i>Senior Editor</i> The Economist	
5:00 pm	CLOSING COCKTAIL	<i>Frontenac Room</i> <i>– 2nd floor</i>

Participants



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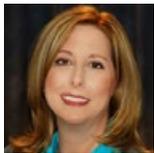
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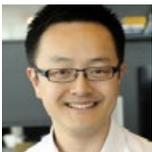
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We look forward to welcoming you to QCC Toronto on April 4-5, 2018 !

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