

HANSARD

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**COMMITTEE
ON
ECONOMIC DEVELOPMENT**

Building an Innovative Economy

Thursday, May 10, 2018

COMMITTEE ROOM

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In Attendance:

Ms. Judy Kavanagh
Legislative Committee Clerk

Mr. Gordon Hebb
Chief Legislative Counsel

WITNESSES

Department of Business

Mr. Bernie Miller - Deputy Minister

Innovacorp

Mr. Malcolm Fraser - President and CEO

Department of Labour and Advanced Education

Mr. Duff Montgomerie - Deputy Minister
Ms. Ava Czapalay - Senior Executive Director, Higher Education



House of Assembly
Nova Scotia

HALIFAX, THURSDAY, MAY 10, 2018

STANDING COMMITTEE ON ECONOMIC DEVELOPMENT

10:00 A.M.

CHAIRMAN
Mr. Keith Irving

VICE-CHAIRMAN
Mr. Hugh MacKay

MR. HUGH MACKAY (Chairman): Order, please. I'd like to call the meeting to order. This is the Standing Committee on Economic Development. I am Hugh MacKay, MLA for Chester-St. Margaret's, and I'm filling in today for our regular chairman, Mr. Keith Irving, the MLA for Kings South.

We're going to be receiving presentations today from the Department of Business and the Department of Labour and Advanced Education. The topic will be: Building an Innovative Economy.

Just the usual reminders - I'll ask committee members to introduce themselves for the record, stating name and constituency. I hope all will turn off their phones or at least put them on vibrate. The emergency procedure is everyone would leave the building through the Granville Street doors and meet at Grand Parade Square.

I would just like to encourage or remind both the members and the witnesses to wait to be recognized before you speak so that we can have our Hansard recordings.

I would like to welcome the witnesses. I see we have a good group here today. I'll ask you to introduce yourselves. Following your introductions, you could begin with short presentations. (Interruption) Committee introductions first - my apologies.

[The committee members and witnesses introduced themselves.]

MR. CHAIRMAN: Perhaps the deputies, do you have introductory remarks?

MR. BERNIE MILLER: Deputy Montgomerie and I will share the duties. I will start off with a few remarks, and we do have a PowerPoint presentation - not an extensive one, but just one to help guide the discussion.

Let me just start by thanking you for the opportunity to be here to talk about a new approach to economic development. I want to start by perhaps dispelling what notions people may have at this point when they hear the word "innovation." Their minds may turn immediately to technological innovations, apps for iPhones, or high-tech innovation.

I want to start with a very important caution, and I'll get into the definition of innovation a little bit later in the remarks, but this is a much more foundational view on how to grow the economy. It's not based on tech - it's based on new and better ways to do valued things, whether it involves traditional industry, whether it involves agri-foods, or whether it involves information and communication technology.

That's kind of the opening comment. The second comment is, this approach to economic development is premised on the view that a strong economy is planted and not transplanted. We have for many decades looked outside the boundaries of Nova Scotia for jobs that we could attract to Nova Scotia. That, no doubt, continues to be something that should support us from an economic point of view, but this approach to economic development is very much focused on looking at our own asset base and building on the skills and capabilities that Nova Scotians have.

Some of our comments will illustrate how Nova Scotia is extremely well positioned. We have assets like a post-secondary system that is superior to many other jurisdictions, which is really foundational to an innovation economy.

The second piece is jobs. I know jobs are very important to everyone in elected office. I start by saying that small- and medium-sized businesses are the engines of job creation. The vast majority of new jobs in the economy come from newer companies. Newer companies tend to be smaller companies. They eventually scale up if things go well and they build their markets, and they become large companies, but a diverse and effective economic development policy focuses and should focus on that early stage. How do we create a vibrant, more dynamic environment to start new businesses - whether they're in rural Nova Scotia in industries like tourism or agri-food, or whether they're high-tech businesses closely affiliated with post-secondary institutions, and therefore sometimes in a more concentrated urban cluster?

Just to illustrate the point on jobs - when we think of start-ups, broadly in Nova Scotia since 2014, there have been over 3,000 new jobs created in start-ups. To put that number in perspective, if you look at large manufacturing enterprises, you may have 200 to 250 jobs of various ranges. So, the start-up community would be the equivalent to greater than 10 times bringing in new, large manufacturers, one chunk at a time.

The thing that happens in start-ups is it's all under the radar. There are a few people that start their business - there's no big press release, no ribbons to cut - but if they're doing things right, their capital starts to grow and their customer base starts to grow and they start adding employees. They become diverse employers as well, because data shows that start-up companies tend to be more diverse in their employment practices. There's a war for talented, skilled folks, and they tend to do what they can to attract talented, skilled folks - immigration in particular. First opportunities for recent immigrants to Nova Scotia come either because they're entrepreneurs by their disposition, or they get attracted into start-up companies. So, jobs and the innovation economy are closely related.

Another observation I'd make at the outset though, is that this is a new approach to economic development. There's a time lag between some of the early phase work and the time in which you start to see the longer-term benefits. There's no quick fix to this problem for urban or rural Nova Scotia.

The key to planting a strong economy is to be patient and take the time and do the right things at the early phase, in order to reap the benefits over the longer term. What I can say from my perspective as the Deputy Minister of the Department of Business, which works with all the departments in government that have an economic or social focus, that what we do over the next three years could well influence our prosperity over the next 20. We're in a period of significant global transition. You can see that in some of the political dynamics that are happening south of the border. These types of transitional periods create opportunity, and I think there's an opportunity for Nova Scotia.

From a policy point of view, there's a broad spectrum from early childhood education to post-secondary to workforce to capital creation to developing an ecosystem. It's all built on collaboration. Our focus will get into that.

I have taken a fairly lengthy period of time to introduce it. Let me just move a little bit quicker.

We're going to talk about the policy foundations to our innovation-driven entrepreneurship strategy. I want to talk a little bit more about that word "innovation" and then we'll turn it over to my colleagues to talk about the innovation ecosystem, and how post-secondary and education and workforce attachment all connect into a more integrated strategy. Then obviously, we would be very interested in having a discussion with you and answering your questions.

I'll start with the policy foundations. The thinking around developing an economic development strategy that's focused on innovation-driven entrepreneurship finds its initial roots in the Ivany report, *Now or Never: An Urgent Call to Action for Nova Scotians*. To put a very quick summary on a complex report, what the commissioners concluded is that the population trajectory, the economic trajectory, and the culture or public will that was connected to both of those factors were at an urgent point for Nova Scotians.

Our population had shown signs of the possibility of significant, continued decline back in 2013. We also saw a 25-year period, which covered governments of all political stripes, where Nova Scotia's economy and economic growth lagged the rest of the country. Going back to 1990, we could see that was self-evident. Then there was a sense of a common agenda, an invitation by the commissioners to look at what we have done in the past and do things differently, and develop a common agenda that speaks to the entire province.

That led to a second analysis, and that was *We Choose Now*, which is the second policy foundation for this, a playbook for Nova Scotians, which was to build collaboratively with all three political Parties in the Legislature involved, together with small- and medium-sized businesses, the not-for-profit sector, the education and health sectors, post-secondary institutions, and social enterprises.

That collaborative effort led to a high-level policy direction that said to really turn the province in the right direction, we had to start early - so we had to focus on early years and starting strong. The investments that you have seen the government make in early childhood education is connected to this strategy. One of the most effective economic development investments that can be made is in early years education.

The second piece was recognizing the need to attract and also retain youth in Nova Scotia, and develop an economic development philosophy that would help attract and retain youth. *Our Future is Young* was the heading that the coalition members assigned to that. They made a number of recommendations on how we could reverse decades of out-migration in the 18-to-34-year-old cohort. We had a big magnet out West which was attracting much of the youth from Nova Scotia - particularly rural Nova Scotia - to opportunities for higher wages and jobs in western Canada. That was really undermining the province's ability to develop an effective long-term economic growth strategy.

Third was recognizing the value of universities and community colleges. We have a top-rated, excellent system here. The question was, is that an asset or a liability? This strategy is built on the foundational principle that that's a huge asset for a knowledge-based economy. Having 10 institutions and having 13 community colleges dispersed throughout the province is an absolute asset, if it's integrated into economic development thinking.

The next piece was immigration and welcoming communities. Addressing our population challenge had multi-layers including retention of youth, but also increasing the scope and scale of immigration.

The fifth item was building on our momentum. At the particular point in time, 2014 or 2015, the province, in particular our urban areas - Sydney and Halifax - were starting to develop some momentum with start-up companies, particularly in information and communication technology. The fifth element was building on that momentum, which we'll speak about a little bit more.

[10:15 a.m.]

Next was going global and recognizing the need for strong exports. A small province like ours builds wealth by exporting our goods and services, whether they are traditional industries like fisheries, which we've seen a lot of growth in, agri-foods, or it's exportive services.

Then finally, the key point at the end of We Choose Now, was to recognize what our distinct competitive asset is and that's our ocean, so it was built around Nova Scotia's Ocean Advantage, and we've recently seen some significant federal alignment on that particular point. The federal and provincial policies on innovation are actually quite aligned, and probably for the first time in maybe 100 years - maybe 150 years - we've had an economic development framework that very much matches up with where the federal government wants to go in building a knowledge economy.

I'll turn things over to Duff Montgomerie in a moment, but I did say I wanted to come back to the word "innovation" which, I will confess, is the most overused and under-explained word in economic development today. (Interruption) Synergy is up there, and I hate to say it, but I'd throw ecosystem in there as well.

I personally dislike buzzwords, but I somehow find, in the job I have today, I end up using them and saying, I've got to go lower and explain what innovation means, just so that I understand it and I don't start to think innovation is only tech. I think it's helpful in our dialogue with the people of Nova Scotia that we create a greater understanding of what we mean.

When we talk about innovation, I actually prefer the language "new and better ways of doing valued things," because essentially, that's what it is. So, on the board we have the Honeycrisp apple as an example - that's an innovation. That was the result of research and development that produced an apple that could be grown in Nova Scotia and revive an historic industry that goes back thousands of years.

It's not Apple Computer - it's apples, and that's innovation. When refrigeration was first developed, it was an innovation. I think back to the *Silver Dart* in Baddeck in 1909 - that was the first flight in Canada of a structure that was heavier than air, and that was an

innovation that led, over decades and decades, to a multi-billion if not trillion-dollar airline and aerospace industry.

Innovation is not apps for iPhones, innovation is new and better ways to do valued things, and it's the single most important factor in economic development growth. If we go back to the death of Jesus and come forward, society had decades, if not a millennium and a half, where there was no such thing as economic growth. Economic growth was basically subsistence, but there was a point in time in the 1600s, 1700s, 1800s - and my colleagues are probably laughing under their breath because I always go back too far in time, as I just did - the Industrial Revolution was the beginning of economic growth and innovation. It started because they needed to figure out how to pump the water out of coal mines, and an engine was developed in order to pump the water out of coal mines - an innovation.

From those early beginnings, we've had this blossoming of innovation that's led to growth. It's had externalities - environmental impacts as an example - but the foundation of economic growth is really just finding new and better ways to do valued things.

When we talk about innovation in Nova Scotia as part of our strategy, that's what we're referring to. Innovation is a team sport, it involves getting all the people in the room, and government does not lead it, it collaborates.

That's where I'll turn it over to my colleague to take it to the next points.

MR. DUFF MONTGOMERIE: Several years ago, when I was head of Sport and Recreation, my IT guy came to me and said, I want to show you email because it's going to change the world, and I said it will never fly. (Laughter) So here I am today talking to you about innovation. I think you'll see how passionate my team and I are about where we are in this province around that.

To Bernie's point - and you look at the graph and I'll bring it to life in a minute - you're looking to create an environment that enables people to innovate, to think differently, to do things better. The history in Canada, particularly around research and development, has been university focused. The private sector in Canada has not really been an active player in innovation while our neighbours to the south, the private sector is a big player in innovation. We're trying to change that dynamic.

Part of the dynamic is if you look at government - and I've been in government for a long time - silos were the way of doing business in government for years. You wouldn't step outside of that silo. You wouldn't go across to another department. You wouldn't think to say, if I'm going to do something, why wouldn't I involve the Department of Community Services if it's about people in need or we're trying to get workforce enticement and so on? That has changed dramatically.

This model is changing things dramatically. If I give you an early success story it's Acadia University. Several years ago, the wine growers in the Annapolis Valley went to Acadia and said we need help - we want to grow our sector, we want to grow our industry, can you help us? Of course, Acadia, being Acadia - and Ray was president at the time - not only did Acadia help, but Acadia reached out to Dalhousie, Acadia reached out to the community college, and they created something called a launch box. In that launch box is wine industry, tidal, and digital analytics. You have the bright, young people out of Acadia and those professors working with the wine sector. They've done research and developed grapes that grow especially for Nova Scotia's climate.

There were over 30-some research projects working with the wine sector. There was a laboratory at Acadia that is dedicated to wine and the development. So, if you look at that ecosystem, how are we doing? You've got the private sector engaged, you've got the government, and by the way, ACOA. The federal government has been a major player with us and really wonderful partners. Of course, the universities - and it's not Acadia driving it alone. Acadia develops partnerships with others. You'll see that's consistent with our universities and our community colleges.

The entrepreneurs couldn't be happier. They're in and out of that area. It's a living, dynamic environment - innovation all the time. Venture capital - and my colleague can speak more to that, but you can see if all those other three things are working, the venture capital piece is right there, if success happens in those particular scenarios.

The last comment I'll make - Ava and I met with Valerie Payn five or six years ago from the chamber. The chamber - a very progressive organization - and we were looking for ways to say to Valerie, how can we get you and your members more involved with post-secondary and what can we do to help you from the post-secondary side? Valerie looked at me - the veteran that she was - and said, Duff, getting to universities is sometimes like getting into government: if you don't know which door to go through, it can be pretty daunting.

From that evolved an amazing partnership. Valerie, for example, established an honour system for their businesses that create co-ops or take young people into their businesses. If you've been to their dinners, a lot of times they'll have a co-op student right at a table with those business people. Innovative - thinking differently, and those kinds of scenarios.

With that piece, I'll move back to Bernie.

MR. BERNIE MILLER: Building on Duff's points and reminding us this is a distinctly different policy framework than what we've been used to in the past, we're not talking about incentives to attract. We're talking about creating the policy environment to grow, which is a very different way of thinking about economic development.

As far as work opportunities go, this is not the old economy. The economy is changing and we can't do anything to slow down the pace of change, but we can position Nova Scotians to have abundant work opportunities in a different economy. These work opportunities, as my friend from Innovacorp will speak to a little bit later, it's not urban based only. Obviously, there's an urban and cluster dynamic, but in agri-food, that's where we're seeing some of the largest opportunities for Nova Scotia, and some significant opportunities where communities like Truro and communities throughout the Valley are benefiting from innovation in agri-food.

There will be an abundance of work opportunity. What's the policy environment that will create that? It really does start with more jobs through early childhood education and development as an effective way to improve youth attachment to the workforce. There are high returns to society from investments in early-year programming, and that's a long-term investment, as we all know.

There are more immediate things like strategic economic infrastructure. Making infrastructure investments that provide high-speed broadband service and telecommunications coverage as broadly as possible in the province is a foundational core element of connecting this ecosystem throughout all of Nova Scotia.

At the K-12 or P-12 level, expansion of science, technology, engineering, mathematics, but not forgetting the importance of arts and creativity, and creating an education framework that gives people the future skills they need to succeed, and also introducing into the curriculum entrepreneurship and coding and the things that we know the future work world is going to require, is a key element.

Workforce development initiatives that attach small, medium-sized, and large companies to the talent that is coming out of our educational system through connector programs, through internships, through co-ops which Labour and Advanced Education has the details on, would be another element of it.

Specialized training through our community colleges - and Deputy Montgomerie would have many examples of where employers have said we need this skill set and the responsiveness by which our community colleges are able to address those needs.

Mentoring is essential. Deputy Montgomerie mentioned the Halifax Chamber of Commerce and other business communities - more and more they're getting engaged in recognizing that they have a role to play in mentoring these new start-ups and passing on the lessons learned from those who have succeeded and failed in business, because failure is sometimes one of your best ways to learn.

The other thing that this policy approach involves, I use the words "strategic economic infrastructure" - things like the Centre for Ocean Ventures and Enterprise, or investment in the privately run Volta Labs or the Momentum hub in Sydney, the Holy Angels work in Sydney in social enterprise would be another example - accelerators,

incubators, co-working spaces, to reduce that cost and friction to turning an idea into a commercial opportunity, that's where government can play a role by reducing the cost and making it easier for an interested entrepreneur to get established.

And it's never been as easy - with social media, your marketing costs can be pushed way down. A lot of these technologies don't require huge capital investments for equipment at the outset. It's really a case of creating an environment where people can take their ideas, get some mentorship, get some connection to people who have been there and done that, and develop their ideas, but they can't do it without capital. That's the other piece, and Malcolm, the CEO of Innovacorp, can give further details on the questions and answers on that.

We've seen two things; one, capital is attracted by talent. It used to be that capital would go into equipment, and capital is still necessary for large equipment, but now capital is very mobile and it will go where the talent is.

There's some good news here for Nova Scotia because when the commissioners wrote the Ivany report, the per capita investment, the venture capital investment in Nova Scotia was about \$15 per capita. We've exceeded \$65 per capita, so we've had a 320-plus per cent growth in venture capital investment in Nova Scotia in a three- to four-year period, which means capital, which is very mobile, is seeing the talent here in Nova Scotia. It's coming here - and it's not just coming to Halifax, it's coming to Truro, it's coming to the Valley, it's coming to Sydney. That's good for the whole province.

[10:30 a. m.]

Just in preparing for today, I was looking at *The Chronicle Herald* and they were reporting on some additional venture capital investment that has happened in Atlantic Canada, in this case it was a company that's in the agri-tech sector in New Brunswick, but the author of the article said, "With this funding, Entrevestor estimates Atlantic Canadian startups have raised close to \$50 million already in 2018." And went on to say, "To put that in perspective, Atlantic Canadian startups raised a total of \$66 million in equity funding in all of 2015, just three years ago."

In the first quarter of this year, we have almost gotten to the number of venture capital investment for an entire year three years ago - so another indication that this principle of capital follows talent is kind of reinforcing that we have a talented start-up ecosystem in Nova Scotia.

Other things government can do - and I know you're probably anxious to get to questions - is we can also focus on things like equity tax credits, which can encourage dormant capital or angel investors, angel investors being people with financial means, that may be putting their money in mutual funds. Instead of doing that, with a tax credit program you can incent them to invest in Nova Scotia-based start-up companies, or small- and medium-sized businesses.

The key distinction here perhaps, from our different way of thinking, is we often used to say government is responsible to lead the economy or get the jobs and bring them here, but as I said, and as my colleague mentioned, this is a collaboration of post-secondary government, large corporations, venture capital, but at the centre of it all is entrepreneurs, and creating an environment where entrepreneurs can thrive is important. Reducing regulatory friction, so the Office of Regulatory Affairs and Service Effectiveness plays a role in contributing to an environment, and there's more work to do on this, but to reduce the regulatory burden and make it easier for people to do business in Nova Scotia.

With that, I'll turn it over to my colleague to talk specifically about the post-secondary sector.

MR. MONTGOMERIE: Collaboration drives innovation and innovation drives economic growth, and I won't take you through the whole slide but to give you an example, the sandboxes - and some of you have heard me talk about them before - there are seven across Nova Scotia and we're adding three more: one in oceans, one in culture, and a health innovation sandbox as well.

What happens in those sandboxes is the professors, the students and, where appropriate, private sector people come together to talk about how we solve problems, how we do scenarios. Since 2015 and 2017, over 6,000 students have been exposed to an entrepreneurial climate in those sandboxes, and I think 1,000 high school students have also been in those sandboxes. Tomorrow, Ava and I are going to Acadia, where they have a Hackathon, where they take some of the top kids from all those sandboxes - and, by the way, they work together, not one of those sandboxes is run by a university, they're all partnerships, so there's that dynamic - where we'll see some of the best kids, who have been working for two or three weeks on projects that they will present. If you get a chance, come on down. I mean, you'll just come away - you won't be worrying about the future of your country when you watch some of these young people present.

The other thing that is changing in the culture is the university professors. They have become key players in all of this, and many of them now look outward, not inward. We used to go to a sandbox, I'm thinking NSCAD and Dalhousie, where you take those bright young artists and you put them in with those pragmatic engineers at Dalhousie, and the marketing people, and then you watch them just thrive. I remember saying to Ava, I couldn't figure out who was more excited, the professors - NSCAD and Dal working together with those young people and people from the private sector. There's a lot of energy.

The other comment I'll make is research. The Field Guide that Bernie mentioned earlier was developed by Peter Nicholson, but it came out of an Innovation Table created by us called Research and Development, co-chaired by Ivany and Florizone. We were trying to get a better understanding of the value of R&D, and by extension, innovation. We contracted with Peter to do that report, and he did an amazing job - so amazing that the

Government of Nova Scotia has now created Research Nova Scotia and invested \$45 million in R&D.

You might be like I was 10 years ago: R&D, what's that? What we're learning is that if we take government priorities and we marry them up with those bright folks in the universities and with the private sector - wine is a prime example, and there are many others that we can speak to - you're going to see success, plus jobs get created and opportunities get created as well.

With that, I have one more, I guess. I'll be brief.

The top part, if you look at all of those programs, every one of them, the success of those programs, is because the private sector is engaged with us. We work hard to make it simple, and we work hard, working with the private sector, to identify opportunities that help them but at the same time help retain young people here in Nova Scotia.

The regional- and industry-specific cluster initiatives - an easy one, of course, is the Ocean Supercluster, where Dalhousie partnered with several universities, Memorial and others, but more importantly, the private sector came to the table in a major way and contributed millions of dollars. The Government of Canada, who awarded the cluster to Dalhousie and to that partnership - an amazing, amazing success story - \$200 million. They will tie into COVE and they will tie into all kinds of opportunities that we're already working hard on in the ocean sector.

International trade: if you look at the amazing job our colleagues in Fisheries and Aquaculture have done, and in Business - NSBI - in exporting our fishing products to China and others, and the growth in that industry and how we focused on those areas, is another story.

The creative industries partnership, another Innovation Table we're setting up - is out of the cultural strategy. We're looking to create a private-sector kind of approach to the culture sector and how it can economically contribute to the province in a smarter way. So, there's an Innovation Table we're setting up that will involve that.

Two years ago, the Department of Education and Early Childhood Development set up a Business Education Council chaired by the head of IBM here in Nova Scotia. There are four or five private-sector people on that table, including Jordi Morgan and others. Just recently they witnessed a contest they sponsored where young people in the schools were encouraged to do these projects, to come and present. And again, the dynamic - who knew, finally, that the private sector is talking to our schools and talking about coding and talking about how we can talk about entrepreneurship in the school system. It's nice to see that change.

Again, I would join with Bernie and thank you for the opportunity to present to you today.

MR. BERNIE MILLER: I'll just wrap it up with four quick comments. One is that this approach is different. It's a team effort. It's collaborative across sectors. Jobs, which are very important to everyone here, are addressed through - new enterprises are the engines of job creation. When we think that this ecosystem - we include social enterprise as an example - we include any way in which we can foster an environment where people are prepared to take risks and create new enterprises. The evidence shows us that that's the vast majority of where new jobs occur.

Large corporates are important and we'll continue to make sure that there's alignment on attracting and keeping our large corporate enterprises, but in terms of where we'll see the payoff and the benefit, it's likely to be in newer enterprises.

I hate the word "innovation," even though I use it all the time. Please think of it as "new and better ways to do valued things."

Finally, a strong economy is planted, not transplanted. Therefore, there's a time lag between the time when you do the field work and get the plants in the ground and when you harvest that. There will be occasions from time to time where people will look and see the indicator hasn't moved this way or that way, but the game here is to make sure that we effectively, across sectors, implement a strategy that will secure prosperity for the long term, not just the short term - so there is a time lag.

An entrepreneurial professor who was here last week used planting asparagus as an example. If you cut your asparagus in the first year, it won't grow. If you plant it and wait four years, you get a good crop of asparagus. The same goes for anyone who is familiar with vineyards and the wine industry. In some ways, this ecosystem is like that: we're at the early phases and it will take some time to reap results.

MR. CHAIRMAN: Thank you for those very informative opening remarks. We're going to open the floor for questions, and I will keep a speakers list. We'll rotate through the three Parties that are represented here.

I'd like to start with the Opposition Party - the PCs, please.

MS. ALANA PAON: I can appreciate your commentaries, Mr. Miller - my hat's off to you for going out and combining business, politics, and religion all in one in your presentation. Kudos to you, you don't often hear that one these days.

As I'm looking at your presentation, it's very impressive, obviously, to see the work that has been done. I come from a background of economic development and farming, and gosh knows what else, what other hats I've worn in my life.

I just want to say this: I find I'm getting a lot of feedback about how complex and complicated the whole innovation and combination with universities seems to be. I know in the New and Better Ways report, one of the criticisms of the existing system seems to be that the support to post-secondary institutions is - I think they called it - fragmented and completely uncoordinated, which is some rather harsh feedback.

Beyond bringing existing research bodies under Research Nova Scotia, could you please tell me what steps that Labour and Advanced Education have taken since 2016, to unify all this support?

MR. MONTGOMERIE: I think the thing that we take a lot of pride in, is in the last five years, the relationship between our universities, community colleges, and government has been amazing. We're the only jurisdiction in Canada where we meet with our presidents together on a regular basis. They will come to us and work corporately with us on things like sexual violence, mental health, and growing the economy. The Innovation Tables that I mentioned - there is an overarching Innovation Table where all university presidents, the community colleges, key deputies like Bernie, myself, and others - ACOA, the federal government are there - so we work in that kind of collaborative environment. Keep in mind, they're competitors, no question. They were here, they are competitors, and they're recruiting students. That's their lifeblood, enrolment - over here, like sandboxes, the partnerships between them and the way they work together corporately.

Let me give you a simple example. There are three scenarios where I look at successes that the universities and the community colleges have pulled off, and one of them is around the Honeycrisp apple - the development of an apple that has basically revolutionized that sector here in Nova Scotia.

The growing of the grapes in the Annapolis Valley, where research enabled them to develop a grape that - working with the private sector, the partnership, I'm trying to take the complexity out of it, how easy it is.

My favourite story is when I was Deputy Minister of Natural Resources. I was only there three weeks and my team came to me and said, we need \$500,000 for a professor at the Agriculture Campus in Truro to develop a Christmas tree that will hold its needles longer. I was going, wait a minute, first of all, do we have somebody in Truro who can do that, and why are we doing it? The trees in the United States, for whatever reason, hold their needles longer. The biggest market for our Christmas tree growers? The United States. So, guess what? That professor has developed a tree that the needles will stay longer, and I think he just commercialized it here a while ago.

Those are the kinds of success stories, the more we tell, the more private sector feels more comfortable to come to us, or to come to a university and say, we've got a problem, can you help us? I hope we're taking some of the complexity out of it.

[10:45 a.m.]

MR. CHAIRMAN: I'll allow one supplemental question if it's related to the original question. That will be for all members.

MS. PAON: Mr. Montgomerie, it's wonderful to hear that there are obviously innovative and success stories throughout Nova Scotia. Could you speak directly to the criticism from the New and Better Ways report when they say that support to post-secondary institutions is fragmented and completely uncoordinated - can you speak to that?

MR. MONTGOMERIE: I think we have answered that criticism, and we have responded well to it. You have to have a climate that helps create that kind of energy and environment. I have no hesitation to tell you that I can pick up the phone and call any president or bring them together on any issue, and they'll be prepared to work with us or work together. What was in that report, we have really worked hard to address, and we took it seriously. If you don't have collaboration, if you don't have partnerships, you will not have success. We are open to any suggestions, obviously, on how we can do it better.

MR. CHAIRMAN: Ms. Leblanc.

MS. SUSAN LEBLANC: Thank you very much for your introduction. I have to say, Mr. Miller, that you have made a friend in me because the word "innovation" drives me bananas because of the way we use it, because of the way it gets tossed around across sectors, and we don't really know what it means, ever. So, I appreciate your definition of it.

I come from the cultural sector, and for several years now there has been this supplementary funding called the innovation fund. I was like, what does that mean? Oh, you throw a few more projections up on your theatre wall, and you're innovative. I don't believe that's what it is either. I do like your definition.

Speaking of the cultural sector, I just want to say this quickly. I noticed that in your comments you were talking about sectors to develop in post-secondary education. I think the way you said it was emphasizing science and technology but not forgetting about arts and culture. I appreciate that, but I would love to urge you to take that a step forward and actually put arts and culture in the same category, in terms of what we need to advance it, as science and technology. I truly believe that it is the creative minds attached to those technical skills that foster innovation.

I will give a little shout-out to the company that I have worked with for 20 years. In the business section of the paper, weirdly enough, there was a little pullout that focused on my theatre company. It was called: Nine ways to get better at collaboration. We have fostered our way of making theatre based on this idea of collaboration. I made a joke and said, look at this - Corporate America is going to come calling; we're going to have a whole new career of training people in collaboration. But it's actually true.

When you said Dalhousie and NSCAD together, I really appreciated that. I would love to know more - not now, but if it's possible, if you could send us information - on the creative industries partnership and what that's going to look like. I'm very excited to learn more about that. I just wanted to make those initial comments.

I wanted to talk about import replacement in this same vein. We know that an innovative approach to economic development, especially rural economic development, is this idea of keeping industry in our own communities and replacing stuff that we have been importing to our communities and actually creating those things here. The wine industry or the craft beer industry are good examples of that. We used to just bring all of our beer, and now we actually - I haven't had a drink of Moosehead in a long time, shall we say. (Laughter)

There was a report from the Centre for Local Prosperity that talks about how, if we had even a 10 per cent shift from import to import replacements, stuff that's made here, we would see 15,000 new jobs created, \$8.8 million in new wages, and \$67 million in tax revenue. I'm wondering what the department is doing specifically as part of this strategy to look at import replacement initiatives, especially in rural areas of the province.

MR. BERNIE MILLER: First, on the point of arts and creativity, as a person who has a Bachelor of Arts and took Physics for Poets (Laughter) I'm not a science mind at all, I agree with you, and your observation is correct. The foundation to economic growth is innovation, as much as we both dislike the word, but the foundation for innovation is creativity. We often speak in either/or where, really, they need to be both. When we look at the future of work and as the economy changes with artificial intelligence, what's going to become even more important are those human skills - the creativity that you can't replace with equipment.

Your comment is appreciated because there's an ongoing debate - is it STEM, is it STEAM, which puts arts in there and I think it's an unnecessary debate because they're truly integrated.

As far as import substitution as an element of an ecosystem approach, I think it's important and it's part of the picture and it's part of the policy foundation because the Ivany report invited us to develop metrics and processes to do that.

You mentioned the craft beer industry. First, I'll speak just to the reinforcement of the policy orientation. I only have U.S. data on this, but up until 2009, there were two dominant players in the beer industry in the U.S. and between them they created 27,000 jobs. In 2009, a couple of things happened. One, the financial collapse in the United States created a lot of entrepreneurs by necessity. Secondly, with the advent of social media, the cost to market a product dropped dramatically. The third element was, equipment for brewery and beer manufacturing became lower cost, so it became easier for market entry, and you saw this proliferation of new craft breweries that we see here in Nova Scotia and see as an extreme positive for the economy, especially rural communities. Nyanza, for

example, to have a brewery there creating opportunity and creating employment - just to give that one example - is fantastic.

The key is to reinforce the notion that small- and medium-sized businesses are the engines of job creation. In the U.S., their total employment in the beer industry went from 29,000 with the two Goliaths to 67,000 nine years later - so reinforcing the notion that job creation from domestic indigenous business is really a good play.

I agree with the principle. I think from the point of view of the Department of Business, our task is to work with the other departments, including the Department of Finance and Treasury Board, the Department of Fisheries and Aquaculture, and the Department of Agriculture to advance these policies, and we've got more work to do, but I agree with the principle.

MR. CHAIRMAN: Ms. Leblanc, do you have a supplementary question related to the original question?

MS. LEBLANC: Yes, for sure. My supplementary would be, speaking of this import replacement, can you talk at all about plans for cannabis production in that same vein? Not that that's import replacement because we haven't really been importing cannabis yet, but we will be - this year probably. Any plans in the future for cannabis production?

MR. BERNIE MILLER: Unfortunately, I'm not briefed and not overly familiar with that concept in the context of import substitution, so unfortunately, I can't give you any useful response, unless my colleagues have any comments. (Laughter)

MS. LEBLANC: Replacing the illegal cannabis with legal, locally grown cannabis - that's what I'm trying to say.

MR. BERNIE MILLER: It's certainly a point we could look into and get back to you with additional information.

MR. CHAIRMAN: From the Liberal caucus, Mr. Maguire.

MR. BRENDAN MAGUIRE: Thanks for coming today, a lot of great stuff going on within both your departments. One of the questions that popped up in my head during this discussion was - innovation, and I'm with Sue, "innovation," "synergy," words like that drive me bonkers.

How do your departments balance technology advancements and innovations with potential job loss? What I think of is self-driving cars and the impact that this will potentially have on the trucking industry. Those are jobs that don't necessarily need a university degree to do and they do support - and I'm just using it as an example. Locally,

we can think of the replacement of water metres by Halifax Water with radio metres that no longer need actual manual labour to read.

How do you balance that? How do you continue to move our economy forward and be competitive, and at the same time realize that this may have some kind of impact on our local economies?

MR. BERNIE MILLER: The three of us will provide a response.

MR. MONTGOMERIE: In our department, we're kind of blessed. We have post-secondary, we have skills and learning, et cetera. We're right across the spectrum. There are 14 sector councils that our department works with in fisheries, technology, trucking, et cetera, to make sure that working with the sector, we're keeping up and making sure that the jobs and the job training we help them do are relevant.

Technology is going to happen. It's going to evolve. But we have a shortage in our workforce a lot, right? So, our responsibility is, how do we match things up where there are needs and make sure that as a department, we give the appropriate training or retraining to those individuals to integrate them back into the workforce in a different setting?

The key for us is that those sector councils keep us honest in the context of, this is what's happening in trucking, this is what we need, these are the kinds of programs we need to focus on. We work with them to try to advance that.

MR. BERNIE MILLER: That's a very apt point to raise in the context of this discussion. I don't know how you feel about the word "disruptive."

MR. MAGUIRE: I've been called that a few times.

MR. BERNIE MILLER: We're a population of 950,000 in a world of seven billion. There are changes that are happening that are well beyond our control, including artificial intelligence, robotics, automation, and autonomous vehicles. We can choose to respond in different ways. One way - and I would venture to say, with all due respect to policymakers from the 1960s and 1970s - is we can try to close ourselves off from the changing world and try to keep our old industries going as long as possible - Sydney Steel comes to mind - or we can recognize that these disruptive forces are upon us by investing in post-secondary education and investing in the future skills needed for the future economy.

We can equip our workforce for the abundant work that the new economy will provide, but if we focus our attention on trying only to keep people connected to the old jobs, that's a short-term solution to a long-term problem.

Anything to add, Malcolm?

MR. MALCOLM FRASER: I think we need to think about these challenges as opportunities more than anything. We do have a lot of truck drivers here. We know that remote operation of drone-type devices is a thing, and that this will most likely happen in the physical driving of cars, trucks, and ships around the world. How are we seizing that opportunity to be unique in our perspective on it, to say, we have a lot of truck drivers here and they're pretty good at what they do, so how do we train them to drive trucks remotely? We're not going to get to completely autonomous through this disruption along the way.

I think about it from that point of view. It's a difficult thing to balance, because we'll not save every job that will be disrupted through technology, but how we're leveraging our way through that is the way that I think about it.

MR. MAGUIRE: I have to say, I've been doing committees now for five years and that was probably one of the better answers that I've received on a question in a long time, between the three of you.

The follow-up for this would be, who keeps an eye on the trends and who makes sure that our education, our grants, and our support for entrepreneurs match up with where the future is going? It's not just about autonomous vehicles. There are all kinds of things that are happening out there.

I think Mr. Miller said that we have 23 universities and colleges in Nova Scotia, along with a brilliant workforce and our ocean. We have all kinds of assets. How do we make sure that we're moving toward the trends and the economy of the future, and also our education - not just our university education, but our public education - is actually shifting toward that so we're getting the outcomes that we need?

[11:00 a.m.]

MR. BERNIE MILLER: Government has a big role to keep an eye on the future, so within the Executive Council Office we have the Office of Strategy Management. Part of the function of that is to scan the horizon and be prepared and inform the decision makers about what may be coming.

More fundamentally - and I think this is where Nova Scotia's new approach and our collaborations will create a better opportunity to get ready for the future - the universities and the community colleges almost by design are thinking about what the future - or they're creating the future because they're doing the primary research that will eventually lead to the transformative changes that will come, and the new relationship that Deputy Montgomerie talked about with post-secondary - those five parties working collaboratively - it does create an environment where information is shared and we have a better opportunity to position our jurisdiction to be on the front end of that curve, the disruptive change, rather than reactive to it.

Within government, the Office of Strategy Management in the Executive Council Office plays a role. The other thing that the Department of Business does is we have the task of creating alignment within government. So, the question of how we make sure we're not contradicting each other with our various programs - I'm as interested in early childhood education as the deputy of Business, as the deputy of Education, because I see that as important to responding to the changes.

MR. MONTGOMERIE: Fundamental to us is labour market information. We have economists within our department, and the federal government just created a national Labour Market Information Council targeted at making sure jurisdictions have relevant labour market information, but when you drill down, it's our partnerships that make it work - so sector tables, for example, where we keep up to speed.

The community college is the training arm of government. They are so nimble and so good at what they do, and the partnerships that they have - they're almost able to adjust on a dime if the private sector or others, or government, come looking for training. The universities, let me give you a really easy example - IBM comes to Nova Scotia and we ask, what do you need? They tell us, so we get six universities and the community college in a room with IBM, and we form this formal committee that they work with IBM over the years. Just last week IBM reached out to Ava and me to let us know they are hiring 50 more Nova Scotians in their business, to make it 650 Nova Scotians since they came here to Nova Scotia.

That's taking a need by a company and putting them in the room with the people who can adjust to their need - like onboarding was a key thing for IBM. How do you prepare the young people we're going to hire to know the culture and understanding of IBM? Community college does the onboarding.

It's not perfect, and I think what you should listen for is the noise out there. Where is the noise coming from that says we have a shortage of something? If there's noise and we're not dealing with it, then that's on us, because usually when people come to us and say - to Elizabeth and her team or whatever - we have this issue, we really work hard with them to say show us the issue, how can we help you, who can we get in the room with you to help meet that? But labour market information is centre to it.

MR. CHAIRMAN: Ms. Adams.

MS. BARBARA ADAMS: I, too, am delighted with the new definition. As a health professional, we've been working on new and better ways of doing valued things ourselves.

There were a lot of things that were said today, but a couple of them that caught my eye was capital follows talent, and I'm going to use a personal example. I have four children - two are out West in construction, one is in the military out West, and the fourth and final one is doing his Ph.D. in Chemistry, about to graduate. He created something patented with his professor at Dalhousie and it's going to make millions for the university. Guess where

he's going when he graduates? He's going to California, to Caltech. A friend of his is going to MIT, and another one just went to British Columbia.

He assured me he was coming back, but that was eight years ago. I asked him what the opportunities are here for a pharma company, if he doesn't come back to teach at the university, which is a long-term goal. He said, there is no industry here for him to come back to. I'm like, well, you could have told me that eight years ago, but now's not a good time. I said, really, there's nothing here? He said no. He has been scouted by other pharma companies around Canada and the United States. I said, there's not one place here for the Ph.D.s in Chemistry to stay here? He said, nothing.

I know how much money he has gotten from grants and bursaries and whatnot, plus all of the cost of running that department. Between him and a couple of his friends, we're talking a million dollars. They're all taking their talent elsewhere.

You mentioned the labour market information at the very end, Mr. Montgomerie. I'm a numbers person. I must admit, what I was hoping to hear today is how many high school grads are still here five years later. How many bachelor's degrees, master's degrees, and Ph.D.s, who are being supported by our government and our province, stay here?

You mentioned that you were changing how you were doing things, which I totally support. But if we're changing it, there has to be a reason. There would be certain numbers that we were successful in retaining that capital, which I believe is our people, and you're changing it. Without the numbers to see how much we were retaining our students, versus the amount of money we're pouring into each program, I don't know how we measure success with the shift.

I guess my question is, is there labour market information of how we have retained those students, what programs, and where they have stayed, which industries? Is that data available? Can you comment in general through high school to Ph.D., how successful Nova Scotia is in keeping our students here?

MR. MONTGOMERIE: Stats Canada tells us that for the first time in 30 years, immigration of young people in Nova Scotia has been higher than out-migration for two years in a row. Can that change on a dime? Yes. But it's a key sign.

We used to say if Alberta's economy went in the tank, and all of a sudden, we had more young people, the unemployment rate would go up - that hasn't happened. What we're trying to do is change the dynamic.

I really appreciate your example about your son. I was on the health file for years and dealt with pharmaceuticals all the time. They are huge conglomerates. When we talk in my world about the need for research, to have research and research capability for Christmas trees and those kinds of things, you need critical mass.

Dalhousie has a high degree of health research that they do, and a lot of it's funded by those pharmaceuticals. You're right - a lot of bright young people like your son get recruited by those pharmaceuticals whose headquarters are outside of Nova Scotia. On the flip side of that, when you look at other analogies of companies - I use those other three examples because they're in the resource sector in rural Nova Scotia.

Those innovation and research things have helped stabilize and grow the economy in rural Nova Scotia through renewable resources. If you look at those three things I mentioned, those resources - grapes, apples, and Christmas trees - are renewable, so it's ongoing.

Bernie and I often say it's not about loaning businesses money, which is what the old style was. It's about creating an environment with them that encourages them collectively working with post-secondary, and with us, and so on, to thrive here to hopefully create opportunities. We'll try to get you the data drilled down a little.

One of the things Peter Nicholson said to us in his report is that the small businesses sometimes aren't encouraged to take risks in exporting. So, we recommended an Innovate to Opportunity Program, that we would take a Ph.D., or a master's person and take them into a small company and subsidize the salary, and it would be that person's responsibility to help that company expand its horizons. Right now, we're starting out small - we have five of those that companies have stepped forward and taken.

The other one is Mitacs. Mitacs is a partnership between the federal government, ourselves, and the private sector where 60 per cent of a salary of a Ph.D. or a bright young person is subsidized by them, 40 per cent by the government. Last year, we had 161 of those interns funded, as a matter of fact; J.P. Deveau's company has hired several over a three-year period. In a lot of cases, those young people are kept on. The companies see the value, et cetera, and they hire them. A lot of the things we're talking to you about weren't here seven or eight years ago. About 80 per cent of the things we talk about weren't in place. Connector programs, Graduate to Opportunity, Mitacs - well, Mitacs might have been here - but those kinds of scenarios. So, it's about trying to change the culture.

MR. CHAIRMAN: Ms. Adams, do you have a supplementary?

MS. ADAMS: I would love to have the numbers. I was hoping to hear about whether your perception is that we are winning the battle in retaining our students. I realize that some of our kids have come back, but not a lot of them are getting the job opportunities further up the educational level, the master's and the Ph.D.s - those are the ones that I'm seeing that are not coming back because they don't have those opportunities here.

You mentioned to me about the labour market and the shortage in workforce in some areas, so I'm just wondering if you could comment on how all the programs that you're doing in this way are going to be helping to keep our seniors working. We've talked a lot about young people, starting from pre-Primary, so I'm just wondering how big the

senior labour market is and how much you're doing to help retain that talented group of people.

MR. MONTGOMERIE: As a senior (Laughter). When you're dealing with all the sector councils and other scenarios, and you're looking to fill job shortages and so on, in a lot of cases seniors fit the bill because of their experience, because of the wisdom they bring to the table and so on. I'm trying to think of some of the companies, Costco and others that kind of target that kind of scenario. I know even on the social side - and Bernie may be able to speak better than I - that's a key area where seniors contribute immensely on the health side, and so on.

Bernie, you may have a better answer than me.

MR. BERNIE MILLER: I think it's a really good point. I mean, our challenge as a province, if you go back to the Ivany report, is a shrinking workforce as the economy changes, the economy not growing fast enough - but a shrinking workforce means that we should have all elements, regardless of age, accessing opportunities to connect to the workforce, if they choose to do that. Obviously if seniors choose to retire - actually, I'd prefer "older adults" as I get closer myself. (Laughter)

Another thing, it's a little bit like when we talk about innovation-driven entrepreneurship that our mind goes to "young 18-year-old developed app in Volta," where the data would actually show a lot of first-time entrepreneurs, the average age might be in the mid-40s, which is not in the category that you raised your question. But I think it's just opening our mind to the fact that the opportunities are not age specific, and as we try to build an innovation-driven entrepreneurship model, we have to check ourselves if our mind starts to go to a particular segment of the population.

I think that point is important. The Department of Seniors has the SHIFT action plan, which is very much built on that foundation, that when we talk about older adults, we shouldn't always put it in the category of a drain on the health system. It should be on contribution, social well-being, and the lifestyle that they can choose to have, if we're doing the right things.

[11:15 a.m.]

MR. FRASER: A great question. I just wanted to talk a little bit about a local company called BoomersPlus that has started to try to help bridge that gap a little bit. The premise of the company is to collect a database of people who have decided to leave work early but have amazing skills to bring and don't want to work full time.

You'd be surprised - well, maybe you wouldn't be - at how many early-stage companies need that sort of steady hand and seasoned advice. You can look at that type of connection as a unique application of solving that challenge, born out of this ecosystem - it's relevant.

MR. CHAIRMAN: Ms. Leblanc.

MS. LEBLANC: I want to talk a little bit about ecotourism. As we were thinking about all these different ways of being innovative and growing our economy, it seems to me that - especially the Minister of Business talks a lot about tourism, and ecotourism is an important part of Nova Scotia's scenario.

I'm thinking about things in terms of climate change as well and knowing that we need to - as Mr. Montgomerie pointed out - the better examples of what we're doing right now are things like renewables: apples, grapes, things that are not that hard on the environment.

Speaking of silos - the silos may be difficult in terms of ecotourism. For instance, Ski Wentworth - the folks down there want to develop their property into a four-season ecotourism site - hiking and biking in the summer - but because of the clear-cuts that have happened in the area, they're seeing an impact to the lands surrounding. They're also worried about a potential gold mine happening there.

Another example: the Healthy Forest Coalition talked about the clear-cut that happened where a bunch of sugar maples were cut down, and the local maple syrup producer was interested in those trees to develop their company.

I'm wondering how the Department of Business can help ecotourism start-ups or existing organizations and work with the other departments to make sure that resource extraction - like the offshore development with the fishery - how are those things going to be working together? How is the Department of Business going to protect the efforts of growing local, green business so that those businesses don't get squeezed out by mineral extraction or other bigger environmental impacts?

Sorry, that's not a clear question, but I think you know what I'm talking about.

MR. BERNIE MILLER: I do. My colleague was the deputy of Natural Resources as well. The role of the Department of Business that probably should be articulated more in different settings is to coordinate an integrated strategy across government. There will inevitably be conflicts between traditional industries and new industries and new opportunities.

Really, the objective would be to look at what the overall strategy for the province is. On tourism, most people would be generally familiar with the fact that that's a strategic sector for Nova Scotia. We've got an explicit target to increase the total revenues from tourism from \$2 billion to \$4 billion.

What is unique about Nova Scotia - we're not Disneyland, we're Nova Scotia - we have coastal vistas, we've got Dining on the Ocean Floor, and we've got a range of experiences, which is what people pay for in tourism these days. To the extent that we need

to balance our needs for traditional economic growth through traditional industries, we need to do it in such a way as we're mindful of the overall strategy of the province.

It's not a sufficient answer to your question, I'm sure, other than we do have the institutional infrastructure in the government to get around those silos in the way at the bureaucratic level we work across departments. We convene as deputy ministers on a regular basis and talk about the strategy as a whole, and if Tourism Nova Scotia and Natural Resources need to have a discussion to make sure that both ambitions are being reconciled, we have a venue to do that, obviously under the direction of our ministers and ultimately the Executive Council.

There will be situations where one intended use is inconsistent with another use, and we can't solve all those problems without some unintended consequences, but we do have an institutional framework where we can at least surface the issues and have the discussions.

MR. MONTGOMERIE: When I was with Sport and Recreation, abandoned rail lines were a key issue. We went to Natural Resources and we made a case of why those abandoned rail lines should be preserved and used for trails. Natural Resources were key allies - they were amazing, actually - so you see where they are now.

When I was deputy of Natural Resources - an incredibly wonderful department that's throughout rural Nova Scotia - we have biologists, we have helicopter pilots, we've got conservation officers. They all care about their province and their community. Clear-cuts drive me crazy to a certain extent. I don't want to get into the scientific side of clear-cuts but the key is, how do you find that balance to be sure that on the one hand you're preserving and protecting but on the other hand you're not holding back?

I would tell mining executives who had complained to me about regulation, and I'd say there's a reason there's regulation in the mining sector: it's because of how you treated people decades ago and how you treated workers, so don't whine to me why all of a sudden you find regulations.

One of the examples is the golf course in Inverness. The gentleman comes forward, markets it as a destination, first tranche he invests all his own money, et cetera, and then he looks to do a second course and there's a dune involved. We have strict legislation around altering dunes for all the right reasons. I said to my team - biologists and all my scientific people - when you're dealing with him, is there a way we can find a marriage that helps them but also helps preserve the environment?

Part of the options we have is if the company we're dealing with commits to buying other land that can stay protected, that's pristine. That's what they did. They bought - I can't remember how many acres of land around a lake in Inverness, and of course, they have a world-class golf course and the economic side of Inverness is just booming. I think

if you were to even go on the beach, you would hardly see a dune that was altered - other than there's one hole, I think, that's surrounded by dunes.

It's a very complex and difficult scenario, and the key is you need good people to keep an eye that there are no abuses, is the best way I can position that.

The last thing I want to tell you - the trail system in this province and the way they're mapped, and the way you can go online and go through them, they're the best in the country. They're really good.

MS. LEBLANC: I apologize for my mixed-up question. I'll try to get more focus on this one. Earlier, Mr. Montgomerie, you talked about the marriage of the community college with responding to needs in the private sector. One of the great examples of that, I think, is the response of developing the film production course that happened 15 years ago, maybe 20 years ago. There was a need, there was film production happening - we needed locally grown crews and that program provided them.

Of course, the film industry is another example of a green industry that is very good for our province and an import replacement because a lot of the money from locally grown film stays in the province.

We've talked about this before in various places - in Public Accounts - and of course, I am very concerned about that industry right now, given that the numbers from the labour unions show that hours worked and money made in the industry has dropped significantly since the cutting of the Film Tax Credit. During Public Accounts, I think my colleagues asked you, Mr. Miller, about those numbers and we asked you if you knew if the numbers connected with animation and the animation industry - again, another great industry - were connected with those numbers that the unions had.

I was wondering if you had any new information about that and, yes, I'm wondering if the animation numbers are connected with that. Of course, because animation still has a tax credit attached to it, I was just wondering.

MR. BERNIE MILLER: Our staff is compiling a response to the undertaking that came out of Public Accounts and I haven't had the opportunity to dig into it. I don't want to provide an answer that isn't fully informed, but it is something that from the information I had, the IATSE and ACTRA numbers, and then to the extent that those services attached to digital animation, was a question in our mind. I don't know if somebody in the industry, not to turn the question, whether those jobs are also the same jobs that would be employed in digital animation, I'm just not certain whether those unions are in that space. But the short answer is we'll give a more comprehensive answer through the Public Accounts Committee, and perhaps your colleagues can clarify once we have gotten that to you.

MR. CHAIRMAN: Ms. DiCostanzo.

MS. RAFAH DICOSTANZO: I do have a question, but I'll end with the question in regard to the Now! Nova Scotia income assistance work incentive. That seems very interesting and I wanted to learn more about it, but I really wanted to make a comment, something that's happening in the workforce with the young people that has just astonished me and I'm delighted.

I've had interaction with two young girls, both in their early 20s: one still doing her PR and the other one has political science, I believe. Anyway, I've offered them a position to work part time for me and both have started their companies, and said no to me, that they'd rather have a contract. They have it all established, and one is an international student. Both are very exceptionally talented girls, and they have the confidence to say no to a job because they are innovative. That's the word "innovation" to me and how they are able at this young age, being girls to see the future and the opportunity that they're having.

Each one of them has a company, they are working, they are starting small but they're saying no to a job that has a bit of flexibility as well, because they see the future. This didn't happen when I came to Canada. It's really wonderful to see, and both - to me, I remember my girlfriends who finished PR and they had to go somewhere else to get a job in PR. But for them, not only to stay but to open their own businesses and their own companies - I'm seeing this day after day and it's really, really lovely.

Saying that, I would love to get some more information on that Nova Scotia income assistance incentive program.

MR. MONTGOMERIE: When we blew up Careers Nova Scotia and we created Nova Scotia Works, we needed a centre of excellence that would keep us up to speed on trends and best practices around special populations and workforce attachment and so on. St. F.X. was successful in winning that particular competition and they set that up. In the meantime, the Premier committed \$10 million for workforce attachment for special populations, and he asked our department to work with St. F.X. and Nova Scotia Works to make sure it was a success.

It's been a great learning experience for us because we're working with African Nova Scotians, Indigenous people, women, and people with disabilities, and we're working with organizations and groups that are Indigenous and are African Nova Scotians, and then we attach them to a business. The dynamic for us was that the businesses had to go through a diversity course, and I'm going, wow, that may be a real showstopper, but it wasn't.

[11:30 a.m.]

One of the learnings we found is that they went through the courses and, if I have my figures correct, I think there are 170 people who have been connected to 104 diverse workplaces. It ranged anywhere from truckers to technical to other scenarios, and we're

now in the process - I think I'm meeting with them next week. We're doing the debrief, for example, and the president of Michelin is at that table, and other private sector people, St. F.X., my team, and so how do we do this better? What have we learned from this? This is over a three-year period, so we'll be tracking this for the next three years to see the success - hopefully it goes to 170 - and how many, at the end of the three years, stay, are kept on by those businesses.

MR. BERNIE MILLER: I was just going to add to the points. It is exciting and Deputy Montgomerie talked about how exciting it is to see young people developing the confidence and the ability to say no to a job. I think back in my own life at that age, and I look at some of the people I see and they're so accomplished, but actually one thing that would keep me up at night and worries me is - another buzzword - "inclusive economic growth."

By that, as much as it's great to see the vibrancy and the dynamic nature, if that's not felt more broadly, particularly in traditionally under-represented communities - one of the Ivany report goals is increasing workforce participation opportunities for African Nova Scotians and Indigenous Nova Scotians - and as much as we're seeing some green shoots in opportunity, we need to do more on that, and that's the program specifically that you referred to, the Now! program, is really taking a deep dive into why, persistently, we have different levels of workforce participation. What policy tools or what communications or what activities can be done across the ecosystem to try to address that so it's a barrier-free economy in every sense? I just wanted to add that additional point.

MS. DICOSTANZO: One of the young ladies I am talking about, she is from African and she does have that confidence, and I'm really delighted to see that. But I don't know, outside of the city - I think there is a lot of opportunity for them here in the city. I'm not sure if there is the same in the rural areas.

The other question I had was more about COVE, what impact has that had on employment for us here?

MR. FRASER: Innovacorp's involvement in COVE at this point in time has been sort of allowing - we just ran a competition to find the first six companies that will be the additional cohort, the first cohort of early-stage start-ups at that facility. That's pretty exciting - again, what Mr. Miller has talked about in our strategy.

If we have these early-stage companies start, they grow and they hire new people, they learn, and the beautiful thing about COVE is its integration with some of the post-secondary education researches going on, but more importantly, or equally as important, larger companies that are within this industry as well, and where that experience gets shared back and forth.

If we look at the development of the start-up ecosystem, those interactions are the ones that reduce risk of these companies' improved success rates, which allows for more inclusion in economic growth and employment within these start-ups as they move forward. I don't know if that answers your question.

MR. CHAIRMAN: Ms. Paon.

MS. PAON: As we go through and discuss all these terms, and my mind is full of all the buzz terms - never mind innovate, let's keep going with everything else as far as sandboxes, playbooks, and so forth. In fact, those bring up kind of negative connotations in my head, remembering my youth on Isle Madame and having a kid bite me on the arm in a sandbox once. (Laughter)

It's actually making me also remember, as we're talking about all of the investments, again it all sounds wonderful. But I live and I work in rural Nova Scotia. I have lived and I have worked for 20 years also in Halifax, so I'm very familiar with the landscape in both rural and urban Nova Scotia.

Recently, I have been looking at some historical photographs of rural Nova Scotia, particularly in my area - I have a bit of a genealogical interest and leanings. I have been looking at photographs and doing comparisons between the infrastructure that existed 100 years ago in rural Nova Scotia and the sheer activity. There's one beautiful photograph that I noticed recently of D'Escousse, which is on the north side of Isle Madame and where I went to school and where that kid bit me on the arm, as I mentioned. The difference 100 years ago, when you're looking at infrastructure that existed in rural Nova Scotia in comparison to today, it's really heartbreaking.

When you look around Halifax, we oftentimes measure success by bricks and mortar and what we see being developed around us. If we look at photographs of Halifax 100 years ago, I think we would see that there is advancement and continued investment, obviously, in our major urban core. I'm not seeing that in an equal way - not nearly equal even in a comparative way - in rural Nova Scotia. It's not just in Cape Breton-Richmond. It's all across Nova Scotia.

I think we're all well aware that 50 per cent of our population lives in rural Nova Scotia. The other 50 per cent, plus or minus a percentage point, lives here in Halifax in HRM.

I guess where I'm going with this is, it's wonderful to see all this investment being done. Again, my colleague here has mentioned that there's not a lot of numerics associated with today's presentation. As much as I value Deputy Minister Miller's commentary that one way that we learn is through failure, especially in entrepreneurship - there's a lot of failure before you get to that success point.

Sustainability is this buzz term that always seems to be very elusive. It's a very elusive term. If you can get to a stage of sustainability, great. But we never really seem to be able to get there in this province.

My question is a bit multi-layered. I'm looking at urban, and I'm looking at rural. I want to see a day when the success of Nova Scotia is measured not only by what we're seeing happening in the urban core but also what we're seeing across the province. I need to be able to see photographs in rural Nova Scotia so I can say that we're not going backward, we're going forward, and that I see more infrastructure and more investment in rural Nova Scotia, or at least that it's keeping up with what's happening in the urban core.

When we're looking at the start-up landscape, I believe recently we have been given a piece of bad news that we have one of the worst real GDP growths in the country in 2017. I don't want to be negative, but that's the reality of our situation right now.

I would like to know, for Innovacorp and the Departments of Business and Labour and Advanced Education, what are your true measures of success? Not just in dollars and cents, but when you're looking back, and you're looking at photographs like I have - a picture is worth a thousand words, as they say.

I'm not seeing the success rate in Nova Scotia that we need to see. I appreciate that there's going to be a lot of failure, a lot of steps back, that need to happen before we actually move forward and get to that stage where we were 100 or 200 years ago - never want to go back in time, but obviously learning from our historical mistakes and trying to move forward.

I would like to see the difference in the numerics and the measures between rural Nova Scotia and the growth rate, and where the investments have gone through Innovacorp, Invest Nova Scotia, and the Research Opportunities Fund. How much of that is actually being invested in rural Nova Scotia as opposed to the urban core of Nova Scotia, and even more so than that . . .

MR. CHAIRMAN: Ms. Paon, you'll have to get to the question, please.

MS. PAON: . . . between mainland Nova Scotia and Cape Breton Island?

MR. BERNIE MILLER: I'll start, and I'll ask my colleague from Innovacorp to speak to their own programming (Interruption) And Deputy Montgomerie.

We spoke earlier about global trends, and there is a global trend towards urbanization. In Nova Scotia, we hugely value our lifestyle and the communities that we have throughout the province. Our framework is that when we speak of - sorry for the buzzword again - the innovation ecosystem, we're always thinking the province as a subset of Atlantic Canada and as a subset of the national ecosystem.

As far as infrastructure, to connect to this new changing world, changing economy, that we are talking about, the foundational element is access to broadband information flow, rural Internet in particular. The \$120 million investment that was just recently announced was seen as the foundation to connecting the province. There's still work to be done to implement that strategy and to leverage federal opportunities where I think there will be, to create that platform where you're not excluded from participation in the global economy if you choose to live in Bayview, Nova Scotia. You get that choice - do I prefer rural Antigonish County or do I want to be in downtown Halifax?

At least in terms of connecting to the global economy, our framework is that we need everyone to have 50 megabits per second download and 10 upload, and target coverage that meets the needs of the vast majority of the province. For infrastructure - not bricks and mortar but infrastructure - telecommunications and connection, I think that's very important.

Then there's the question of co-working spaces, places to connect. We have mentioned the Nova Scotia Community College network of 13 communities around Nova Scotia. We engage them and bring them in to the planning so that as we talk about creating an innovation network or connection, rural spokes are connected to the urban hubs so that there's a flow of information, connection, and communication about opportunities and to ensure that our frame of reference is province-wide.

What can be damaging to progress on strategy is if people do turn inward and start to approach the issue as if it's zero sum - a gain for one district is somehow a loss for the other district. In a province of 950,000 people, in a region of 2.5 million people, I think we have demonstrated that that internal focus has actually held us back. We do need to change our thinking and recognize that growth in one area is not to the detriment of rural, but rural certainly has to be connected and feel the opportunities.

Innovacorp has specific thoughts around that. One of the things that I take some comfort in, in terms of data, is we measure high-growth businesses, businesses that are increasing their employment by 20 per cent year over year or their sales 20 per cent year over year, and where we see it happening is around the province. TruLeaf in Truro is a high-growth business, not in information communication technology - they're an agri-food or agri-tech company in traditional industry. Meteghan has Riverside Lobster. Riverside Lobster has built a workforce of about 300 people. Our thinking on economic development is how we develop an ecosystem that reaches the whole province.

[11:45 a.m.]

MR. FRASER: I think one of the relevant activities that we do at Innovacorp is a program that we have just launched again this year called Spark. We go out to see who has interesting early-stage ideas and wants to turn those into businesses. Last year, we got 136 responses from around the province completely, with over 68 of those actually outside of HRM itself. I look at that as an excellent pointer that there is innovation happening

throughout the province. Some of our more successful companies - TruLeaf, which we talked about; Ubique in Sydney; and Securicy and Marcato up there - are great examples of companies that are really happening. Aqualitas as well, which is in Liverpool, is growing aggressively at this point in time.

Your picture analogy is pretty interesting. It brings to mind a company in Sydney that we actually haven't helped, that has grown all on its own, called Protocase. They have this great facility filled with young people working their butts off every day on a very successful and profitable business right in the middle of the redeveloped lands where the steel factory was before. When I look at that infrastructure, it looks different, but it's the right infrastructure for today. Pictures like that excite me in this comparative of where we have been and where we're going along the way.

MR. MONTGOMERIE: I'm from Bridgetown, a rural community. I have watched the changes and what's going on in rural Nova Scotia is going on in North America; we have to be cognizant of the fact that it's a changing dynamic.

I was home a while ago and met a lot of young people who had moved to Bridgetown. When I talked with them, they said because of your school, because of the safety, and because of lack of infrastructure, if I can be so blunt - it's a different way of life.

Is that going to solve all our problems? When you work in companies like Web.com, and you work in some of our resource sector companies that are alive and well - several years ago, when I told John Bragg I was from Bridgetown, he said, did you realize in Bridgetown that the guys you played basketball with were farmers, fishermen, and foresters? I was a townie - I said I never thought of that, John. Well, you think of that, because they're probably 60 per cent of your economy. I'm with you. We have to stay vigilant.

But it's not just a phenomenon in Nova Scotia - take Acadia in Wolfville, take St. F.X. and look at Antigonish, take Sainte-Anne and look at Clare, and take 13 campuses of the Nova Scotia Community College that are throughout Nova Scotia including COGS in Lawrencetown, which is world-recognized for its analytical work, and the Port Hawkesbury Nautical Institute, which specializes in that. I'm cautiously optimistic, quite frankly, it's about us all working together to make it better.

MR. CHAIRMAN: We're going to end questions at this point. We're going to have a small amount of committee business at the end, but I would like to tell the deputies that they do have time for short remarks, to provide those now, your closing statements.

MR. BERNIE MILLER: I would like to thank everyone for the discussion and the input.

The latter question really spoke to the need to take an “all of Nova Scotia view” to this new way of approaching economic development and really coming back to that foundation that it’s new and better ways to do valued things. Whether it’s rural or urban, we can innovate; whether it’s creating a craft brewery in Nyanza where whatever number of people work at that, that’s a win.

Across our departments, we want to create an environment where people feel confident taking those risks and that they’re supported in the early stage of the development of their business with access to mentorship, access to training, and access to the appropriate programs to reduce the market failures that would prevent them from getting off the ground. That’s things like the Small Business Loan Guarantee Program to ensure that they have access to capital and investment.

We’re appreciative of the conversation that we’ve had today. I hope that we have the opportunity to speak again and share our dislike of the word “innovation,” our understanding of the underlying principle, and the need to do things better and in new and better ways.

MR. MONTGOMERIE: I’ll leave you with one story. Ava and my team just toured the province and visited our staff and talked innovation. Our staff were like you folks - what the heck is innovation? I said it’s very, very simple, and I gave the analogy of the gentleman who was in his 60s, who sang in the church choir, and was a finance guy for 3M - we stick better.

He couldn’t keep the places in the hymns. The papers kept falling out. So, he goes back to work and into the lab, and he says, can you stick less? Can you find a way that you can put these things in that will keep my place? The chemist did it in 10 minutes - no problem, here. Then the guy said, wait a minute, can you now stick them together in a pad?

The next day he gave him like five pads. Then he took it to an executive meeting and said, here’s the future. They all looked at him and said, no way. The next day his secretary took all those pads and put them on these people’s secretaries’ desks, and Post-it notes were born.

It’s a simple example of just letting the juices flow, being open and creative, and working together. I really welcome the opportunity to talk about good stories.

MR. CHAIRMAN: Well, you’ve enlightened us on sticky Post-it notes and email today. Ideas that stick.

I'd like to thank the witnesses for coming in today. It's been a very informative session. I thank the members for their questions.

I will ask the members just to stay in their seats, if you don't mind, because we do have a bit of business to wrap up here. If the witnesses would like to excuse themselves now, please.

The matter to deal with is correspondence with the Canadian Federation of Independent Business, Mr. Jordi Morgan. I believe that this has been circulated to the members, so if anyone has any questions or additions to that? I'm hearing none. We've dealt with that.

Our next session will be on June 14th: The Role of Early Learning and Child Care in Economic Development.

Is there any further business?

Hearing none, the meeting is adjourned.

[The committee adjourned at 11:53 a.m.]