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Chair

Mr. Ed Komarnicki

Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities

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● (1530)

[*English*]

The Chair (Mr. Ed Komarnicki (Souris—Moose Mountain, CPC)): We'll call the meeting to order.

I'll just ask for the witnesses' indulgence for a moment. I'd like to welcome the new members to our committee: Chris Charlton, Marjolaine Boutin-Sweet, Ryan Cleary, and François Lapointe. We look forward to your participation. It's a complete, new change of members, and we look forward to interacting with you.

We'd like to do a couple of things. I'll ask the clerk to distribute the budget for the study a little later on. On Wednesday, I will ask the members to approve the budget. I want you to have a look at it between now and then.

In addition, the first order of business, which will only take a brief moment, is to install a new vice-chair for the opposition party, the New Democratic Party. I will turn matters over to the clerk for a moment. Can you proceed, please?

[*Translation*]

The Clerk of the Committee (Ms. Evelyn Lukyniuk): Pursuant to Standing Order 106(2), the first vice-chair must be a member of the official opposition.

[*English*]

I am now prepared to receive motions for the first vice-chair.

Madam Boutin-Sweet.

[*Translation*]

Ms. Marjolaine Boutin-Sweet (Hochelaga, NDP): I would like to nominate Mr. Chris Charlton.

[*English*]

The Clerk: It has been moved by Madam Marjolaine Boutin-Sweet that Chris Charlton be elected first vice-chair of the committee.

Are there any further motions?

Is it the pleasure of the committee to adopt the motion?

(Motion agreed to)

The Clerk: I declare the motion carried, and Ms. Chris Charlton duly elected first vice-chair of the committee.

The Chair: Having taken care of that order of business, we'll invite the witnesses to present.

We have on behalf of the Canadian Coalition for Tomorrow's ICT Skills, David Ticoll; from the Information Technology Association of Canada, Karna Gupta, president and chief executive officer; and from Research in Motion, Morgan Elliott, director, government relations.

The practice is for you to present first for about five to ten minutes. Then we'll open it up to a round of questions, starting with the official opposition and followed by the Conservative Party, and going back and forth like that. Until the time has concluded, we'll proceed in that fashion. If you have any questions, feel free to ask.

With that, I'll turn it over to you. Go ahead, please.

Mr. David Ticoll (Executive Director, Canadian Coalition for Tomorrow's ICT Skills): Thank you very much.

Good afternoon, and thank you for the opportunity to appear today. I believe everybody has a copy of my presentation.

I am David Ticoll, executive director of the Canadian Coalition for Tomorrow's ICT Skills.

The focus of CCICT, as we call it, is Canada's information and communications technology skills challenges. Our thought leadership and programs have achieved significant real-world results, in no small measure due to our collaborative multi-stakeholder partnerships. Formed in 2008, CCICT includes 25 financially contributing corporate members—that is, industry members—plus universities, school boards, industry organizations, and professional associations, two of which as it happens are sitting with me today. We all came together to tackle a skills crisis.

With below 3% unemployment for most of the past decade, Canada's ICT labour market is very tight. Recent studies from several sources, including Industry Canada, reconfirm this reality.

It's not just about the ICT sector. From finance to natural resources, other sectors employ nearly half of Canada's 800,000 ICT workers. The ICT sector, some 5% of GDP, accounts for one-third of private sector R and D in Canada. In every sector, ICT professionals enable innovation and productivity growth. A tight ICT labour market limits the potential of our entire economy.

A major issue is that too few Canadian students choose today's ICT-related career paths. Enrollments in ICT-related post-secondary programs have yet to recover from a major collapse that occurred in 2001. Young women comprise well under 20% of enrollments in core technology programs. As I'll explain in a moment, demand for ICT professionals is changing in very exciting ways, but this news is not getting to the students, parents, and teachers who need it.

Finally, a global war for talent makes it increasingly critical, and challenging, to make it appealing and easy for foreign technology professionals to live in Canada.

This crisis can be resolved with a few small investments and policy initiatives. We should focus on three priorities in Canada.

First and most important, we need to fix the domestic skills pipeline by motivating more young Canadians to choose ICT-related careers. How do we do this? Well, the new narrative I just talked about needs to be communicated. Tech careers now are very different from the boring geeky image of yesteryear. They appeal to every taste and interest. A quarter of the jobs, from analysts to entrepreneurs and CEOs, are as much about business as about technology. Others combine information technology with life science, security, analytics, marketing, gaming, art and design—you name it—even politics. Students, parents, teachers, and the public at large need to hear this new narrative.

Second, we need to make it easier to recruit skilled foreign workers. Employers often need to bring in seasoned IT people with five to ten years of experience or more. In this fast-paced sector they can't afford to wait the six months it often takes for immigration approvals. Another issue is that too many foreign students in Canadian universities decide to leave the country after they graduate.

Third, we need to improve labour market information, and you can see my comments on that.

We are not starting from scratch on these three priorities. Regarding skilled foreign workers, we've seen very encouraging indications from government, thanks to this committee's work and also Minister Jason Kenney's recent statements.

Regarding the domestic skills pipeline, we have achieved some positive results at our organization, with two initiatives.

First, something we call CareerMash conveys the new ICT careers narrative with a catchy slogan: “Today's careers mash up tech with anything you imagine”. With compelling content at the CareerMash website and nearly 100 volunteers, along with our Quebec counterpart MaCarrièreTechno, we've delivered inspiring real life stories, in person, to nearly 10,000 students since our launch just last October.

The results are clear: 55% of participating students attest to increased interest in tech careers, and 85% of teachers and role models that we send into classrooms find the CareerMash narrative to be new and illuminating.

Second we are increasing the supply of business-tech hybrid graduates—that quarter of those 800,000 jobs. In 2009, a national committee that we organized of employers and universities designed Business Technology Management, an undergraduate degree program. It's now in ten universities from coast to coast, with three in Quebec and more on the way. Again, the results are in: BTM schools report significant gains in enrollment and student quality.

But this is just a start, and here is what we are proposing for you to think about. We believe we can definitively turn the tide on this by taking five additional steps, and kind of pull a switch over a period of a few years.

First of all, take that new narrative on ICT careers and make it national. The narrative we've introduced is accurate, illuminating, appealing, and it works. Industry groups in several other provinces besides southern Ontario, where we got this thing started, want to take it up. But it requires sustained government partnership, and needless to say, dollars.

In addition, ministries of education, school boards, and teachers should bring the narrative directly into career guidance programs and career-related content in all subjects in the curriculum.

● (1535)

Secondly, we need to make some changes in post-secondary programs. We have some gaps around communication, collaboration, and real-world learning in technical programs. A lot of those programs have a boot camp feel that leads to dropping out. These programs need to be changed. We need more co-ops, more internships, and more student-oriented business incubators. We need government support for some of these too, and incentives for employers to do these things.

Thirdly, we need to make it a lot easier and more attractive for highly qualified foreign professionals to come to Canada and stay here. Implement those plans to simplify and speed the entry of foreign skilled professionals. Provide compelling immigration incentives for foreign students. For example, we could forgive post-secondary fee premiums for those who build careers here, say, after having worked here for 10 years or what have you.

Fourthly, we need to innovate to get more frequent, more granular, and more accessible labour market information. One strategy that we advocate is to form a public-private-academia partnership to do this. There are our funding issues. There are data gathering issues. There are motivational issues. We need a new way to do this. Also, a big focus should be on disseminating the results, not just to academics and policy-makers, but also to the key people who need to make decisions about their own careers—students, parents, teachers, and so on.

Fifthly, this needs to be a big campaign, an “own the podium” style of campaign for digital economy skills. Our Olympic successes were fueled by an inspiring campaign that brought the country together, and we pulled it off. Imagine how Canada could build on this success to seize the golden rings of competitiveness in the 21st century digital economy. Think about it. Brain power is the natural resource of the knowledge economy. To build Canada's reserves we propose a time-limited, multi-stakeholder, highly focused project team with clear objectives, a mandate to act, program budgets, and measurable target results.

Thank you.

● (1540)

The Chair: Thank you very much for that presentation. There are certainly some interesting initiatives that you have undertaken, and suggestions for the committee. Communicating today's new narrative is important. I know that involving students, parents, teachers, and the public at large is obviously important.

Thank you.

Mr. Gupta, go ahead.

Mr. Karna Gupta (President and Chief Executive Officer, Information Technology Association of Canada): Good afternoon, Mr. Chair and honourable members. I'm very pleased to be here. Thank you for inviting ITAC to this forum. It's a very important discussion that we're having regarding skills and talent.

As you know, ITAC represents the Canadian technology and ICT industry. Our membership is over 350 companies across Canada. This group of companies in the ICT sector produces over 5% of GDP, as you heard, and creates over 750,000 jobs. I'll put it in terms of dollars. We make about $140 billion of revenue, which contributes to the economy. However, in our membership, 65% of our members are small and medium-sized companies, which are dealing with the skills and talent issue on a regular basis.

I know you have heard from several witnesses over the last little while, such as Industry Canada and Statistics Canada. The skills gap is a common issue and common thread that I hear from all of our members. Some of the reports I've seen indicate that over the next 10 to 12 years you're looking at over 160,000 shortages—jobs that need to be filled in this sector. This issue is very real for our members, and they deal with it on a regular basis. If we're going to be building a knowledge economy, it is extremely critical that we build not only our own resources internally, but that we also compete globally to attract the talent to come here. Canada needs to be a destination for a skilled workforce. There are several key areas we need to address.

First, we need to have much better information in terms of emerging ICT jobs. Often we do a lot of studies that are based on jobs and NOC codes that look backwards to yesterday's jobs. We need to know where the puck is going, rather than where the puck has been. This industry is changing very quickly. We need to have a view of where the emerging technologies are going.

Second, we need to have skilled talents available through our own growth in our universities and high schools, as David mentioned before. Also, a significant effort needs to go into retraining.

Finally, we need to acquire additional talent through responsive and timely immigration. We need to attract talent globally.

As you know, there are some shortcomings in the way we gather labour market information. When I talk about the market information that's available, quite simply, we need better information on supply and demand. We need to match the supply and demand relative to the ICT sector. We need better forecasting on what the jobs will be in the future. If you think back on our educational institutions' internship programs, we can prepare our youth for tomorrow's future and for the ICT sector.

Our industry is very dynamic and jobs change at a very quick pace. A recent study commissioned by Industry Canada indicated that the students need more real-world experience. We need to have some policy framework that allows young companies to offer jobs to the young students in this sector, and keep them in the sector. We also need to support a cooperative internship program among academia and the private sector.

It is always important to measure against the benchmarks we have seen in other countries, and there are several countries that are attracting foreign talent on a much larger scale than we have been.

In the immigration area, we need to do some fast-tracking, an exemption of LMOs for the ICT sector and for inter-company transfers. The reason this is critical is that our members often need foreign talent to get certain jobs done now. They cannot wait three or six months; the projects are over. So when the need for talent comes, we need to find a way to bring fresh talent here on an ongoing basis.

Often in the ICT sector—after 32 years of being in industry—this pyramid is often built from the top down. If you attract top talent, they'll bring 200 other jobs with them. If you don't have the top talent available in the country, they cannot build the organizations, research, or processes where young people will come and join them. It is extremely critical for us to import the best of the breed into the country.

Finally, in closing, Canada's ICT sector continues to be strong, and at the same time we need to take some very specific actions to build on our ability to compete in the world. Addressing this skills gap will be vital to our success in the future.

We need better information and programs to ensure that we have the skills that will be in great demand for the future. ITAC would be pleased to draw upon our members and experience to help you with any assessment you need to do.

I would like to thank the chairman and the forum for asking me to come and present this today. Thank you.

● (1545)

The Chair: Thank you very much for that presentation.

Certainly, better forecasting with respect to supply and demand is important. I might ask where the puck will be in the next five years in your industry, but we'll leave that to other members.

Mr. Elliott, on behalf of Research in Motion, go ahead.

Mr. Morgan Elliott (Director, Government Relations, Research in Motion): Thank you, Mr. Chair, and thank you for inviting Research in Motion to this committee.

For those of you who may not have heard of Research in Motion or read the news lately, we are a global leader in wireless innovation. Actually, we invented this entire industry that you probably wear on your hip. I see a lot of BlackBerrys, and I am very happy to see such enlightened committee members using our devices.

To give you a sense of RIM's scope, our products and services are used by more than 77 million people, each and every day, across the globe. We work with over 600 carriers, and we're located in over 175 countries.

Let me give you a sense of the scope of RIM's presence in Canada.

You may be aware that Research in Motion is the largest R and D spender in Canada. We spend approximately $1.5 billion a year in research and development. We also offer more co-op placements than any other private sector company in the country. And we are one of NSERC's largest industrial research partners in terms of their programs across the country for partnering with universities.

We compete in a highly competitive global smart phone market, and we are in a global battle for talent. While we streamlined some of our functions last year, we currently have multiple job openings on our website, including many R and D jobs that we would prefer to locate here in Canada, as we maintain the bulk of our R and D activities here in Canada.

Nearly two-thirds of our employee base is here, and nearly half of those who live in Canada and work for us are directly engaged in R and D. But if we can't find the right candidate in Canada, we also have to consider hiring workers that result in the offshoring of jobs.

Some of the positions we are looking for are engineer specialists, test specialists, electrical engineers, mechanical engineers, LTE modem developers—it's a very long list of highly skilled people that we're looking for.

In Canada, unfortunately, we continue to see declining enrollment in the so-called STEM disciplines you've heard about—science, technology, engineering, and math—making it more difficult for Canadian technology companies to find talent. As a result, the Canadian tech sector suffers.

We need to turn around the negative cultural perception that science and technology programs are for boring, awkward geniuses who work in their parents' basements. Because far from that, this is an absolutely wonderful career path that offers high value in terms of fulfillment and income.

By exposing our people to careers in ICT through business visitation programs, experimental learning opportunities, and online engagement, RIM is hoping to turn this trend around. In our operating regions, RIM employees actually go to high schools and elementary schools to discuss physics and math to try to attract students to the sector. They show them the underpinning technology of a BlackBerry—they get to take apart a BlackBerry—and show them how maths, sciences, and physics all play an important role in the development of products.

Cooperative education, which I also mentioned, is a critical way to foster the skills we need to be successful. For those of you who are familiar with the Waterloo region, co-op education from the early days of the University of Waterloo engineering program has been essential. As I mentioned, we are one of the largest private sector employers of co-op students.

It's great because they bring their own enthusiasm and attitude. They're not jaundiced by business and how it's supposed to work. They're willing to challenge. They're willing to break the old business model. At one point in RIM's history, about one out of every four employees had been a co-op student at RIM at one point.

One solution the federal government may want to consider, and I understand and RIM understands that financial constraints are here and now, is to match Ontario's co-op tax credit to increase the opportunity for co-op students to gain experience in Canadian companies. In a large number of cases, they have ended up in full-time employment after graduation.

When we're unable to find qualified candidates in Canada, the ability to relocate workers with the essential technical skills to Canada is critical. As part of this process, we frequently use LMOs, labour market opinions, from Service Canada.

● (1550)

However, the structure and procedure of the program unfortunately are not well suited to the demands of a dynamic labour market for highly paid IT talent. Similar to past testimony you've heard, I'll say that a technology company's number one barrier to continuing growth and success is lack of access to talent, and not just technical talent, but the business talent as well.

Two key areas to address this are easing just-in-time talent acquisition processes, and creating a culture that builds the right kind of talent. When companies find themselves needing specialized skills, they cannot afford a lengthy hiring process.

In recent months, we've unfortunately encountered increasingly long processing times for LMOs. We used to be able to count on turnaround processing times of three to four weeks, but now the LMO process adds 16 to 18 weeks in our recruitment process.

The cost to RIM in terms of lost productivity and time to market is severe. Even worse, we've lost candidates who have actually accepted positions at RIM but have not been willing or able to put their lives on hold for months due to the long period as we waited for an LMO approval.

To give you a sense of the problem in the Waterloo region, we are not the only ones facing this issue. There was a story in the Waterloo *Record* about how a start-up company in the region has gone out and said to anybody in the community that if they can send an engineering student to them and the student is successful in getting a job, they will pay that person $3,000 cash. That's what the problem is becoming in the whole Waterloo region.

I won't repeat the stats that David and Karna have mentioned. I'll just leave you with the thought that the ICT community has about 5% of GDP, but in an era when we're trying to look at commercialization and productivity, we also add over 30% of the country's R and D as an industry.

I want to congratulate the committee for looking at this important issue. I look forward to your questions. More importantly, I look forward to seeing your recommendations and reading your report after you're finished.

Thank you.

The Chair: Thank you for that. From previous witnesses, we have heard about the co-ops and how they can work beneficially, and we hear you with respect to labour market opinions and so on. That will all fit into the study.

Now we'll go to the rounds of questions.

Ms. Charlton, go ahead.

Ms. Chris Charlton (Hamilton Mountain, NDP): Thank you very much, Chair.

Thanks very much to you three for your presentations. I have a ton of questions. I don't even know where to start.

I don't think there's anybody on this committee who hasn't spent a lot of time thinking about the high level of unemployment, particularly among Canadian youth, and about what is being described as the skills shortage, and how you square that circle. How can it be that we have so many unemployed Canadians and yet we have employers who are consistently saying that it's difficult to find talent for their workplaces? I want to just explore that a little.

Obviously, universities are great incubators of skilled Canadian talent, and you've all described how you've drawn on that talent in your workplaces, but universities can't do it alone, right?

The training time through an academic program doesn't give you the just-in-time delivery of talent that you spoke about in your presentation, Mr. Elliott.

For students, you talked about needing a new narrative, for example, to attract students to the field. My sense is that it's probably more than just a narrative that students need. They probably need to know that, yes, they're not going to be described as a geek or a nerd, and that there are also some very positive reasons why they should be coming to your industry. I wonder if we could just talk a little about how we make sure students understand that the investment they make in their post-secondary education in this field will actually pay off for them.

When I was going to university, the tuition wasn't any higher for studies in IT than it was for a general arts degree. Now that's no longer the case. Particularly in Waterloo, I think the tuition is now twice as much as it is for a general arts program. For some students, that will be a barrier to getting the kind of post-secondary education that you want them to get. For some students, the work environment may prove a barrier if they aren't able to work the irregular hours that an entry-level position in the field sometimes requires.

I wonder if you could just talk a bit about what those barriers are at the post-secondary education level in regard to actually meeting your needs.

● (1555)

Mr. Karna Gupta: Maybe I'll start with the first question you asked, and it's an important one: why is there so much unemployment out there? We're saying there's a skills shortage. In the ICT sector the jobs tend to go where the skills are. If the available skill pull is not what you need, your jobs are going to migrate out, and that's what's happening. The kids who are coming out aren't necessarily in the sector and trained to do the jobs we need done.

A great example is that from a developer point of view, at a very young age, for every 10 .NET developers there is only one job as a developer. So we need to understand where the pressures are, what's going on in the marketplace, and what the needs are. If they're not trained for the right thing, the jobs are not going to come to them. That's the first point.

As David mentioned, the ICT sector unemployment continues to be at the 2% to 3% level—much lower than what we see in the economy. The second point you raised was on what we need to do. I think the private sector does have a responsibility here. We need to post the jobs and create the conditions for the right jobs in the country. At the end of the day the talent must be available. Most of the companies are managing toward the bottom line, and there are economic factors at play. If the job skills are not available, those talents migrate.

I talked to my son who is in engineering school. He won't be competing with the local graduates when he graduates; he'll be competing with graduates coming out of Hong Kong. So the magnitude of competition has changed very dramatically, as companies need to be global as well. For any technology company in Canada to be successful they must do business internationally. Our market, by nature, is very small. We have 30 million people and a very small market. So if you want our ICT sector to be strong and robust, these companies need to go international and global. There is a need to attract talent, and they have access to talent globally. We need to compete on that level.

Our training programs in schools and universities need to change. That's the new narrative David talked about. Our training programs need to be much more up to date, and our scholastics need to be different to compete globally. It's a multi-dimensional problem. But the issue is that where we find ourselves today, everything needs to be dealt with in some sequence. The private sector is responsible for creating jobs locally, but the policy framework from the government needs to help support it. Partnerships need to be developed between the private sector, the public sector, and academia to make sure we're creating the right skills resources.

● (1600)

Ms. Chris Charlton: Thanks. I really appreciate you saying that there needs to be a multilateral approach that includes the private sector and government. It is also true that Canada, as a whole, rates very low compared to other OECD countries with respect to on-the-job training. You're looking for highly skilled people, and that kind of training can't happen at universities. Some of it will have to be on-the-job training, because it's so particular and needs to be in the context of the work you're asking people to perform.

How much time do I have left? Can I go somewhere else?

The Chair: Sure, go ahead.

Mr. David Ticoll: Can I add a couple of comments as well?

On the concept of the new narrative, we surveyed 1,000 high school students across Canada a couple of years ago. We asked them a word-association question: what does a career in this field mean to you? The response from about 30% to 40% of them was: "I don't know". Then there was a whole collection of very geeky sounding things like technician and programmer, but it was extremely vague. When it came down to something specific it was "game designer". We have about 12,000 game design programs in Canada out of those 800,000 jobs.

So you're not going to get more people in the labour force with this skill set unless more people choose a career in the field. That's the starting point. There are two sources of talent. One is Canadian students who go on to post-secondary education—not just university but also college—and train for these jobs. The second is immigration, whether it's targeted immigration or larger numbers of people. But the foundation is the people who grew up in Canada. That's where the bulk of people are going to come from in our labour market. So we need to fix that.

On the narrative, if you go to the website you'll see that we convey it as being interesting, fun, social, and lucrative. A quarter of these jobs pay over $85,000 a year. We promote that information. It's whatever you're interested in. If you're interested in music you can do it. You can invent new musical instruments, or what have you.

That's one part of it.

Ms. Chris Charlton: May I take the questioning somewhere completely different?

Mr. David Ticoll: Okay.

Ms. Chris Charlton: Again, I'm sorry. We have only seven minutes.

Most of the information I've been hearing about the skills crisis in Canada has been very much anecdotal. By that I mean that someone will come from a particular company and they'll describe their own circumstances. I'm not aware of any significant studies that actually quantify in a meaningful way what the crisis is now or make projections. I know Statistics Canada used to be the leader in the field on that, but even Statistics Canada doesn't really provide us data by region or by occupation.

Have you given any thought as to how the government might help with respect to just providing us with accurate data so that we can have a conversation about what exactly the skills crisis is, which may actually lead to some solutions about where we ought to go?

The Chair: Just respond to the last question, because your time is up. Go ahead.

Mr. David Ticoll: The government has actually done a lot of data gathering on this topic, and it has a model for doing it. A lot of that information is published on a monthly basis. But I agree with you that it's not sufficient. One of the reasons it's not sufficient is that the occupational classifications that we use are not granular enough. We probably need 100, and we're only using about 15 or 20. We're not doing it frequently enough. We're not actually asking about supply and demand, or a regional basis.

This is a big project and it involves a fundamental rethink of how we go about it. As I said in my presentation, we believe we really need to do a consultation just on this issue, but essentially, I think the fabric of this is that it would be a public-private-academic partnership. It would use some innovative techniques, which we could discuss at another time, and it would need to be much more a public and campaign-style data collection thing that goes on year after year, in which the contributors of the data recognize that they have a personal stake in gaining access to the outcomes.

It's really, if you like, a new business model that we need to be thinking about—which also, by the way, could be a business model that would be quite fiscally prudent if done effectively.

The Chair: Thank you very much for that.

Does anyone else have a comment?

We'll move to Mr. Butt. Go ahead.

Mr. Brad Butt (Mississauga—Streetsville, CPC): Thank you very much, Mr. Chairman.

Thank you very much, gentlemen, for being here today. I have to confess I'm not very tech savvy. Sometimes staff even tell me I don't know how to work my own BlackBerry properly. I'm interested to know what you and your industry have to say in a little bit more detail about some of the issues we're trying to deal with here, as a committee, to get our hands around what the real issues are in Canada.

To follow up on Ms. Charlton's comments about trying to get some real numbers, a real idea, and real studies on what we're dealing with, as I understand there was a report released last year by the Information and Communications Technology Council that indicated that there's a major skills shortage in the digital field and there will be, specifically, more in the area of electrical and electronics engineering technologists and technicians.

Can any of you comment on the accuracy—if you're familiar with that study—of those conclusions and whether you anticipate a broader or narrower skill shortage in the digital field in particular?

● (1605)

Mr. David Ticoll: I was somewhat involved with that study and I know a little bit about how the data was gathered for it.

First of all the electrical and electronic engineers was one category of occupation that they identified, one of those national occupational codes that I was talking about. Another one, which was actually of a larger scope, is what they called information systems analysts and consultants. That was another of the classifications, which is these business technology hybrids that I was talking about.

The data shows that over the past 10 years that particular category of employee, along with various kinds of managers in IT and communications, has grown dramatically. The numbers are a little all over the map, but it has gone up by at least 60% over the past 10 years, from 100,000 to maybe 160,000. By some accounts it's up to 200,000. That's astonishing growth, and we're not preparing. The post-secondary programs that are creating these kinds of skill sets are putting out maybe 2,000 people a year.

The issue with data quality that ICTC and other organizations face is that they're largely hamstrung by two factors. One is these national occupational classifications that don't provide sufficient detail. Karna was talking about, do you have a Java programmer versus a C programmer or what have you? We can't get that kind of information. We can't provide it to people who are making choices, whether they're post-secondary institutions that are designing programs, students who are making career choices, or even employers who want to find out whether there is a skill shortage area or surplus. If there's a surplus and it happens to be in B.C., people can be recruited from B.C.

So one factor is the granularity and frequency and regionality of the data collection, and then the second factor, as I said before, is the business model we use to do that.

I would say that, in gross terms, that research is very good. But because of those structural limitations, which, by the way, they actually acknowledge in the report—that the report itself was limited by the kinds of factors I've just been talking about....

Mr. Brad Butt: Did anyone else want to comment?

Mr. Karna Gupta: The only comment I would make is that the skill set need is very fluid. I think that's the biggest thing you need to come to grips with as you start looking at some sort of recommendation.

The technology need is evolving very rapidly. If you're looking backwards in terms of what the NOC code was and the specific shortage in a skill set, 18 months to two years down the road it will change dramatically in terms of how the companies need the technology. With regard to that part of the evolution of the skill set and how companies train people, to some degree you need to rely on this partnership of companies and academia as to what they need to train people for.

We need to provide the underlying framework to access the raw material. The raw material in this case is people, youth. It's retraining people who exist in the job and mining elsewhere. We need to find people to come here to set up these organizations and areas where they can start building the skill set underneath them.

I'll give you an example. If you put in a chief technology officer in Waterloo or Montreal or somewhere else, they will tend to build an organization of 200 technicians and technologists and create the jobs there. If you don't create the conditions for companies to have that job here, through either LMO delays or something else Morgan mentioned before, that job and the associated talent that goes with it will migrate somewhere else.

It is very fluid, and we need to rely on the private sector to do the right thing. The economics in this case is the ultimate equilibrium. They drive the reality. The framework needs to be there. You cannot look at a study that is two or three years old that says we only need electrical engineers. It will probably not be true, looking two years forward.

● (1610)

Mr. David Ticoll: We need to be doing this every year.

Mr. Brad Butt: Right.

As I see it, there are really two streams to filling these jobs. There is what I would call domestic, homegrown talent, and there is international recruitment where required.

A number of you have mentioned the labour market opinion, LMO, process. Do you have any specific recommendations for us that would significantly improve that? I've had some frustration about it as well. Local employers have come into my office to talk about the LMO process. I'm a new member of Parliament. I'm learning how the bureaucracy works and how the system works.

Do you have any specific ideas of what we can do to speed it up and also to make sure it's accurate? One of the accusations made by some people is that they don't believe companies are actually hiring local people, but are saying that it's easier to steal somebody from another country, and overlook domestic workers, which I don't think we want as Canadians. We want to put Canadian workers first. I do believe there are situations where we don't have enough trained domestic workers with the skill sets to move into those jobs ASAP, or fairly ASAP.

Do you have any specific recommendations for us around the LMO process, where the private sector can help the staff in HRSDC speed up the process and better understand what the skill gaps and labour shortages are in certain areas? Do you see any other role that private sector organizations like yours can play to improve the LMO process?

Mr. Elliott, you mentioned it specifically.

Mr. Morgan Elliott: One of the things they may want to do first is a risk-based analysis, for example, if a company or an organization has a reputation for bringing in qualified people by following the rules and paying properly. Everyone has heard the stories of when it has been abused. If a proper risk-based analysis was done based on companies that did live up to the letter of the law, I think that would be a good first step.

I know for the ICT sector we're in a highly competitive area, so we're kind of reticent to advertise what we pay. If we offer a highly qualified engineer $150,000 to $200,000, the person next door is going to mark it up by 10% or 20%. Often there is a need to advertise the salary. I think if they set up salary bands, that would be a good way of doing it as well.

There are little niggling things like, when you apply for the LMO, having to prove that you've advertised for the job. If we hadn't advertised for the job already, we wouldn't be knocking on Service Canada's door for an LMO.

Those are three little things they could do to improve the service.

As little as a year or 18 months ago, it took only three or four weeks, which I think is entirely acceptable. For some reason it seems to have slowed down over the last little while.

Mr. Brad Butt: Could I quickly ask one follow-up question on that. You talked about the salary bands. One of the complaints that I have heard about the LMO process is that the wage rates that are being set are not realistic for the geographic areas. They're too high in a lot of cases, or outdated, and so on.

Do you think the industry could be more helpful in helping us set some of those? We talked about the codes and so on of different job descriptions, and they do change over time. There is a lot of fluidity, especially in your sector. Could you be more helpful and more timely in providing us, as the government, with an idea of where the wage scales are going generally in those areas? Perhaps you could help us set fair bands rather than saying that you have to pay $44 an hour and if you don't pay $44 an hour you're not getting a foreign worker into the country. That's the frustration I've heard, that there isn't enough reasonableness in some of the wage scales that those LMOs are setting.

Mr. Morgan Elliott: Not to put Karna on the spot, but for the ICT sector, I'm sure that's something the members of ITAC would love ITAC to do.

Mr. Karna Gupta: We would actually welcome providing that kind of input to the government on how this should be done. When we talk to our members, this is one issue that comes up constantly.

The other one that always comes up is that we always tend to manage by exception. There are some companies that would be on the exception side, maybe stretching it a little beyond what the bounds are, and then there should be some consequences. But the vast majority of the companies are following within the norms of the guidelines, and they should be allowed to move forward.

Time and again the example our members tell me is that they have a project to do in a bank or somewhere else, and they have to deliver something in a big project. They need to put 30 people on that work but they can't find them. It's a three-month project. If it takes them three months to get the resources, the project is done. They basically are not active in the process anymore. We need to beef that up.

● (1615)

The Chair: Thank you very much for that.

Is there anyone else?

Go ahead, Madame Boutin-Sweet.

[*Translation*]

Ms. Marjolaine Boutin-Sweet: Thank you.

Good afternoon, gentlemen, and thank you for your warm welcome to this committee.

I have two sons, two brothers and two nephews who work in the field of computer science. They are all men. There are far fewer women in this area, just as in politics. I myself have a background in archeology, and there are not very many women there either. At university, there are a lot of women in the courses, but in the field, there are not many because of the working conditions in general.

Mr. Ticoll, you mentioned that fewer than 20% of the women registered in this field are women. Already there are not very many women who register in this area, fewer even than in anthropology. And so there must be even fewer women who stay there, because all of the people I know who work in this area work very long hours. Society has not yet caught up with the labour market. The reality is that often women are still the ones who take care of the family, and so they need working conditions that are different from those of men.

How can your market adapt to that reality? You said you wanted to find women to hire, but how can your market adapt so that women are able to work for you?

M. David Ticoll: I am going to answer in English because it is easier for me.

[*English*]

First of all, I just want to clarify the numbers. What I said in my presentation was that women make up less than 20% of those in the really hard-core technical programs, but actually, overall among ICT professionals, it's 25% because some of those professionals are not.... They're like analysts, for example. Information systems analyst job programs are easier for women to work with. They're more attuned to the kinds of things that women want to do. So the overall number is about 25%, which is still unacceptable.

I have a couple of responses to this.

First of all, I think you're right that we don't have more women in the field because they're making choices, not because they're being kept out. They don't necessarily see the field reflecting their interests.

With respect to your concern, which is a valid one, historically it has been very true that the culture of information technology has not been very female-friendly. That has changed dramatically. Certainly ITAC's members, our members, and our 25 corporate members are very proactive with respect to all the issues you've identified and more, in terms of making sure that there's a very strong focus on work-life balance, with a special focus on women. Many organizations, particularly large companies, see creating working conditions that will appeal to women as an explicit priority. For smaller companies, it depends on the organization, but in general among large companies, it's now happening, not in every single one but pretty much across a large number of them.

The other factor is our view that it's not enough. Do women really see their aspirations and desires for the kind of career they want, the kind of work that they want to do, reflected in this field? Again, it comes down to the question of the old narrative—this geeky programmer who spends all day sitting in front of a computer screen—that's going to appeal to fewer women than men. That's just the reality. It's a cultural fact. But in this new narrative we're talking about, where, first of all, many of the jobs are actually business-oriented and require leadership skills, collaboration, communication skills, and so on and so forth, it is a fact that there's a significantly higher proportion of women in those jobs. Outside the IT sector, well over 30% of those jobs are actually filled by women. Inside, it's a little bit less.

But now the new narrative is saying, it's whatever you're interested in. Are you interested in life science? Go into bioinformatics. Are you interested in design? Well, you can do online design. You can design things.

The arts, social sciences, medicine—many, many fields—are now combined with IT at a technical level or at a business level. That's what is really turning the corner. By the way, it's not only turning the corner for many women. We're just getting started, and we've touched a tiny percentage of the Canadian population. By the way, we need financial support from government in order to do this. We can't just do this with our industry funding. We've had good support in the past. Now we need it to continue.

But what I was going to say is that we also need to recruit a certain kind of male into the field, someone who's a bit of a right-brain/left-brain kind of person, who's not just technically oriented, but who has those creative and communication skills as well. So our approach is to tell that narrative to the entire cohort, and based on at least our preliminary results, it's working.

● (1620)

[*Translation*]

Ms. Marjolaine Boutin-Sweet: In my opinion, working conditions could be winning ones not only for women, but also for the men. Indeed, there are far more men who take care of their children today than there were in my father's day, for instance. And so it would be beneficial for everyone if working conditions would allow people to have a life outside of work.

I would like to move on to another topic. You referred to this briefly, as did Mr. Butt also. We talked about the studies that provide information on the jobs of the future. Mr. Butt mentioned sectoral councils. That was a very good source of information, but unfortunately they were abolished.

What impact has the abolition of those councils had on planning, to ensure that there are no shortages? I would also like to know what we could do to replace those councils and obtain the data in question, and perhaps even to obtain more data.

[*English*]

Mr. Karna Gupta: Let me give a response to that one, then I'll ask Morgan and David to comment on it.

I think, from an information gathering point of view, the sectoral studies were good. They were timely, and they addressed certain issues. As we look forward, whether these sectoral groups are there or not, these studies can still be done. It does require some support from the government to work with the private sector to develop them.

I believe that rather than always looking at a study that is more what I call historical, initiative needs to be taken to engage the private sector in telling you where they think the goals are and what kinds of jobs and what kind of talent and skills they will need in the future.

In our business in technology, we separate that out very quickly. Things that are water under the bridge, you cannot really deal with anymore. They are behind you. You can only drive the car looking forward. You can't drive a car by looking at the rear-view mirror, right?

In that sense, these studies need to be done with the industry. I would welcome any opportunity to find a way to engage the private sector and engage them in studies developed with the multiple parties that are around the table. They would be happy to support that.

[*Translation*]

Ms. Marjolaine Boutin-Sweet: Would you have some more specific suggestions to make to the government as to what form those studies might take?

[*English*]

Mr. Karna Gupta: I think there is a clear funding issue in starting these kinds of studies. There are several groups. One of them, David Ticoll, is here. There are some other groups out there. ICTC is also looking at some of these studies. All of these groups do meaningful work in terms of either delivering programs or creating assessments of what kinds of jobs are needed for various sectors.

There are other organizations and institutions we collaborate with as ITAC. As you know, ITAC is completely funded by the private sector. We collaborate with several of these organizations to get the right information. We bring our constituents, who are our members, to the table to provide them with the data and information they need, and we deal with the government.

● (1625)

Mr. David Ticoll: I'd just like to add a couple of information points.

As we understand it, the sector councils themselves are going through this transition, but the sector council program, or what was formerly the sector council program, continues to have a budget, part of which is, as I understand it, to be allocated to labour market research. Hopefully, at some time in the near future, that program will be calling for proposals to conduct research. I don't know what the nature of those proposals will be. Karna mentioned some specific ideas that ITAC has. We also have specific ideas.

We believe that there should be baseline ongoing research, ongoing supply and demand, on what the current state is. It should be done on a regular basis, in far more depth and specificity and frequency than it is now, through a private-public-academic partnership. Then, using that as the foundation, we can do futuristic research, as Karna was talking about, as well as deep dives into specific areas.

Let's say that we have this problem that Morgan was talking about in Waterloo. Let's find out a little bit more about that, or how can the oil and gas sector in Alberta use ICT skills more effectively, or whatever it may be.

If you have those two foundational pieces in place, then, in fact, a lot of those kinds of specialized things could be funded more by the private sector entities that have an interest in them. And if government can kind of quarterback collecting the larger frame of information, but can do it extremely well—a couple of orders of magnitude better than we're doing it now—we would have a foundation for....

We believe that this could be a source of competitive advantage for Canada, if we do it well.

The Chair: Your time is up.

Go ahead, Mr. Elliott. You had a comment.

Mr. Morgan Elliott: I'm sorry, but I wanted to address your first question, if I may.

The issue of the ICT sector and careers for women, I would say, applies to every professional career. This is an issue very near and dear to me, being married to a lawyer. We have this discussion all the time on whether or not it would be better for her to take some time off so that we can talk about family and deal with other things. That's not an issue that's indicative of the high-tech sector at all.

But what I would say for the global war on talent is that I do think you will see more accommodation for situations like that. Definitely in the ICT sector, I think we could be the leader in terms of being accommodating for all sorts of different needs, simply because we do have a lot of telecommuting, whereby people are able to work at home and balance off careers with being mothers or fathers.

The Chair: Thank you for that exchange.

We'll take a five- to ten-minute break and then resume the questioning.

● _____ (Pause) _____ ●

● (1640)

The Chair: We'll call the meeting to order. We'll commence with questioning from Mr. Daniel.

Go ahead, Mr. Daniel, as we settle in here for the next round of questions.

Mr. Joe Daniel (Don Valley East, CPC): Thank you, Mr. Chair, and thank you, witnesses, for being here.

I have a little bit of a tech background and also on the teaching side. I'll start with the technical side.

Most of the big companies here in Canada—and this may be the reason why there's such a small gap in terms of two or three per cent of not-required—outsource a lot of their design work, software work, etc. I'm curious just to see how much of that is going on in the industry, and how much is that filling the gap of what skills we need here. Maybe we can start with Mr. Elliott and RIM.

Mr. Morgan Elliott: Sure. Primarily the way that we've—and I wouldn't say outsource—but primarily the way we do R and D offshore has been through acquisition, where we've identified a gap in some of our technology or an area that we may want to expand in. That's primarily how we've grown in Germany, Sweden, Australia, Singapore—a number of locations across the globe.

One of the problems with offshoring, and I think you're seeing it more and more being involved in the tech sector or with a technology background, is the protection of intellectual property. That's one of the biggest concerns the ICT sector has going forward. The more that you tend to offshore, the more you tend to lose control of that protection. That, measured against the value and the savings of doing non-critical, non-IP producing offshoring, is definitely a consideration. Unfortunately, if you are unable to get that talent, that's definitely a consideration you have to make. Do you do the project or do you secede it to your competitors because you haven't been able to get the people that you need to work on it? So it's a combination of the two.

Mr. Joe Daniel: Does RIM actually do some of this outsourcing? There are great places like Bangalore in India, etc., where some of these bigger companies outsource both hardware and software.

Mr. Morgan Elliott: We currently don't outsource or offshore any of our new jobs.

Mr. Joe Daniel: Mr. Gupta.

Mr. Karna Gupta: In terms of outsourcing, most of the jobs that you're talking about are what we call "code cutters"—very low-level jobs that, purely on an economic basis, will go where the economies are better. In terms of the talent jobs you're talking about, we need to start looking at talent as being like your gold. The price of an ounce of gold is the same no matter where you go. The price of top talent is pretty much the same regardless of where in the world you hire them.

The associated jobs that go with it, those are the ones we need to attract more of in the country. The pure outsourcing economic jobs, those would probably be tough for us to get back. The economics just don't work for a lot of the large companies.

But these companies are also exporting and marketing in those countries, so there is a tremendous number of market opportunities that are opening up by setting up those shops. But the big consideration always is, as Morgan says, that the intellectual property always comes to the table. That dictates how you construct that.

● (1645)

Mr. David Ticoll: Thank you, Mr. Daniel.

Actually, I was just recently involved in a survey of a number of major ICT employers in Canada, large and small. Everything that Mr. Elliott and Mr. Gupta say was validated. But there's another piece as well, which is that particularly large global companies have, what they call, a global business model. They put the work in the country that makes the most sense.

Take IBM for example. They're not a particularly Canadian company. If IBM is going to create a lot of jobs in Canada it's not a matter of whether they're.... Arguably, they're offshoring it or outsourcing it to Canada rather than away from Canada, if some work comes here. So Canadian leaders of many of these companies are actually competing with the leaders of their companies in other countries for what they call a global mandate.

I'm sure you may have noticed the recent IBM announcement where both the Government of Canada and the Government of Ontario made a contribution around analytics in Ontario—a very significant investment, altogether close to $100 million. The reason why it's happening here is that IBM actually happens to have a lot of analytics talent in this country already. They acquired a number of companies in Ontario, the largest of which was in Ottawa, but a number of others as well. That's why we got that mandate. It wasn't because IBM likes Canada. It's because the skills are here. So the point of this is that if we want to get more mandates here, we need to create those skill clusters.

Mr. Joe Daniel: I'll change the subject completely now to the educational side. I was a professor at Centennial and Humber colleges. They didn't teach anything very specific; they were teaching fundamentals. The way I would summarize it was that they were teaching people to think. It's really up to the industries to train them for the specific jobs they're going after.

Do you feel it's possible to incorporate the changes that industry demands into the current educational curriculum, particularly given the pace of change, etc., that's involved in industry?

Mr. David Ticoll: We've done it. Three years ago we designed a new program called business technology management. We formed a committee of about half a dozen employers and half a dozen universities. We designed a set of learning outcomes. We convinced the universities that this was an opportunity. It was based on a lot of existing programs in business schools called management information systems. Still, it was a lead for many of them, and many of them started new ones from scratch.

We designed it in several months. Within a year, 2010, the degree was being granted by one university. It's now in 10 universities across Canada. We expect it to be in another 10 or 15 within the next couple of years.

Mr. Joe Daniel: That's all wonderful, but did it produce the types of skills that were needed by industry?

Mr. David Ticoll: Yes, it did. The graduates of these programs are all getting jobs.

Mr. Joe Daniel: Okay.

Mr. Gupta.

Mr. Karna Gupta: On the educational side, the expansion of co-op programs or similar programs is important. A big part is that the student needs to go to university, then go to work, and then come back. Often what happens is that a big part of our cohorts who are not in co-op programs go through universities or schools for three, four, or five years. By the time they come out with what they've learned, the context of the workplace has changed very dramatically. To expect the private sector to then pick up these kids and train them in the new technology that's coming out is much harder and more expensive.

The model probably needs to be slightly different. Some of this stuff is going on at Cambridge University, where they have a much more robust exchange going back and forth between universities and the private sector. There's an ongoing engagement in terms of going back and forth.

The panel has talked about different things. One is incentives to companies that will bring in students beyond co-op, through some credits, to hire them and train them and then send them back to school. That probably would create a different type of outcome from what we're facing.

We have two outcomes to this. Some kids are going through co-op. They're engaged with industry. Then a large majority of the graduates are completely detached. If you're in an engineering program, you're detached for five years.

● (1650)

Mr. Joe Daniel: From my teaching experience at Humber College, unfortunately, the sad fact was that probably fewer than 10% were Canadian students. Almost everybody else was a foreign student. Then we train, and they don't necessarily stay in the country—I put a few of them into RIM, by the way.

Let me just ask another question along the same lines, but I got the idea from that one there. Can you highlight any particular strategies within the industry to address any specific skills shortages that you can anticipate stemming from Canada's aging population? Is there any correlation like that we need to be starting to address?

Mr. Karna Gupta: I'll answer the first part of the question in terms of where the shortages are. The major one we hear, when I poll several of our members, is in the area of business analysts with a technical skill. So we have raw technical skills with no business analytics attached to them as to how they should work in a business context, and that's where the most significant gap is. That is consistent.

I could take all of my members in ITAC and go through all the president-CEOs and ask where the gaps are, and that will probably come up as number one. We know, categorically, there is a significant shortage there.

Mr. Joe Daniel: Mr. Elliott, did you want to make any comments on any of those?

Mr. Morgan Elliott: Just to echo some of the previous comments that were made and to address the first part of your question, as in all problems there's never an easy solution. It takes a whole bunch of different pieces to put it together.

If I'm able to back you up a bit, part of the problem for the ICT sector was some of the fallout from the 1990s technology bubble, when unrealistic valuations and mass unemployment in the area really scared a lot of people away—even a lot of the guidance counsellors in high schools. We need to start there. We're back into the high schools and elementary schools trying to encourage people to go into the maths and sciences, to have that background.

That's why we really believe in the co-op placements, because we find that the students who have had a co-op placement adjust more quickly. Even after spending a term or two at a business, they'll go back and maybe even change what they're learning in school to be more up to date with the skills that are needed and in demand. The great thing about a co-op is that you can make your errors and your mistakes without adversely affecting your entire career at a company.

Mr. Joe Daniel: I have one more question. We talked about seeing where the puck is going, and of course, RIM is investing $1.5 billion in research. In the land of the blind, you're the one-eyed monster there.

Can you tell us where you think the technology industry is going?

Mr. Morgan Elliott: Are you looking to invest money?

Mr. Joe Daniel: It could be.

Mr. Morgan Elliott: If you look at the smart phone industry overall, it's still a tiny portion of the traditional clamshell phone that you think of.

A lot of areas like Africa and the Middle East are still on 2G technology. For a lot of these people, a smart phone is their first encounter with a computer. This is a computing device for them; it's not only a phone. They're using it for all sorts of different uses that we never thought of when we created the BlackBerry.

For example, if you talk to the ambassador of South Africa, they use the BlackBerry—and this is not a commercial for RIM, by any means—to tackle attendance programs. There are police forces in the UK that are using it so that people can spend more time on the beat. They can check records. They can check warrants. We're seeing all sorts of different things in that area.

Where technology is going in the smart phone industry—things like near field communication, your mobile wallet, your ID, your credentials—that's going to be your one computing device.

There are already companies in Europe that instead of.... I know MPs have a little pin, but for the rest of us who have ID cards, the ID card won't be around your neck anymore, it'll be on your hip. Everything that you can think of that you're using in your wallet now will be in your smart phone. That's where it's going in the short term.

● (1655)

Mr. Joe Daniel: Are there any very brief comments from the other two, since I've run out of time?

Mr. David Ticoll: It will be smart everything. Everything will have smarts inside it.

Mr. Karna Gupta: I will make a comment on where technology's going in terms of what we hear, so that you have the same sense of what we're hearing from our members.

There are three things that come to the table all the time when we talk technology now. One is that everything is mobile, including your health care, your patient records, doctor's records. Everything should be mobile.

Second, they all talk about everything being about big data. This means that if you look at a power corporation with a smart grid and everything else, the amount of data that will be transferred about you, your house, and your consumption is tremendous. So there is a huge demand for analytics in this space, and how to deal with it. Big data is the second big thing that's unfolding.

Third, government is evolving and it's all about cloud computing. Government is involved in large discussions with shared services, and how you deal with that. So everything is in the cloud—private cloud, public cloud, hybrid cloud. It is all cloud.

So if you look at it from the point of technical needs, skills, and talent, those are the things we should talk about in the schools and universities, in terms of why these things are important, how you use them, and what it means career-wise.

Mr. David Ticoll: May I add one more thing?

The Chair: Go ahead.

Mr. David Ticoll: I was talking about this concept of a mashup, and what we are seeing now is that it's not just the kinds of things that we do in the ICT sector, as Morgan and Karna talked about. In every other field, technology will be integral to what happens in that field.

You'll have smart hospital beds. Just in health care there are probably a half-dozen different things going on—bioinformatics, health informatics, what have you.

You can apply the same thing to every other sector, whether it's in the arts, or in various natural sciences, or engineering. So what is feeding the cloud, the smart grid, or the analytics that Karna is talking about are processors, which you're going to have everywhere—in your power networks, in your plumbing networks, and your municipal sewage systems—that are monitoring everything that's going on. So the people who do those kinds of things are going to need to understand the technology of IT and the technology of that specific field.

To come back to your first question, we are seeing a lot of innovation in post-secondary programs to offer that kind of education, and we need more of it.

The Chair: Thank you very much. You certainly extended that into a good lengthy round.

We'll go to Mr. Cuzner.

Mr. Rodger Cuzner (Cape Breton—Canso, Lib.): Thank you, Mr. Chair.

Thanks to the three witnesses for being here and sharing their insights. It's pretty good for three geeks.

Voices: Oh, oh!

Mr. Rodger Cuzner: The Ontario tax credit for the apprenticeships, for the co-ops, has been mentioned in past testimony. What you're advocating is that you believe a federal credit would also serve us well.

Could we get comments from the three of you? It came from Morgan, but could you share the insight? Is it a pretty easy tool to deal with from your perspective?

Mr. Morgan Elliott: Sure. It's an investment in people's futures. In Ontario, the program is $3,000 per credit for co-op. We pay a fairly substantial salary of anywhere between $45,000 and $60,000 for a co-op student, which is a heck of a lot better than I made when I graduated from school. So the government is recouping its money.

Mr. Karna Gupta: I have the same comment. When I speak to the industry, to RIM and others, the input is that they all would like to see some sort of a program delivered whereby they can go out, get students in, and get some credit for bringing them in, either for the summer term or for two terms, and then sending them back to school.

Mr. David Ticoll: Yes, I strongly agree with this. There are other things we could do as well around sharing best practices and creating an infrastructure for sharing best practices in various kinds of experiential learning, including co-op, but also others. The second would be to help post-secondary institutions with creating their infrastructures to support the co-op experience, because academically there are a lot of national leaders doing this. I don't think this needs to cost money so much as to just provide a vehicle for the sharing of knowledge. Greasing the wheels in those kinds of ways would also help a lot.

● (1700)

Mr. Rodger Cuzner: Yes.

The other thing you've spoken about are the LMOs. Where it gets bogged down is that there's an absence of a vernacular, really, I guess. You were saying that it has to be more granular for it to be more effective. But is there any kind of movement afoot now within the industry to bring that stuff together?

Mr. David Ticoll: If you're talking about the labour market information, labour market research—

Mr. Rodger Cuzner: Yes, exactly.

Mr. David Ticoll: Well, the government really needs to make the first move on this—

Mr. Rodger Cuzner: Okay.

Mr. David Ticoll: —because industry, the standards.... First of all, the core data comes out of the census and comes out of StatsCan monthly, quarterly, and in annual reports and so on. It drives a lot of government-funded research, which is the most commonly available research, and again, is the work that happens most frequently.

By the way, those same extremely narrow national occupational classifications also tend to be replicated in a lot of other research. There was a study done in Toronto by the Toronto Region Research Alliance on the Toronto labour market. They felt they had to use those classifications because they are the standard.

Even though that wasn't federally funded, it is the standard. So we need to tackle that problem at the national level, because it in fact goes back not just to StatsCan, but also to international standards for these things.

Mr. Rodger Cuzner: You see governments playing a lead role there...?

Mr. David Ticoll: Well, lead or facilitating, what have you, but it needs to issue a signal that we want to address this problem.

Mr. Rodger Cuzner: Okay.

Morgan, it was in 2003 or 2004 that you guys announced your expansion and the establishment of the facility in Nova Scotia. Could you give me an overview of that?

I would think that part of the impetus would be trying to establish places close to the rich number of post-secondary institutions within that community. How are you doing with recruiting talent from those institutions? What types of lines in do you have there or what types of working relationships do you have with those institutions? Could you give me an overview of that initiative?

Mr. Morgan Elliott: Sure. Our facility in Bedford, just outside of Halifax, has been an overwhelming success, and not only because of the research institutions like Saint Mary's and Dalhousie and others in the area. We find that retention rates are excellent in Nova Scotia. In fact, they're far below some of the industry norms....

As for the type of staff we've been hiring, they're definitely in the customer support organization area. They're supporting our clients on Wall Street, including some of the big banks and some of the big government institutions as well.

It has been a combination of the low turnover and high retention rates and the fact that we can get access to that skilled talent. Access to talent was one of the reasons why we located in Nova Scotia. It's the only reason we located there.

Mr. Rodger Cuzner: And there's been very limited imported talent out of that facility, or...?

Mr. Morgan Elliott: Yes. All the talent has been from Nova Scotia, from the Maritimes, from New Brunswick and other areas.

Mr. Rodger Cuzner: Great.

Going back to Joe's question on the course that you guys have put together, you've seen some success in that. That makes absolute sense, training people for...and you would hope that it would be flexible enough and nimble enough to....

What types of opportunities are there? Do you go back and review that annually? Is it the same program, or is it driven more, as Joe had indicated, on the principles of learning and that type of stuff, or is it specific stuff? In your sector it's all just so rapidly changing. What's new this month is redundant six months down the road.

How do you stay current with the curriculum?

● (1705)

Mr. David Ticoll: We're very deliberate about that.

We designed this course—to use educational learning lingo—with a set of learning outcomes. These are basically the things a graduate of this program should know after they've completed the program, the minimum set of things they need to know. If you take the BTM, the business technology program, anywhere in Canada, you can be sure that you'll get those things.

But that's only part of the overall undergraduate curriculum. That's just the learning outcomes. We're not prescribing the structure of the courses or how the courses get taught. In fact, we're encouraging the different universities to offer different versions of it, to specialize in one thing or another. One university might specialize in entrepreneurship. Another one might specialize in deep programming. Another one might specialize in business operations, management design, or a very specific area such as retail.

We're encouraging that innovation in the programs within the context of an overall set of core assumptions of what the program's about.

Mr. Rodger Cuzner: So in the jobs that are forthcoming, in the jobs that we're going to be looking at filling in the future, what percentage of those would be Canadian graduates as opposed to...? Obviously for a number of them you're looking for foreign talent, but do you have any kind of indication as to what the percentage would be?

Mr. David Ticoll: That's a good question. That's another good topic for this revised labour market information research that we need.

Mr. Morgan Elliott: I can tell you, just from the Waterloo example, that the answer would be less than 100%. We have Microsoft. Google has set up shop. We have a number of U.S. firms that are stealing the talent away and moving them right to Silicon Valley upon graduation.

Mr. Karna Gupta: As well, 40% of our graduating class is not indigenous to Canada. They're foreign students. Current policy has seen a lot of them in fact go back after. The issue is how to create a model where a lot of them will stay here for four or five years, work, and contribute towards the economy.

Mr. David Ticoll: Yes, there are two parts here: the policies don't encourage them to stay here, and also it's more attractive to go home than it might have been 15 years ago.

Mr. Rodger Cuzner: Just as far as remuneration, or...?

Mr. David Ticoll: Everything.

Mr. Rodger Cuzner: Everything, yes.

How are we doing for time?

The Chair: If you have another question, go ahead.

Mr. Rodger Cuzner: Yes.

The Chair: But make it short.

Voices: Oh, oh!

Mr. Rodger Cuzner: No, that's okay. I'll let that go.

Thank you very much.

The Chair: Mr. Mayes.

Mr. Colin Mayes (Okanagan—Shuswap, CPC): Thank you, Chair.

Thank you to the witnesses for being here today.

It was interesting; in the *Post* this morning there was an article that talked about how engineers are still in demand at tech start-ups, but so are designers.

The interesting thing to me was the statement made here:

> The new breed of "user experience" designers—part sketch artist, part programmer, with a dash of behavioural scientist thrown in—are some of the most sought after employees in technology.

Really this is about identifying the gift, identifying the skill. I'm just wondering, first, how you do that.

With that, your fifth recommendation here is to launch an "own the podium" style of campaign for digital economy skills. We identified the gifts of the athletes, or the sports department did, and then they funded them. You just can't give the money to everyone.

I just wondered how you could put that model together. Does your industry identify gifted students, whether coming up through the high school or university stage? And then how do you deal with that?

Mr. David Ticoll: If we're going to really transform the career choices young people make in this field, we need to make a sustained investment as a country. We did some work over the past six months, as I talked about in my presentation, but it's the tip of the iceberg of what needs to be done. We had some government funding for this, but it is over now and we hope we can get some more. We are supported by HRSDC, among others, Ontario, and Quebec, but it's a big enterprise.

You gave the example of the digital designer. That's another example of a mashed-up career. There's a huge variety of them. So the approach we think we should take—and it has worked for us with these 10,000 kids we work with—is that it's really up to your imagination. Take whatever you imagine you can do and hybridize it in some way with technology.

We need those kinds of added incentive programs—scholarships, identification of stars and leaders. If you have an "own the podium" type of campaign, you bring in smarter marketing designer minds than mine to do that kind of imaginative work you're talking about. That certainly needs to be a part of it.

● (1710)

Mr. Colin Mayes: I guess you're asking government to participate, but the benefactor of the people you get is the industry. How do you see that working back to...?

Mr. David Ticoll: It creates a more robust economy for the whole country. It increases employment. It increases national competitiveness. Industry is certainly prepared to pay and is playing its part financially. The work we've done has all been co-funded. The majority of the spending on the work we've done has been from industry.

The "own the podium" campaign was the same. It was a public-private partnership. That's what we need. If industry is not at the table, it's not going to work. It won't have credibility. We won't get the real stories about what those careers really are. We have 100 volunteers from industry, most of them from our membership, who we're sending into the schools. They're telling their own stories. It's that gritty reality that brings it to life. If you're going to do that, you need to have some skin in the game financially, obviously.

We've demonstrated that we can do this. We need a signal now from the public system. One of the biggest problems we have—and I know this is outside of the federal jurisdiction and we have to find a way to quarterback this—is that a lot of teachers and guidance counsellors are still in the old narrative. They don't understand how this field has changed. We can't do it by sending volunteers into schools. We need to get it right into the high school curriculum in all subjects, not just guidance.

There are many layers to this. As we like to say in the tech industry, we need to build an ecosystem around this sort of game plan for national global leadership in the knowledge economy.

Mr. Colin Mayes: There is the training and getting the labour resources, but there is also what I call a business landscape or a corporate landscape that the government helps to build. We have brought the corporate taxes down to the lowest in the G-7. We've kept personal income taxes down. We're trying to set a climate here for investment and retaining people.

What do you see as the number one issue that causes the leakage of those leaving Canada and going to other opportunities, and what can be done? Are you not paying enough to those people, or does this country not offer enough advantages tax-wise?

Mr. Morgan Elliott: Having experienced working in different countries, Canada is a great place to do business. The tax rate, while it could always be lower, is also very advantageous.

Some of the changes made regarding R and D, especially as that relates to large corporations, was a little bit different in terms of what was in the budget. We were a little bit surprised with what we saw in there, but in terms of what makes people leave Canada or leave different areas, again, it's one of those multi-faceted questions around which you need the ecosystem in order to solve it.

Karna mentioned earlier in his comments that, just like in movies or music, there are rock star technologists that people will actually follow into different areas, so if you can get that one person interested in your technology.... For example, we have a gentleman at RIM who was responsible for writing GSM. That's one of the world's global standards. He is an American, and we brought him up to Waterloo. He has 400 or 500 people that he recruited from all over the world, who wanted to work with him because he was the world leader. So that's one of the reasons as well.

What you may find, surprisingly, is that wages aren't always the most motivating factor for the younger generation coming up. They want to be part of something and they want to be creating something. They want to be seen as adding value.

There is not one easy solution. It's creating that ecosystem from being in the schools, showing kids what they could do with maths and sciences, and in other areas too. We don't just need maths and sciences. We need people with global business skills as well that might lie outside of engineering skills. That's another area that I haven't mentioned, which is a key skill gap that we always look for. Then you move into the universities and the co-ops.

So as David said, it's an ecosystem that you need to solve the problem. But some of the underlying things that you might think cause people to move don't necessarily hold true in the ICT sector, which is different.

● (1715)

Mr. Colin Mayes: Because of your sector and the fact that it's moving, would you say its primary employees are younger, and you're not going to be affected by the baby boomers going through or have labour shortages because of the aging population?

Mr. Morgan Elliott: I'm an old guy at RIM. There is some element of that.

Mr. Colin Mayes: That's what I meant. You are not seeing those stresses that other sectors are seeing because of the aging population, are you?

Mr. Karna Gupta: It is extremely critical that we pay attention to what I would label as top talent. The technology workforce is highly mobile and the separation of economics between a developing country and a developed country is slowly disappearing for that class of people. They can migrate just about anywhere.

If you go back to India, today they are not only hiring low-skilled people, they actually come to Boston to hire people from Harvard. The top talent is highly mobile, and unless we find a way to tackle that piece of it so that we attract the top talent here, in a world market, it is very hard to build an ecosystem that is going to sustain and grow over time. We're constantly playing catch-up, and young people tend to gravitate toward those few people who are world renowned.

Our kids try to go to good schools, like MIT. Why do we send them there, other than the brand name? It is because they will bump into the 14 Nobel laureates who are teaching there. That is sometimes the attraction, and in the technology sector, this is very critical. To draw the younger talent you must have the top talent available. Without that, the young kids are not going to come.

As Morgan mentioned, when half of the graduating class coming out of Waterloo ends up in Silicon Valley with whichever company takes them, how many do you think come back?

The Chair: Thank you, Mr. Mayes. Your time is up.

We will conclude with the splitting of time between Mr. Cleary and Mr. Lapointe. Go ahead. You can split it however you wish, and we'll conclude when you are both done, but no later than 5:30.

Mr. Ryan Cleary (St. John's South—Mount Pearl, NDP): Thank you, Mr. Chair, and thank you to the witnesses.

I have a question for you, Mr. Ticoll.

Your quote in your presentation is that tech careers now are very different from the boring, geeky images of yesterday. I'm just wondering what adjectives you'd use today to describe the industry, and to describe people who work in the industry.

You can all have a hand in this.

If you asked my 16-year-old son, he'd probably say, “They're sick, Dad”, but you could take that in two ways. What adjectives would you use?

This will lead into my second question.

Mr. David Ticoll: Coming back to our research, we surveyed these high school students and we found a correlation between the following terms and those who were interested in a career in this field. There was a high correlation and this is in rank order. Those kids who tended to think that this field is interesting, fun, cool, creative, and social are the ones who are most likely to think they're going to want to pursue a career in this field.

We would argue that the kinds of careers we're talking about have those attributes, but a lot of people don't know that.

So that would be the package of descriptors for today's ICT career: interesting, fun, cool, creative, and social. What I like about that is that cool is only number three, because cool has to do with what other people think of you, in a way. Interesting and fun have to do with what you are getting out of it.

● (1720)

Mr. Ryan Cleary: I think "cool" would definitely resonate with my kids.

In terms of image makeover, in terms of spreading the new narrative, as you describe it, and taking that narrative nationally and building this ecosystem that you talk about, that's going to take money and someone would have to spearhead it.

When you talk about building an ecosystem in schools, that's an advertising campaign. There would be all kinds of different layers to that onion, but who takes the lead? Who spearheads that?

Mr. David Ticoll: It needs to be jointly done by a number of layers of government and a number of layers of industry. If you look at what we've done, we've already built what might be a nucleus for that, because we are a multi-stakeholder partnership, and in fact Morgan and Karna represent two of our partners. So you need to extend that even further, and government plays a role in our partnership as well, both as a funder and in some cases also as a member, because government is a major employer of IT people as well. So we have government members as members who are out there sending representatives into schools.

So yes, you need to form an initial steering committee of all those participants. They certainly do need to be prepared to put sponsorship or funding into it or whatever. Industry might call it sponsorship. I don't think you'd want to use that term in government. You'd probably call it contribution agreement or something like that. You'd need to have clear metrics, objectives, tight management, and all those other things you need to do in an initiative of this nature, but it also needs to be visionary.

Mr. Ryan Cleary: Has that coordinated approach begun yet?

Mr. David Ticoll: No. As I say, what we've done is a nucleus of that but it's a kind of start-up version of it as opposed to a top-down organized version of it, which we believe needs to be the next step.

By the way, this idea wasn't our idea. It was that of another industry person who was involved with a piece of Industry Canada research that will be announced tomorrow.

Mr. Ryan Cleary: Thank you.

Mr. François Lapointe (Montmagny—L'Islet—Kamouraska—Rivière-du-Loup, NDP): Thanks to BlackBerry we can share our time in an equal way. Thank you, Mr. Elliott.

Mr. Ryan Cleary: That was the BlackBerry beeping.

Mr. François Lapointe: Yes, but since it's a BlackBerry, I know you'll agree it's not a problem.

Just a quick point in English and then I'll switch back to French, please.

You didn't have time in your conversation with Mr. Butt. You were about to say that there's a process that, two years ago, took three weeks, usually, and it's slowing down. You didn't have time to explain. Could you tell us what it was?

Mr. Morgan Elliott: To be honest with you, I don't know why it has slowed down.

Mr. François Lapointe: LMOs?

Mr. Morgan Elliott: Yes. Labour market opinions, where we need to get someone in, a temporary foreign worker, relatively quickly to work on a project. In fact, we've tried to keep on most of the LMOs we've hired and have them become Canadian citizens afterwards because of their high scholastic talent. A while ago it used to take three to four weeks to get an application processed and now we're looking at 16 to 18 weeks.

Mr. François Lapointe: Sixteen weeks? Do you have any clue why it has tripled like that?

Mr. Morgan Elliott: No.

Mr. François Lapointe: Okay, thank you.

[*Translation*]

I am going to continue in French.

For all sorts of reasons, Research in Motion has had some difficulties over the past year. I even heard some people say that the main problem is that the product is too good, and people keep it too long—it is that good.

But let's go back to today's topic. Is the difficulty of finding qualified personnel a part of current problems? If so, to what extent does that contribute to Research in Motion's current problems?

[*English*]

Mr. Morgan Elliott: You make a very good point. It's one of the problems we're having. We're finding that people aren't upgrading their devices quite quickly enough. They're holding on to them for too long. It's a good problem and it's a bad problem, as well.

We've definitely had some challenges in the past. It just goes to show the highly competitive nature of the tech industry in the current climate.

The smart phone industry is very similar to politics in that you can't believe all the news you read every day. Not necessarily all the stories are true.

We've had some problems in the U.S. By the way, the U.S. is only a small portion of the world's smart phone industry, but unfortunately it has about 80% of the public opinion globally in terms of where the industry is going.

There are places, such as Indonesia, where later on this year probably we'll have 10 million subscribers. In India we're growing by leaps and bounds. In fact, over 60% of our sales are overseas.

The problems we have haven't been a barrier whatsoever in terms of attracting talent. We're in the same predicament that a number of companies in the Waterloo region are facing. We currently have over 3,000 tech jobs that we're trying to fill. That plays a factor in terms of what's going to happen. Am I still going to have a job? That's human nature. We haven't found that it has been an issue in terms of attracting talent.

It's highly coincidental, but I received an email that we have a new program inside RIM where we're offering money for new employees that we can recruit, as employees are ready to hire people. That's good.

● (1725)

[*Translation*]

Mr. François Lapointe: There is a program in my area, in La Pocatière—Rivière-du-Loup, that works very well in small towns. There are long-term development agreements between certain local businesses and local colleges—CEGEPs, as we call them in Quebec—for young people between 16 and 19 years of age. These agreements work very well because they are small scale agreements. For instance, if Bombardier works on the creation of a laser robot, the tests are carried out in part by CEGEP students who are studying computer science and IT technology.

This works very well where there is integration. In this case, young people benefit from the program, because they want to live in the region. In bigger centres, in companies like Research in Motion or university departments, would this type of small scale but very effective agreements be something that could be considered? Are there such programs already? Is enough being done? Could this be a possible solution?

[*English*]

Mr. Karna Gupta: Maybe I'll answer the question on a slightly different slant.

I know about the program you're talking about in CEGEP on Bombardier. It is important to have those things largely because the technology sector tends to grow by clusters. There's no such thing as a national cluster.

The Waterloo region is a cluster for mobile devices and mobile computing and applications. Montreal is for digital media. Vancouver is for digital media. Ottawa is for telecom. These clusters are important. In terms of the schools and universities and the private sector in those areas, the more they cooperate, the stronger they get and the talent pool gets built. That's how to attract other talent of a similar type to those clusters. It is important to have that. It is a program that can be done in various places. Typically they are very successful whenever they're done.

Mr. François Lapointe: How do we translate that to a bigger town with a bigger university and bigger companies?

Mr. Morgan Elliott: That's the great thing about the tech sector. The size of a community doesn't matter. It's a great equalizer.

If you look at Kitchener—Waterloo, Waterloo, when school is in session, is only about 120,000 people, and the whole area is a little under half a million. It's creating that system.

I would want to start even earlier than the 16- to 18-year-olds.

We get a lot of people who come to the Waterloo region and ask what's in the water, what's the secret to success in terms of everything we're doing. It's that everyone works together, from industry to colleges. Conestoga College, the University of Waterloo, Wilfrid Laurier University, we're all working together. It's not what issues we're facing. It's a different conversation. The conversation is about how to get around an issue. I think it's one of mindset and working together. We'll work at one issue, maybe two issues. Once we get those done, we move on to the next one. We're working together cooperatively.

In terms of a program you mentioned, where Bombardier comes in, we go into the schools. We think it's a great idea in terms of getting new ideas from the students and showing them what they can do with the technology. The size of the community, if that's your question, doesn't matter. The tech field is a great equalizer in terms of not only large urban areas but also rural and remote areas.

The Chair: That's a good point.

Thank you, gentlemen, for a very interesting presentation. We appreciate it very much.

The meeting is adjourned.

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