The City & The University: A Partnership for Innovation

AUCC Optimizing Innovation Conference

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Check against delivery.
Good evening – thank you for that kind introduction, David.

I am delighted to be here to address this wonderful and distinguished audience.

I am particularly happy to acknowledge, Ambassador Barak, Esteemed guests from Israel and Germany, Parliamentarians, and Members of the civil service.

It is a tremendous privilege to offer this keynote address.

“Innovation” is very much one of the dominant memes of the day. It is in the news so often, it is easy to forget it wasn’t always so, as this slide shows…

A quick Amazon.ca search produced 32,531 books with the word ‘innovation’ in the title.

And I suspect every AUCC institution has at least one class or program or facility with the words “Innovation” or “Creativity” in its title.

Yet for all of this attention, innovation remains a somewhat elusive concept.

There is much we still don’t know.

But I want to argue this evening that at least one thing about innovation is absolutely clear: Universities and cities are critical partners in stimulating innovation and driving prosperity.

As many here will know, of course, this theme is near and dear to me. One of the reasons I was so excited to take on the Presidency of the University of Toronto last year is that I have focused much of my academic career on studying the economies of urban regions,
and the role that major institutions such as research universities play in their
development. Now, as President of Canada’s largest university in Canada’s largest city, I
have the opportunity to help put some of those ideas into practice.

Let me hasten to add that none of what I will say is particular to Toronto. While I will draw
eamples from the case I know best, these are simply examples. What goes for U of T
and Toronto goes for higher education institutions and their host regions across our great
nation, from Vancouver to St. John’s.

Indeed, the same is true for other leading regions and universities around the globe, from
San Francisco to São Paulo, from Boston to Beijing.

I would also suggest that the link between innovation, creativity, and prosperity on one
hand and universities and cities on the other hand is becoming more important every day.

Urbanization is one of the most profound forces of our time. Canada is a perfect example
as this chart shows.

This is a profound shift over 165 years. Today, 80% of Canada’s population lives in urban
areas (defined as regions with populations greater than 1000 and population densities
greater than 400 people per km².)

As our urban regions grow, they present us with important challenges and opportunities. I
would guess we all want many of the same things:

• Urban regions that are economically dynamic and prosperous and at the same
time provide for the most disadvantaged segments of our population.
• Regions that are open; that welcome diverse newcomers and provide them with opportunities to contribute their talents to our collective wellbeing

• Safe and livable neighbourhoods with great schools, parks and lively commercial life

• Cities with a vibrant cultural milieu that reflect the diverse composition of our population

• And sustainable cities, with well-planned and efficient public infrastructures to support our collective prosperity.

In this regard, we are fortunate to live in one of the world’s great nations. Canada and Canadians are privileged in many ways.

Nevertheless, we face growing and serious challenges. These are too well-known and well-documented to rehearse them again here.

Instead, I want to spend the next 15 minutes or so making the case that universities and their host regions are crucially important to meeting our collective challenges and advancing innovation and creativity.

I will present the case for why the partnership between cities and universities is greater than the sum of the individual parts – and why it makes sense to grow and deepen these partnerships, for the mutual benefit of both universities and their host regions.

My starting point is that the relationship between universities and their host regions is fundamentally symbiotic. It is mutually enriching, along multiple dimensions.

“A strong university helps build a strong city, and a strong city helps build a strong university. We need to leverage this relationship to our mutual advantage if we are going to advance our shared prosperity.”

Here are my three key messages about this relationship and how it promotes innovation:

1. Dynamism and resilience

Universities impart dynamism and resilience to the economies of urban regions, helping their host cities to reinvent themselves over time.

2. Stability

At the same time, universities are tremendously important stabilizing forces on urban economies, and on the local neighbourhoods they inhabit.
3. International Gateways

Universities connect their host regions to the world, and vice versa, at a time when global connections are part of the very lifeblood of local and national prosperity.

Let me begin with my first key message about Universities as a vitally important source of dynamism and resilience.

As everyone here knows, universities are research performers. This is especially true of Canada’s more research-intensive universities, but it is also true more generally across the AUCC. And the data are staggering.

According to the most recent figures, AUCC Universities and their partner hospitals carried out $12B in funded research last year. *Twelve billion dollars.* That is more than the *entire* operating budgets of the cities Vancouver, Toronto, and Halifax *combined.*

While much of that $12B came from federal and provincial funding councils, something like a quarter of it arose from collaboration with industrial, institutional, and not-for-profit partners, including local and regional businesses and community-based organizations.

This kind of partner-based research frequently leads to new research insights, both fundamental and applied. So when local research partners work with a university, faculty and students are both the *providers* of new ideas, and the *beneficiaries.*

In addition, much of the research conducted within our institutions ultimately finds its way into the marketplace through a variety of channels, as measured by technology licensing agreements, patents, start-ups, and other markers of commercialization. I will say a little more about this in a moment.
However, it is equally clear to this audience that educating human capital – or *embodied knowledge* – represents the single biggest contribution by AUCC member institutions to our regions and our nation. Despite all the press given to the other kind, educating students is by far our most important form of ‘technology transfer’. Again the numbers are striking.

There are 1.2 million students in degree programs at AUCC institutions.

Some 16,500 students graduated from the University of Toronto alone last year.

And it is worth noting that nearly 95% of our graduating class was employed within two years of graduation, the majority of them with jobs in the Toronto region.

The numbers are similar across the country. Increasingly, the best antidote to unemployment is a university degree.

These days, with youth unemployment so high, these data are reassuring. Canada is a terrific place to build a career, and employers coast to coast clearly benefit from our well-educated graduates.

At the same time, successive waves of immigrants moving to our urban areas for economic opportunities and social-political stability have helped create one world’s most multicultural countries. This is especially true in places like Toronto, perhaps, where half of those living in the region were born outside of Canada. But it is also true more generally across the country. Modern Canada was built, literally and figuratively, by immigrants.
These new Canadians or their children have often become our students. Generations of young people have brought their talents, ideas, and drive to our cities, transforming them profoundly.

This is a huge advantage in today’s knowledge economy, and has provided the wherewithal for our cities to reinvent themselves over time.

Toronto has reinvented itself continually over the course of its history. That’s the heart of downtown, circa 1913 [on the left]. We’ve gone from trading post, textiles and tanning, to farm implements and food processing, and more recently to finance, pharma, film-making and artisanal foods.

Or consider Hamilton:

That’s Dofasco in the foreground [on the left] in 1947. Although steel remains an important part of Hamilton’s economy, today Hamilton Health Sciences and McMaster University are the #1 and #2 employers in the region.
Stories like these, of urban reinvention are not uncommon in Canada. But urban resilience over time is anything but universal. Where does such resilience come from? One can certainly thank the resourcefulness and risk-taking culture of recent and past immigrants and students. But there are other forces at work as well.

Consider that Bethlehem, Pennsylvania was once the second largest steel producer in the United States after Pittsburgh. But while Pittsburgh has flourished, Bethlehem has struggled following the US steel industry’s near-demise. Why?

The ability of places like Pittsburgh to reinvent themselves can be explained in large part by the local impact of the University of Pittsburgh, Carnegie Mellon University, Duquesne, and some 35 other universities and colleges in the Pittsburgh region. City-regions like Boston, San Francisco, Raleigh and Austin have similarly benefited from the influence of MIT, Harvard, Stanford, UCSF, UNC-Chapel Hill, Duke, and the University of Texas at Austin.

And communities across Canada have likewise benefited from the propulsive effect of our nation’s universities and colleges, whose graduates have been the backbone of educated, diversified, and highly creative workforces for years.

Moreover, AUCC faculty and students have actively created companies, jobs, and even entirely new industries. Indeed, this is the very essence of resilience and reinvention. It turns out that many AUCC institutions are very good at this. I know this next slide is not a fair comparison, but this is a friendly audience…

These are the most recent data. And of course it isn’t fair. But our institutions have nothing like the resources available to many of our peers south of the border. It is important to celebrate a success story hardly anyone knows.
Much of our success in entrepreneurship is due to the remarkable students, faculty, and staff on our campuses. But we must also give credit to the very special urban regions in which we are situated.

Canada’s innovation and entrepreneurship success stories rest equally on local economic bases that provide a rich environment of suppliers and services. New ventures of all sorts depend heavily upon local strengths in marketing, design, advertising, IT services, product development and testing, IP lawyers, management, packaging, logistics … and more. These are key tools that tend to cluster in urban regions. They might not be flashy. But they are absolutely indispensable.

So, to summarize my first point, universities drive the dynamism and resilience of urban regions, but they rely on a symbiotic relationship with their host city-region in order to make this work.

At the same time, universities are tremendously important stabilizing forces within urban economies, and within their local neighbourhoods. This is my second point. I hope you will forgive me for drawing heavily on the example of U of T here.

First and most obviously, U of T’s sheer size generates substantial economic impact within the region. We host more than 80,000 students on three campuses – more than any other university in Canada or the United States.

U of T is also a major employer in its host city-region, with more than 18,000 employees. In fact, U of T directly employs more people on its three campuses than Chrysler and GM employ in all of Canada – combined.
At the neighbourhood level, all across Canada our universities have deep and extensive root systems. We are ‘anchor tenants’ that help stabilize communities. Not only does our presence generate substantial economic activity for nearby businesses of every description, but we also keep local property markets buoyant.

And we are here for the long run – U of T might be 187 years old, but that’s nothing compared to Laval whose roots go back to 1663! Clearly, institutions like ours are not going anywhere soon.

Moreover, at U of T – and I know this is a strength across the country – our many students learn by working with community partners in neighbourhoods across the region. And our faculty often gain access to stimulating research topics at the same time. Indeed, the evidence shows clearly that the placement of our students in the community, through co-op programs, internships, and other similar mechanisms not only provides real benefits to our students and their sponsor organizations, but frequently also cements closer linkages between faculty supervisors and the sponsoring firm or organization.

Of course, town and gown challenges inevitably arise, and we’ve had our share in Toronto. But too often these are allowed to overshadow decades of wonderful partnerships that go largely unnoticed.

Speaking of wonderful partnerships brings me to my third and final point. Universities connect our host regions to the world, and vice versa. We are invaluable gateways to global knowledge and networks.

Quite obviously, the present and future prosperity of Canadian cities from coast to coast depends on our ability to access and use knowledge produced not just locally, but in other leading centres of research and innovation around the world.

Indeed, a large portion of the knowledge produced in Canada is actually created at AUCC institutions, in collaboration with the world.

In 2013 alone, authors with an AUCC affiliation produced over 111,000 international collaborations resulting in publications in scholarly journals. These collaborations involved thousands of institutions in over 180 countries around the world.

Each line on the map [in the figure below] represents 100 or more collaborations between an AUCC university and a country.
These collaborations often lead to ideas that fuel local innovation, even as local innovations flow out into the *global* arena.

In this way, Canadian universities are portals to global knowledge networks, bringing important benefits to Canada even as, I hope, collaborations with Canada bring important benefits to our partners.

As an aside, if we relaxed the 100-or-more restriction, the map would get a little busy!
Let me stay with the global network theme for a moment. A recent paper in the *Handbook of Creative Cities* made this observation:

“[W]ell connected research cities are likely to be important cities in the global economy; nodality in research often corresponds to nodality in other parts of the economy.”

A report released this month in the UK called *Univercities: The Knowledge To Power UK Metros* put the point bluntly. An unnamed venture capital fund manager told the authors of the report “Ultimately, money flows where ideas flow.”

Of course, it is not all about money – and one thing Canadian institutions have demonstrated, countless times, is how to innovate frugally.

But money helps. It is obviously a critical component in the link between scholarship, innovation, and prosperity that finds fertile ground in the partnership between universities and cities.

Let me conclude with an observation.

In the knowledge-based economy, universities have come to be regarded as prized competitive assets for cities, regions, and nation-states.

We see striking evidence of this in the lengths to which municipalities around the world *without* a university campus will go in order to *attract* one. There are many examples in Canada, of course. But we see dramatic evidence in jurisdictions from Singapore to Saudi Arabia where huge amounts of capital have been invested attempting to build world-class, research universities.

The leadership in these places recognizes the value that universities bring to their host regions. The benefits of regional dynamism and resilience, stability, and global connectedness are too important to ignore.

Of course, it takes a dynamic urban region as a symbiotic partner for a university to flourish. I submit to you that we are fortunate in Canada to have so many of both: excellent universities *and* forward-looking city-regions.

As we explore innovation, collaboration, and ideas aimed at addressing our regions’, our nation’s and even our planet’s most pressing challenges, I am mindful that solutions to those challenges will come disproportionately from the higher education institutions led by the people in this room and their collaborating colleagues around the world.

In this regard, I recognize that I have been preaching to the converted this evening. The leadership represented here does a huge amount for our country, our municipalities, and our institutions.
At the same time, I know you join me in the belief that we can do more. We can make our country, our cities, our neighbourhoods, our universities even better places in which to live, study, work, play, and prosper. I look forward to working together with you towards these goals. And I thank you for the opportunity to get started on them today.

Thank you for your kind attention.