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Thursday, December 6, 2007

Chair

Mr. James Rajotte

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● (0905)

[*English*]

The Chair (Mr. James Rajotte (Edmonton—Leduc, CPC)): Order.

I'll ask the members and the witnesses to take their seats, please. I understand one of the witnesses will be joining us. He's currently stuck in traffic.

Members, I'd like your attention at the beginning of the meeting, before I formally go into the witness part.

We had a subcommittee meeting earlier this week, and I have the report from that subcommittee, but I would like to do that at the end of the meeting. We're going to allot the last 15 minutes for that. The committee will go in camera, and we can then formally adopt or amend what the subcommittee decided. I'd like the members, at least one representative from each party and the independents, to stay until the end of the meeting. We'll do that at 10:45, or even earlier, if we can.

This is the tenth meeting of the Standing Committee on Industry, Science and Technology. The orders today, pursuant to Standing Order 108(2), are to continue our study of the review of Canada's service sector.

We have with us today three witnesses. We have, first of all, from IBM Canada, Mr. Matthew Ivis, the governmental programs executive; and secondly, from Microsoft Canada Corporation, Mr. Marc Seaman, who is the national director of corporate and public affairs. We will be joined later by Mr. Bernard Courtois, the president and CEO of the Information Technology Association of Canada.

Welcome, Mr. Ivis and Mr. Seaman. You have up to ten minutes for an opening statement. You don't have to use all that time. And then we will go to questions and comments from members.

Mr. Ivis, we'll start with you.

Mr. Matthew Ivis (Governmental Programs Executive, IBM Canada): Good morning, and thank you for the opportunity to address the committee on this important topic.

IBM Canada strongly supports the committee's decision to undertake a study on the Canadian services sector. Services are a very significant but often overlooked segment of our economy. Our hope is that the study emulates the excellent work undertaken by this committee in regard to the challenges facing the Canadian manufacturing sector.

IBM has a significant manufacturing presence in Canada. Bromont, Quebec, is home to our microprocessor packaging and testing facility, employing 2,800 people. This world-class, high-tech manufacturing facility competes on a global basis for product mandates both from within and outside IBM.

I wanted to begin by underscoring that we strongly support the recommendations you provided in regard to the manufacturing sector. The report and its recommendations were comprehensive and balanced; I would like to urge you to bring the same approach to your study of the services sector, because services are crucial to the Canadian economy in terms of employment and competitiveness and hold tremendous potential in terms of increased trade.

The Canadian services sector accounts for two-thirds of all economic activity and three-quarters of employment. Moving forward, we expect to see these numbers increase as we have in other advanced economies. Services increasingly form intermediate inputs to the production process for goods and other services. In fact, according to the OECD, services now account for a full 25% of the value-added manufacturing.

As such, in today's economy a firm's productivity and competitiveness rely not only on its employees and capital equipment, but also on the services it purchases. A dynamic, competitive services sector can, therefore, enhance the competitiveness of the entire economy.

Moreover, services offer tremendous potential in terms of trade. Canada, with its open economy and highly educated and diverse population, is well positioned to capitalize on the increased trade and services being facilitated by information and communication technologies. Unfortunately, as the Conference Board of Canada recently noted, the high services profile of our economy is not being fully translated into international trade.

Our services exports are only 12.8% of our total exports, considerably below the 2004 world average of 19.6% and the U.S. share of just over 29%. Our share is also well below the share of other economies similar to Canada's, such as Australia's, which sits at 22%. In short, our economy has become substantially more services-based, but our trade has not.

I think this is a significant challenge that we collectively must examine and address, because the opportunity really is enormous. As developing economies advance and mature, their appetite for services will only increase. We are well positioned to take advantage of this demand, but we need to make sure the Canadian services sector is poised to exploit the opportunity. We must make sure that free trade agreements such as the WTO Doha development round include strong service sector commitments.

Unfortunately, despite the size and importance of the service sector, it is often characterized as a low-value, low-wage sector. While a wide variety of jobs exist in the services sector, I think it would be a mistake to generalize. The services sector includes many of the knowledge-based industries that offer the highest-paid jobs. For example, think of financial, education, health, government, business and professional services sectors. It is in these areas that we find our highly skilled doctors, lawyers, accountants, investment bankers, engineers and, lest I forget, IT professionals.

For these reasons, I commend the initiative of this committee in examining the Canadian services sector. I think there's a great opportunity to better understand the needs and dynamics of the sector and to make it more competitive and efficient moving forward.

For example, from our perspective the skills required in the services economy are different from those in the industrial economy. In a services-based industry, human capital is a major source of competitive advantage. We require more multidisciplinary skill sets—people who possess technology skills as well as business, legal, and societal acumen.

Also, our research and development activity should better reflect the composition of the economy. This means more services-based R and D, because despite the size of the services economy, very little is known about driving services innovation. In fact, our scientific understanding of modern services, services systems, and service architectures in general is rudimentary.

● (0910)

And finally, our public policy specifically in regard to innovation and trade must focus more attention and place a higher priority on the services sector.

I began by outlining that IBM Canada has significant manufacturing operations in Canada, and I'll end by relaying that we're also a major Canadian services provider. In fact, over 50% of IBM Canada's 19,500 employees are service professionals. They are business, technology, and management consultants.

If you add to this our software developers, you'll have another 3,000 highly skilled IBM Canada employees in the frame, as well as the destination for the majority of the $360 million that we invested in R and D last year and the $3 billion we've invested in research and development in Canada over the last decade.

With this, I'll conclude by thanking the committee for undertaking this study. It's an important subject that I think is very much worthy of your attention.

Thank you.

The Chair: Thank you very much, Mr. Ivis.

Now we'll go to Mr. Seaman, please.

[*Translation*]

Mr. Marc Seaman (National Director, Corporate and Public Affairs, Microsoft Canada Co.): Good morning, everyone. I would like to thank you for inviting me to speak to you this morning. I am going to make my remarks in English, but I will be able to answer questions in French or English.

[*English*]

Thank you again for having Microsoft at the committee. It's not often that Microsoft and IBM sit together. We're fierce competitors, but we sit together in the good of the industry, and we are now joined by our colleague Bernard Courtois, who hopefully will provide a broad context of the industry.

The IT sector—and Bernard might be speaking to this—is about a $40-billion industry in Canada. It's a growing industry, and $25 billion of that is software and services. The software industry, which Microsoft predominantly works within, is a $6-billion specific industry, and it is the number-one driver behind approximately 23,000 IT companies across Canada that deliver services through software. It supports approximately 58.6% of overall industry employment and it creates about $25 billion in annual taxes.

The reason we're suggesting the importance of software within the broad IT ecosystem and within the services is that there's a moving trend towards what's called “software and services”, and a merging of that. The services on the Internet are definitely a major transformation of our industry. Service, unfortunately, is a word used in a lot of contexts, but it really is transforming the innovation happening around services.

First is in the area of software as a service, which is about one-to-many delivery of software over the Internet. This is fundamentally changing the way services and software are delivered to individuals and to businesses.

A second area is the service orientation, which is the development approach that lets us compose multiple services. It shows up in the lightweight mash-ups that you see on the web today, all the way up to the more heavyweight services-oriented architecture.

A third area is the new innovation of Web 2.0. Web 2.0 is really transforming...it's where the Googles, the Yahoos, Microsoft, and others are working towards delivering software directly to consumers, directly to businesses, through the Internet. It is the way of the future, where services will be delivered online. Services will be supported through a very seamless infrastructure so the software component is the industry driver behind that.

Most of the industry seems to be on the same path to software-plus services. Companies like IBM are certainly going that route, as well as some of the other organizations we've talked about. The importance, though, when we move towards software and services is that it's really about a knowledge economy. Where Canada is struggling with respect to that is in the area of graduating our numbers of students in math and computer sciences. I think Bernard may speak to that, but my ITAC report indicates there will be 25,000 IT jobs in the next year, and only 8,000 graduates from Canada. This is not unique to just Canada. We're facing the same challenges in the United States as an organization. Hence, many of you may have heard of Microsoft opening a software development centre in British Columbia. The majority of our people from that centre—it's recruiting the brightest from around the world—will come from overseas, primarily from India and China.

I think the reason I put that in the context of where software and services are is that the transformation of the industry is moving towards software and services combined, and delivering the services and software through online experience. The software development side and the impact it has and the ability to transform on a global perspective and to have this centred in Canada and having a stronger regimen around that is a great opportunity right now for this country, based on some of our immigration policies, some of our infrastructure issues, and so forth.

One of the aspects we certainly want to bring to bear to the committee, and which I know the government is paying attention to, is the lack of a strong IP regime in Canada and the protection of IP, because as you're working towards software development, it's important to have IP supporting that.

The other one, as Matthew pointed out and as we just talked about, is the skills shortage in the area specifically of software development and computer sciences.

So we certainly look forward to working with the government on shaping a greater strategy for IP protection and for software development and working with the post-secondary institutions towards that end.

● (0915)

Lastly, I think that the onshoring of people is an important one. We've seen a lot of companies, like Microsoft, having an option of either offshoring the software development, or bringing it to North America. With the challenges in the United States with immigration policies, I think it's a great opportunity for Canada for the onshoring, and for the knowledge-based industry to really take hold here in this country.

I talk about that in the context that it is a $1 trillion industry globally. The software and services industry provides over $900 billion in taxes annually globally. If some of that part of the context can be developed here in Canada, I think it's a great opportunity for companies like ours and a country like ours.

Thank you.

● (0920)

The Chair: Thank you very much, Mr. Seaman.

Welcome to the committee, Mr. Courtois. You now have up to ten minutes for an opening statement and then we'll go to questions and comments by members.

Mr. Bernard Courtois (President and Chief Executive Officer, Information Technology Association of Canada): Thank you, Mr. Chairman.

[*Translation*]

I am going to make my comments in English, but then I will be pleased to answer questions in French or English.

[*English*]

I want to thank the committee for beginning this process of looking at the service industry. I think it's very timely and very welcome.

Our perspective for the information and communication technology industry is a bit unique, because we have the perspective of what's happening in our own sector and a unique perspective on what's happening in the economy as a whole. In our industry, we have about 600,000 jobs at the present time, but in addition to that, there are about 500,000 information and communications technology workers who work in the rest of the economy and drive our productivity in the economy.

There are numerous macroeconomic studies that show that, today, productivity in a country's economy comes from deployment of information and communications technology. StatsCan just published another study yesterday, on a microeconomic basis, studying the performance of firms that had used ICT versus those that had not, and the studies demonstrate superior performance. So we see technology spreading throughout the economy and being necessary for the productivity of businesses, as well as public services, and we have witnessed the shift of the economy from one of manufacturing of products and extraction of natural resources to a services economy, and that's also true in our own segment.

In ICT, until about the year 2000, the revenues from manufacturing, services, and wholesale were proceeding at about the same pace. Indeed, manufacturing actually peaked and was growing faster than the others until that time, although employment was already beginning at that time to exceed in the services sector what it was in the manufacturing sector.

Since the year 2000, there has been a divergence, with services really driving the entire growth in our industry, and that's probably a sign of what's happening in the economy generally. The result has been that even though on the manufacturing side we've had a dip in revenues and employment, on both counts, both revenues and employment, our industry has continued to outpace the growth of the economy. We find ourselves hiring and employing more people today—and that has been true now for a couple of years—than at our peak, the peak of the bubble.

So our industry, like our economy, is shifting to services. One of the ways I can illustrate that is that the microelectronics industry, which makes the chips that go into all kinds of products nowadays, has shifted from companies or operations that are completely integrated, down to fabricating their own chips. Other than the plants in Bromont, in Canada, there aren't too many of those left. Most of the work now is for fabricationless semiconductor or microelectronics companies, and even chipless, where the work is essentially design and marketing, and so on, and not the fabrication of the actual product.

Our industry, like the rest of the economy, is shifting not only to a services economy but to a knowledge-based economy. We all know that. The knowledge-based economy is subject to the same forces as the manufacturing part of the economy and many other sectors, with the forces of globalization and the pressure from the drop in the U.S. dollar. Many other countries tried to go for the key jobs in this area. Our future as a developed economy, with an advanced system of education, a high quality of life, and being closest to what is still the richest market in the world is going to be based on knowledge and on leadership.

We will not succeed by being me-too. We can't compete on cost with countries like India or China, which graduate more engineers or PhDs every year than we have in our entire base. We can only compete by picking the leading-edge things where we can be faster or closer to the market and better with the new thing that will succeed in the marketplace.

As I said, we're subject to the same challenges as other sectors, and I think it's extremely timely for this committee to look at that, because these jobs are our future. We should pursue our advantages with intensity and tackle the challenges we have. We have talent challenges, as Mark mentioned.

● (0925)

We also have challenges for our entire R and D sector, which is really at the hub of the entire ecosystem on which our knowledge economy is based. So we are very happy the government is reviewing the SR&ED tax credit at the present time, because that program, as it turns out, simply does not count for many of our major investors in labs when they're making their investment decisions. We need to have all of those credits become refundable. At the moment they're only refundable for a small portion of smaller companies financed in a certain way. I would compare that with saying we want to attract auto plants in Canada, but we will put all our efforts on small plants and we won't try as hard for big plants, or our program won't work for big plants and we're not going to tackle those.

Those are the kinds of issues our industry and the knowledge economy face in Canada.

I thank you, Mr. Chairman, and I would be happy to continue the discussion.

The Chair: Thank you very much, Mr. Courtois.

I thank all of you for your presentations. There's a lot here to discuss and question.

We will start with Mr. McTeague, for six minutes, please.

Hon. Dan McTeague (Pickering—Scarborough East, Lib.): Thank you.

[*Translation*]

Mr. Courtois, I would like to come back to where you left off. You were discussing the knowledge economy.

[*English*]

I want to find out your perspective on what the greatest challenges are for Canada continuing to advance in the area of new technologies, cutting-edge technologies, and enhancing the knowledge-based economy. I think Mr. Seaman also may have referenced protecting intellectual property. Do you see counterfeiting and issues of piracy as problems to the further development of these cutting-edge technologies that are going to sustain your industries?

Mr. Bernard Courtois: Yes, as a group at ITAC, when we look at the competitiveness of our sector and there are various subsectors wanting to decide who they will measure themselves against in aiming for leadership, and we canvass them about the kinds of things they look at when they decide to invest or to put a lab or an operation in a particular country, the solidity of the intellectual property regime is one of the elements they look at.

In Canada we have an intellectual property regime that is very good in some aspects, being more balanced and better than these regimes in many other places, but it is weak in the protection against counterfeiting. We are an industry that is changing extremely fast in terms of business models, new markets, and new offerings to consumers. Those markets involve some people who say, well, I'm going to almost give the product away and get ad revenues; or some artist is saying, I'll have people pay what they want for my music.

But the fact is that unless the intellectual property regime protects the rights of those who want to protect their rights, then we cut off a whole series of business models. While the marketplace is going to sort out what works and what doesn't and what is best for consumers, the base has to be there so that those who want to protect their rights can protect them.

Hon. Dan McTeague: Monsieur Courtois, thank you.

I'd like to hear from Mr. Seaman and Mr. Ivis, because I think both of them may have referenced this as well. I want to get an idea of how serious the situation is from their perspectives as well.

Mr. Marc Seaman: Mr. Chair, Canada has one of the highest piracy rates in the western hemisphere. Our piracy rate is approximately 33%—and this is specifically of Microsoft products. Thirty-three percent of all Microsoft software in Canada is pirated or counterfeited. This compares with about 21% in the United States. Obviously it's not as significant as it is in parts of Asia, but as I mentioned, in the western hemisphere, Canada is one of the weakest nations as far as protection of those types of rights is concerned.

The loss to the economy from that is quite significant, both in taxes as well as in terms of the industrial base. It also is an impediment and discourages companies on the IP side to really want to develop products here.

Now, we understand, or are hopeful, that copyright legislation will be tabled in the coming weeks, which will help enhance that, but without strong enforcement at the borders and the ability of border guards to seize counterfeit products, it is going to.... It has to be an integrated strategy ensuring we have strong IP, anti-counterfeiting, and anti-piracy legislation, and enforcement and funding for the RCMP and the Border Services Agency to ensure we can execute against this. Because Canada, as I said, is unfortunately one of the worst nations with respect to this.

● (0930)

Hon. Dan McTeague: Thank you.

Mr. Ivis.

Mr. Matthew Ivis: Just briefly, to add to that, I would agree with my colleagues here and just say it's very important to balance incentivizing the creator as well as being able to facilitate innovation from the creation of that knowledge. Balancing those needs is imperative, and the government plays a strong role in defining that balance. It is very important to your question on driving new technologies and innovation in the marketplace.

Hon. Dan McTeague: Thank you all for that, and we look forward to the government's announcement. That can't come soon enough for some of us, certainly on this side of the table.

We look forward to strong support from your industries and from those you represent to ensure this legislation has the full understanding from the public's perspective of how the current status is unacceptable and untenable, certainly in terms of development of jobs and creating new opportunities.

Mr. Ivis, you had talked a bit about the amount of work, new ideas coming forward in a knowledge-based economy, IT developers. To what extent is your industry involved in terms of training beyond schools? At what point and in what kind of investment does IBM see itself in terms of training new entrants? Obviously there is a lot of demand for jobs. Can you give us an idea of just how much effort—financial resources and otherwise—is being made by your company in terms of training people out of school?

Mr. Matthew Ivis: Sure, and you're talking about internal training within IBM.

Yes, we place a heavy emphasis on internal training. On a global basis we invest about $350 million a year. We have moved very aggressively into Internet-based training. We focus very heavily on retraining and re-skilling across our workforce. As I mentioned, services is a large component of our workforce. In the 1980s it comprised some 10% of our global revenues. Now it's over 50% of our global revenues. So in this area where we're heavily focused on the services aspect, keeping our people up to date in terms of knowledge and skills is imperative, because in a services-based business human capital is often your greatest competitive advantage. It's their ideas, their skills that really make you world class and differentiated against your competitors. It's a strong focus of ours. It's something we heavily invest in and encourage, as an organization, as well.

The Chair: Thank you, Mr. McTeague.

We'll go to Madame Brunelle.

[*Translation*]

Ms. Paule Brunelle (Trois-Rivières, BQ): Good morning. Thank you all for being here.

I am wondering mainly about this shortage of skilled workers. Your industry is constantly expanding. I wonder about the relationship between the universities, which provide training, and your industry. We know that the training is done mainly within the companies.

Are our universities lagging behind in terms of training? Is this creating a disadvantage for your organization?

Mr. Marc Seaman: I imagine that the question is one of targeting...

Ms. Paule Brunelle: I am asking each of you, everyone who has something to say.

Mr. Bernard Courtois: I could start by saying that our problem is twofold. First, there are no longer as many students wanting to enrol in the faculties that lead to jobs in technology. The problem starts well before that: it can be seen as early as secondary school. We are therefore trying to see how the parents of children who are finishing elementary school, and the children themselves, could be made more aware of the possibilities. There is a lack of information about the fact that the jobs of the future are in technology, and that they are very diverse, very interesting and completely different from what they were. In a nutshell, the number of students going into careers that lead to jobs in technology is too low.

As well, a lot of training is provided within companies. However, I am now hearing that in some cases, companies are having trouble hiring young people, no matter how qualified they are. In the present circumstances, basic jobs in some companies are being transferred to developing countries. They are looking for people with experience, because they are on the leading edge.

In our system, there is support for apprenticeship. In some cases, the provinces provides support through co-op programs, in particular, but at the federal level, apprenticeship systems mainly target old economy jobs, not new economy jobs. Something has to be done so that our qualified graduates can get into the job cycle, and so that five or 10 years from now they are there to take over as employees leave.

Even in the case of government contracts there is a problem. Often, to get a federal government contract, you have to list the qualifications of the employees who will be working on the project. There is no room for employees who do not have a lot of qualifications. Some members of my association who are in Ottawa tell me that they need a new generation in their companies, that they interview young people when they bid on federal government contracts, but they can't have them work on those contracts. That kind of thing happens when we are focused on the knowledge economy and trying to solve the problems that arise. They are not all huge problems. Of course, young people's career choices are a much harder problem to address.

I would like to know whether there are targeted programs that could solve the problems like the ones I am talking about.

● (0935)

Ms. Paule Brunelle: Do you have any comments on this subject?

Mr. Marc Seaman: As was mentioned, Bill Gates came to Ottawa last year. He spoke with the Prime Minister and pointed out that this problem is not unique to Canada, but affects North America as a whole. A lot fewer postsecondary students are choosing mathematics and computer science, in particular. The strategy has to be applied not just at the postsecondary level, but really at the elementary and secondary levels. We need to develop more affinity, a better philosophy about integrating technology-related jobs.

Bill Gates has created the School of the Future. Forty of those schools have been established in the United States. One has been established in York Region, in Toronto. These schools are designed to determine what jobs there will be in 15 or 20 years and to start developing young people's skills a lot sooner.

Ms. Paule Brunelle: In the sciences, among other things, we know that in Quebec the Conseil de développement du loisir scientifique is starting to provide young people with experience very early. Your companies might take an interest in this approach. Organizations can be set up in the schools. That would certainly help to overcome some myths. Young people are very fond of computers and big users of them. My 14-year-old son is must more up to date than I am about everything happening in that field. A lot of things could be done, it seems to me.

My next question relates to the representation of women in your industry. What can we do about this? Is the problem the same for women as it is for young people and other workers?

Mr. Bernard Courtois: In fact there is an equivalent problem. We have a lot of trouble persuading girls to think about making a career in technology. As you say, they are surrounded by technology every day, but they don't see it. We have to try to get the idea across that if we want to change the health care system in Canada, the biggest change we could make is to bring it into the 20th century and modernize it.

All jobs of the future, in all sorts of fields, are connected with technology. If kids want to change something in society, if they want to do the things they love, they should think about going in that direction.

Some of our companies have programs for the schools. They go out to see kids in secondary schools and talk to them about their careers. These kinds of programs exist everywhere in Canada. Unfortunately, it doesn't seem to be getting through to them. It may get through to the children in the schools, but not the parents. Career counsellors don't seem to be on board. It seems that we need a better link between the message we are trying to get across to the base and a message that would be directed to the public and be more visible in general. The connection should be made between the two, and we should try to solve this problem.

● (0940)

[*English*]

The Chair: We're over time here. Did someone want to comment briefly? We'll have Mr. Ivis, very briefly.

Mr. Matthew Ivis: Yes, I'll be very brief.

I think you raised a number of excellent issues across all those questions. It's something we focus on very specifically with some of the programs we have, specifically one called EXCITE, which focuses on 12- and 13-year-old girls to get them excited about science and engineering.

Specifically, as I think my colleagues mentioned, it really focuses on applied learning. It is taking things apart and putting them together and understanding how that's applied in the real world. Then they are provided with mentors through the next couple of years to try to encourage them in science and engineering. Attracting women into science and technology is an issue. I think, from our perspective, that we invest in it because diversity because of gender, in terms of culture, is one of the cornerstones of innovation.

If you don't have the diversity of thought, you're going to limit yourself in the type of innovation you're going to be able to draw out.

The Chair: Thank you.

Mr. Marc Seaman: Mr. Chair, I have just one.

The Chair: We're well over time. I'm sorry.

Mr. Marc Seaman: I was going to say that the teachers at the elementary level—

The Chair: I'm sorry, we're way over time. We're two minutes over.

I'll go to Mr. Van Kesteren, please.

Mr. Dave Van Kesteren (Chatham-Kent—Essex, CPC): You'll probably get that question answered in the course of the morning.

Mr. Seaman, you touched on the Web 2.0, and this is fascinating the way things are flowing. I know that in my business, too, this was already starting to happen. I am curious, though. Will this result in layoffs in the industry? Does this new technology mean that you don't have to put people in the field? Will it result in layoffs, and to what degree?

Mr. Marc Seaman: I think it will have the opposite effect, because organizations like banks can focus on banking and not have, necessarily, an IP shop per se. What it creates are organizations and an ecosystem that Canada can create and not just deal within Canada but globally, where a lot of the services, a lot of the infrastructure, and a lot of the support is managed through them.

I actually think it has the opportunity to create a much greater ecosystem, because it allows organizations to really focus on what they do best and to have the organizations, through the Web, provide that type of back-end support. I think it actually allows it to grow the industry sector and the knowledge economy.

Mr. Dave Van Kesteren: That's a real possibility.

Mr. Seaman, I want to ask you what Mr. McTeague was asking. I want to build on that.

Does the lack of IP law hinder companies like Microsoft from investing in Canada?

Mr. Marc Seaman: Does it hinder us from investing in Canada? No.

We announced in July that we'd be opening a software development centre in the lower mainland of B.C., which we opened in September. It will have approximately 300 employees or software developers by the end of January. Hopefully, that will continue to grow quite significantly.

There's a recognition that the IP regime in Canada is taking shape and that the government is taking it seriously. I think it was under the Liberals, the previous government, with Bill C-60, and I think that, obviously, we're seeing steps by this current government in moving towards that.

I think that decision to invest in Canada was done regardless of the IP regime here. It was done for other reasons, such as the strong infrastructure we have, the quality of life Canada offers, and the better immigration policies we have, because again, we're talking about onshoring people, as Bernard points out. As we have indicated, there's a shortage of skilled people in the computer sciences in North America.

Our goal was to recruit the top 1% or 2% from around the world, wherever they may be, whether they're in Canada, the United States, India, or Trinidad and Tobago, and to bring these people to B.C. to create and innovate and do some software development, recognizing that the IP policies in Canada will become stronger. We're certainly hopeful that this will continue.

No, the decision to invest in B.C. had nothing to do with the IP policies here.

Mr. Dave Van Kesteren: Mr. Ivis, is it the same thing with IBM?

Mr. Matthew Ivis: One of Canada's strengths in general is that it has a very strong legal and policy framework. Can we improve? Yes, we can, and I think we demonstrate a willingness to do that all the time.

We've invested over $3 billion in the last decade in research and development in Canada. It's a strategic note in our global footprint. One of the largest drivers of that investment is access to skills and talent, in addition to the strong foundation we've built in terms of our legal and policy framework.

Moving forward, I think it's very important. Intellectual property is a fundamental. Business models are shifting, but if I had to point to the most dominant or important factor driving that area of research and development, it would be access to skills and talent.

● (0945)

Mr. Dave Van Kesteren: Mr. Courtois, what effect do emerging markets in China and India have on Canada's ICT service industries? Is it a positive effect?

Mr. Bernard Courtois: It's a complex effect, a little bit like the rest of the economy. In other words, companies in our sector operate very globally, and it's important to use the capabilities of those developing nations to be more competitive. The more competitive you are globally, the better your company will do overall.

We would like to see Canada find its place as a place where we do the more advanced work. This is happening throughout our economy. As a society, we have to think about the jobs we want, in that there are going to be plenty of jobs for us—indeed, most developing societies are going to face a shortage of people—and we want to make sure that we have the people and the skills that match the jobs we want, as opposed to the leftover jobs.

Mr. Dave Van Kesteren: That leads me to my next question.

We hear all the time that we're shifting away from one industry and moving into another. Some industries have suggested that employment insurance should make a shift as well, and focus on training rather than on unemployment. Would your industry benefit from such a shift? Are there enough people in the manufacturing sector who could be attracted into your industry if they were retrained and if the government would shift that pattern?

Mr. Bernard Courtois: It's hard to imagine taking people who are quite late in their careers and have never been involved in technology and switching them to become computer engineers, but we're headed for an environment in which people, no matter where they find their careers, should go through the school system and get some training in the fundamentals of technology. In other words, we have to prepare our citizens of the future to be multi-faceted. That's actually the kind of skill that will succeed the most in tomorrow's economy; it will also position them better as the shifts take place.

Mr. Dave Van Kesteren: You're saying our schools first of all have to do the basic training. However, could that type of direction in government to make sure we...? If you had some type of tax benefit or something, would that...?

Mr. Bernard Courtois: It's going to have to be a multi-faceted approach. There is not going to be one magic bullet that will solve everything. To produce what people call the “package” of skills that is better suited to tomorrow's economy, you would be starting with the school system and continuing throughout, but you have to carry that through to lifelong learning and a whole career. As I mentioned earlier, at the moment the programs we have are unfortunately really stuck in what was useful in the past, which is the old economy, and we're quite a bit short when it comes to the new economy.

The Chair: Thank you.

Thank you, Mr. Van Kesteren.

We'll go now to Ms. Nash, please.

Ms. Peggy Nash (Parkdale—High Park, NDP): Thank you, Mr. Chair.

Good morning to the witnesses. Thank you for coming here today.

I'm the mother of three sons who are more techno-savvy than I will ever be, and I held out long enough with my VCR and found that if you wait long enough, you never have to learn how to program the thing, because the technology will change. So I'm kind of astounded that we don't have enough young people who are interested, or who have the skills to get into the ICT sector, because it seems that it is a sector that is fascinating and compelling and that our young people are very engaged in it.

I did hear you say that there were issues with the curriculum of the school system, and I assume that's something on which you're reaching out to the education sectors very early on in public school, and helping to influence university decisions. I was also interested to hear you say that even when there are people graduating with appropriate credentials, it's difficult to get a foot in the door and that our procurement programs may have a negative influence on helping our young people get started.

My question is twofold. How do we correct that procurement issue? That seems to be something that's fairly straightforward. And I guess the bigger question is that at a time when hundreds of thousands of people are losing manufacturing jobs—and I don't for a minute give up on the manufacturing sector, I think we have to really be concerned about that—how do we engage young people, especially disadvantaged young people, and not just inspire them, but help get them into a career that can be lucrative and rewarding and have a real future in the IT sector?

● (0950)

Mr. Bernard Courtois: Some of the elements are structural. It's not an easy thing, because if it were easy, I guess we would have resolved it. As Marc said, we're not the only country that faces this problem. Most developed countries do.

There's a bias in the system. To help kids advance in the system to the college and university level, there's a tendency to try to recommend that they take easier subjects, those in which they're going to succeed more easily. There's a fear that math and science are more difficult, and that introduces a bias. There's a notion sometimes in people who have seen the crash and the bursting of the bubble in this sector. As I mentioned at the start, we went through the bubble, came back down and have made it up since. It's as if you drew a straight line through it and the bubble went up and down, and you cut right through it. But there's still a perception that lingers there. There's still a perception that the jobs are like those in the year 2000, when everybody had to do a lot of coding.

So those are all messages we're trying to get to the schools. The sort of bias in the school system is harder to deal with, and it has to be done through the provincial education ministries. But also, there has to be dialogue and interchange with the professors and with the career counsellors. It's not a simple thing.

Regarding the rest, as I say, you need to carry that through to lifelong learning and all that. You also made the comment about not giving up on manufacturing. There is still a significant amount of manufacturing in our industry. A developed country like Canada, with the assets we have, does have quite a place in manufacturing, but it's not necessarily going to be the huge massive things that take place in China, closer to a bigger market. We do have our place there, but it's going to be like everything else, moving up the value scale for something that's more technologically advanced and superior. But while we've gone through this change in our economy—it's since the late 1990s when the impact of ICT has really driven productivity in the economy and this shift has been taking place—we've had the lowest unemployment in Canada and the U.S. and many developed countries in years. So that shows that technology is having a positive impact.

Ms. Peggy Nash: I'd like to ask you more on that. We had some of the manufacturing sector here yesterday, and the resource processing sector. The person from the Vehicle Manufacturers' Association said they're facing a category-six hurricane of all of the different forces: the high dollar and competition and a variety of things. He also said they had invested—I forget the figure—many billions of dollars in new technology and new investment, to upgrade that sector.

How much of the IT sector is dependent on other manufacturing? Some people think of manufacturing as kind of old and rusty, but in fact I think of aerospace. There are many sectors that in fact are on the cutting edge of new technology. How much of your field is linked to manufacturing?

Mr. Bernard Courtois: I don't have a specific number, but it's quite symbiotic. Today there's technology in everything. There's technology in prospecting for natural resources. There's technology in how you run the plants. They're much more automated than they ever were. These are things that are happening. We very much share the concerns of the natural resource and the manufacturing sector. And strange for us, because we understand that the solution has to be in more technology, more use of our technology, we have a problem getting smaller enterprises to adopt technology. They don't have the knowledge, they don't have the resources on staff. They need help to be able to see what technology can do for them and they're under pressure.

Now, at the same time, while we're all very conscious about the pressure on manufacturing and forestry and so on, we must be very conscious that the exact same forces are causing people to look at their investment in R and D labs and in advanced jobs and centres of excellence in this country—and those are Canadian-based companies as well as foreign-based companies—and asking themselves whether they should move them to Brazil or Russia or China or India.

The labs are not as visible as auto plants and that kind of thing, but as jobs, they're the primary jobs that we want at the core of our ecosystem. While Canada has not been seen as a low-cost jurisdiction, we had, and we still have, a cost advantage compared to the U.S.—notwithstanding the dollar—because of a variety of things such as real estate, salaries, etc.

But when there's a shift taking place, like in the value of the dollar, it causes people to relook, and our industry's quite concerned that our big labs are in jeopardy. That's like saying that we don't care about the big auto plants, we only care about the little ones.

● (0955)

The Chair: Okay, thank you.

Ms. Peggy Nash: Thank you.

The Chair: Thank you, Ms. Nash.

We'll go to Mr. Simard, please.

Hon. Raymond Simard (Saint Boniface, Lib.): Thank you very much, Mr. Chair.

Welcome to our witnesses this morning.

There's this misconception out there that the only jobs that are being offshored are the McJobs, if you will, or the textile jobs. When I was in China a couple of years ago, we met with the head of Nortel. They had just built this world-class lab, with 200 or 300 IT specialists—engineers—and when I asked the gentleman there what this meant, he said, “Well, it means that the G-7 will no longer be the G-7.” I thought that was a pretty powerful statement.

When you're telling us that there's a potential of 25,000 jobs and only 8,000 people to take them up, should we be concerned that you may be forced to offshore some of your high-tech jobs, and is this a trend that is happening right now, where these high-paying jobs are being offshored to developing countries?

Mr. Bernard Courtois: Our concern is more that we might have to offshore some very good jobs simply because we won't have the skilled people we need. This phenomenon of the shifting of knowledge jobs—they're actually quite moveable, and it's been taking place for years. The result has been pretty good for us, because it's simply made our firms more competitive. The firm, as a whole, is growing and we have found our niche. We're very tiny, only one-half of 1% of the global population, and we can find much more than our place in that in these knowledge jobs.

So what's happening here is that we're going to continue to need to use those human resources that are in those countries, but, as Microsoft has demonstrated, the great thing about Canada is that we have a window of opportunity where at the present time we are one of the most desirable places to bring the best and the brightest. As a country, we have to be conscious, with some intensity, of seizing that extraordinary opportunity.

Hon. Raymond Simard: It's interesting that you say that. Mr. Albrecht and I were on another committee studying the human resources issues in the government's future. One of the things that we were told by some experts is that five or ten years ago you could easily attract people here from India or China, and that's not happening any more. They're staying home. The jobs are better paying, the standard of living has improved. And as a matter of fact, these people are actually recruiting some of our specialists here in Canada.

Are you seeing that as well?

Mr. Bernard Courtois: Yes, and one of the very important things that's happening on the horizon is that our government faces a bit of a demographic wall, where they're going to be short of people to run many of their operations. That's going to be happening throughout the economy. That, for us, means that governments must think of different ways of performing the same activities and serving the public. That leads us to more contracting out to places where there can be a core of experts that can be deployed to serve multiple clients. We're going to have to do more with a smaller number of people. It's not like the old days when we feared outsourcing because we'd have to cut jobs in government. We're simply not going to have the people.

It's very interesting when we're talking about a service strategy. If we put two and two together—put that problem together with the opportunity of creating centres of excellence—that will then be a base inside the firms from which we can do work for global clients. That actually could turn out to be a win-win, if we seize that opportunity.

The Chair: Go ahead, Mr. Ivis.

Mr. Matthew Ivis: Thank you.

Just to put the numbers on this, in terms of the past five years, Canadian university enrollment has increased from about 850,000 to over a million. During the same time period, enrollment in math and science and computer information sciences has gone down from over 43,500 to under 41,000. So while people are enrolling more in university, these core skills are going down.

If you look at IBM or Microsoft or our industry, for instance, we have, as I mentioned, 3,000 software developers. These are the people who go on to get their PhDs, who can feed our lab. And if we want to grow that capability, we need to have that capability here to grow. That's one stream, the deep technology skills to feed our labs, to feed the research and development we want to do.

On the other side of the coin, something that Bernard mentioned are the multi-faceted skills, people who have this core technology base but also understand business, legal issues, and social sciences. These are the people who are going to be able to engage clients to comprehend their problem, understand how technology and industry expertise can be applied to solve problems, then devise the strategy, lead a team to execute the strategy, and solve the client's problem. So this is the multi-faceted skill set that has a technology root but also the business and legal complements that we need to develop. That's the broad base of the new fundamental skill set that I think we need in this economy. So there's the deep technology skills, and then there's the multi-faceted skills that we need to create.

● (1000)

Hon. Raymond Simard: Mr. Seaman, there are ten seconds left, so I guess I'll let you answer.

Mr. Marc Seaman: You know what, I'm going to get to answer my question from earlier.

The teachers teaching the students are the ones who also need the training, and I think that's where we're seeing a big gap. We have 50-year-old teachers, with all due respect, teaching kids who are much more savvy on computers and technology. I think that's where, as you pointed out, Ms. Nash, there has to be a greater emphasis, on the development of teaching the teachers of the students.

And just on the last point, which was related to the other question on India as to whether they would want it, since we announced the opening of our lab in B.C—there are 11,000 East Indians and over 7,000 Canadians who work for Microsoft in Redmond—the number of requests from a lot of these East Indians and Canadians to move back to Canada, for the reasons that Bernard pointed out, such as the quality of life, the infrastructure in the lower mainland, B.C., as there is in Markham, for East Indian culture.... A number of the other aspects are really strong attributes and advantages that Canada has, and I think as Bernard points out, these really need to be leveraged and positioned as far as a science and technology strategy.

The Chair: Thank you.

Thank you, Mr. Simard.

We'll go to Mr. Carrie, please.

Mr. Colin Carrie (Oshawa, CPC): Thank you very much, Mr. Chair.

I want to thank the witnesses today. I found your presentations to be very interesting. I was a little discouraged, though, Mr. Courtois, when you said it's difficult to retrain older workers into the technology. I was hoping there was a future for lifelong geeks who've become involved in politics.

I want to ask you this. As a committee, we did a counterfeit and piracy study. I was wondering if I could get your comment on that. As well, on copyright issues, what do you think of the fair use in U. S. policy? What do you think of things like an iPod levy and TiVo? Could you comment on those things?

Mr. Bernard Courtois: Yes. In a former life I was involved in another piracy issue that had to deal with satellite signals, and I think it is a significant problem. We're talking about a knowledge economy, so obviously you've got to protect your knowledge the way you protect ownership of real estate and property on that basis.

At the same time, intellectual property is always a question of balance, balance between the interests of the user and the creator and also the ability to innovate. So, yes, the issue of fair use we think should be addressed maybe in a second stage. One of the problems with copyright legislation in some other types of framework legislation is sometimes we try to tackle too many things at the same time and then we can't get anywhere, so we need to move on.

Obviously, our future has to be based on evolving in a marketplace on a basis that is satisfactory to the consumer. If the consumer doesn't like the restrictions being placed or can't use the product in a useful way, then we're shooting ourselves in the foot. And that can be addressed in two ways. It can be addressed in the law, but it can be addressed obviously in how the companies behave in the marketplace, and hopefully trial and error will have them find the things that work.

That's why I said earlier that if you don't protect the property going in, then you don't allow any of those models that are based on a consenting transaction between a seller and a buyer, which is the best way to build an economy and to give customers what they want.

As for the idea of a levy, we do not like the idea of a levy on iPods or on computer hard drives or on ISP access because they run contrary to everything that will make this economy grow. Everybody in the marketplace is groping with what will work in the marketplace, what will work with consumers. We know what technology can do. Sometimes it's much harder to know what exactly will work for consumers.

If you take the example of music, some will say I'll sell it for you for 99¢ a tune, I'll sell it for you for $10 a month all you can eat, or I'll try to sell you some stuff based on advertising.

In our industry, trying to predict what the successful business model will be is extremely hard for the best brains and experts in the world to do. For the government to, by default, choose the business model by saying we won't protect certain things.... And the worst thing would be to make it a levy.

Suppose you wanted the levy to cover all the music that's going to be bought on the Internet, all the videos that will be bought on the Internet, and, if you're not protecting rights, why not all the software that will be bought on the Internet? You might say we'll charge you, we'll tax you; we'll start at $5 a month and next thing we know we'll be at $50 a month, and $100 a month. And some people might consume nothing and others might consume a lot, and then somebody is going to determine the size the market is going to be every year, who's going to get what share and redistribute it.

It's a total nightmare. What you want is the market to find—and some will work with one solution, others will work with another—what do customers want to pay for? And then that's the best way to generate money, when it's willingly paid by the consumer, not a tax that then gets redistributed through some cloud.

● (1005)

Mr. Colin Carrie: Does anybody else have comments on that?

Mr. Seaman.

Mr. Marc Seaman: I don't feel comfortable at this point. I'll respond, if you want, in writing afterwards. No, I have nothing to add, thank you.

Mr. Colin Carrie: Are there any comments on time shifting and the issue of TiVo?

Mr. Bernard Courtois: The time shifting is something that needs to be addressed, and there's some cloud that's been put on that from a U.S. decision and debates in Canada about what we should do. Time shifting is value added for the customer. It's a good thing. It's even a good thing socially. I have to admit that the fact that I can watch things at a different time or I can record something, a show, the news in Winnipeg and in Vancouver, as opposed to the news in Ottawa, gets me to understand what is going on in those cities the way that I wouldn't.

But it's really that consumers expect to be able to make use of that capability. They don't expect to have to pay extra for it. The technology allows for it, so you wouldn't want the law to interfere here and block it.

The other thing with the PVR, the TiVos, whatever, is everybody accepts that I can record a Formula One race and watch it at a time that suits me better than seven in the morning, whatever. We all accept that you can do that in your home. The technology exists to do the exact same thing in a network. That can prove to be more convenient to the user, and it doesn't affect the basic rights or the flow of funds that would have come from the original show anyway. Yet our laws at the moment are saying that it might not be allowable.

So those are the kinds of things that perhaps in the future we need to address.

The Chair: Thank you.

Thank you, Mr. Carrie.

We'll go now to Monsieur Vincent.

[*Translation*]

Mr. Robert Vincent (Shefford, BQ): Good morning everyone. Thank you for being here today.

As I understand it, your main problem is the shortage of workers. You then talked about elementary and secondary schools and colleges and universities.

In your opinion, what should the government be doing to develop or help to train people to fill the positions available in your field?

Mr. Bernard Courtois: As we said earlier, there is no automatic solution. To begin with, that is what we tell young people about their career choices. It is the effect of structural factors in the school system. Our companies and all sorts of people are doing a lot of work every day in the schools. This has to be supplemented by a public message, and the country's leaders have a role to play in getting the message out. That could go so far as providing assistance for training.

If we had support for apprenticeships, which is offered for jobs in the old economy, those incentives would attract young people into these careers. They know that someone is trying to develop jobs in those fields and that an apprenticeship program is going to make it much more certain that they will be able to find a job.

Measures of that kind, which have an impact on the knowledge economy, are needed, in order to have the same effect. This is the kind of thing the government can do.

● (1010)

Mr. Marc Seaman: I agree with Bernard on this point. It is not necessarily a solution, but the philosophy of the Government of Canada is that we should become a major player in the knowledge economy. The conditions that will enable Canada to play that role have to be created. The government is well aware of the economic aspect of the potential economic fallout for the country, if we develop human capital for a future that focuses more on the knowledge economy.

Mr. Robert Vincent: What efforts are your companies making to assist these young people? What is your company doing? What can it do? Do you follow up? You are talking about secondary schools. Have you found young people who are good at math or other subjects, and have you followed up with them to offer them summer jobs and continuing education so that you could get them to work in your company later? Are you involved in this sort of thing? Would it be possible to do?

Mr. Marc Seaman: I am going to let Matthew speak, but we are always happy to talk about what we are doing for society.

Mr. Robert Vincent: We don't know what it is and we want to know.

Mr. Marc Seaman: If you will give me 30 seconds to do a commercial, I will definitely jump at the opportunity.

With respect to teaching and students, Microsoft has a program called Partners in Learning, everywhere in Canada. In Quebec, it is pretty stagnant, but in New Brunswick and Manitoba it has made considerable strides. It involves developing training programs for teachers in grades 6 to 12. It is a very complete program. We have a major program with the University of Waterloo, as you know, to train students.

Microsoft's co-op program is one of the biggest. You mentioned summer jobs. It is the biggest program in the world. We have set up business in Canada to ensure that students receive not only an education, but vocational training for the jobs of the future.

There is a program called skills retraining. In Toronto, there are communities where young people have quit school. We have established a partnership with Humber College and the City of Toronto. Training is paid for by Microsoft and the City of Toronto so that these young people, who do not necessarily have jobs but who are knowledgeable about technology and computers, can use their knowledge, thanks to the investment by an organization like ours and institutions like Humber College. They receive training so that eventually they can get jobs.

I could go on. These programs are really very advanced in doing this.

Mr. Robert Vincent: Mr. Ivis, you want to say something.

[*English*]

Mr. Matthew Ivis: Thank you.

That was a good question, because the answer I was going to give to your first question was that it's not just government. There's a collaborative need here. There is a need to work together on this issue.

There are three areas I will point to from our perspective, and they probably parallel my colleagues in a lot of our industry. One area is we have a tremendous number of programs that focus on youth engagement. So applied technology and science demonstrate it, and it's not just theoretical tables you're learning. There's an application to this knowledge that's fun. It's interesting. Actually I have just collated that for another effort, so if you're interested, I would be happy to provide the range of programs we participate in.

[*Translation*]

Mr. Robert Vincent: Do you offer these young people summer jobs? Do they get a bit of training in the company?

The Chair: Mr. Vincent, excuse me.

[*English*]

I'm sorry, the time is over. We can do what Mr. Seaman did previously. He can answer a previous question at a later question.

We have Monsieur Arthur.

● (1015)

[*Translation*]

Mr. André Arthur (Portneuf—Jacques-Cartier, Ind.): Thank you, Mr. Chair.

Mr. Seaman, I would like you to expand on the answer you gave Mr. Vincent when you were talking about Microsoft's program in the schools.

Did you say that it was not working as well in Quebec as elsewhere?

Mr. Marc Seaman: You misunderstood. I said that there are already programs established in other provinces and that we are currently working with Quebec. There is no difference, there is no one province where it is working better than in another.

Mr. André Arthur: In other words, all of the provinces accept gifts.

Mr. Marc Seaman: Yes, but as I said, it is a question of evolution. It is different in each province. It all depends on what their school boards want to do.

Mr. André Arthur: You also drew a terrifying picture a little earlier when you talked about classes in our schools where the cleverest, the most highly skilled when it comes to computers, are not the teachers, but the gifted kids in the class.

This situation will not change overnight, because those teachers, who are completely incompetent when it comes to computers, are protected by layers and layers of union security and seniority. They are more focused on watching the calendar until they hit retirement age than on letting young people advance in a field that they don't know and don't like.

A majority of teachers are like a majority of the members of this committee: they are not even capable of programming their video recorder. I am convinced that Ms. Brunelle asks her 14-year-old son to do it.

How do we reach the teachers in a country as complicated as Canada, where each province has its own jurisdiction? In China, the 100 most influential people in the Chinese Communist Party and the Chinese government are all engineers. All of them, without exception. They are all engineers. How do we reach the teachers in Quebec and Canada when our country is governed by lawyers?

Mr. Bernard Courtois: We have to be careful when we say there is a generation gap and that some people learn how to use technology and others don't. There is a continuum. People of all ages use the Internet, whether to make travel reservations or to do their banking.

The situation in the school system is complex. Sometimes, there are things in the structure of the school system that are discouraging. If teachers want to take additional training in a tech field, it won't have the same effect as if they wanted to take further university courses in their field. In some provinces, a teacher who takes courses in his or her own field will climb the ranks of the pay scale, but if a teacher takes additional training in technology, even in order to be able to teach his or her own subject better by making more use of technology, it doesn't lead to a pay increase. So we are discouraging them from making an effort. The system has all sorts of things, and various companies offer all sorts of individual programs. It should all be brought together and a coherent strategy adopted.

Mr. André Arthur: Mr. Courtois, it must be 20 years since Canada has won a Nobel prize. The last one I know of was a Nobel prize for chemistry, which was won by someone at the University of Toronto.

In your field, computer technology and communications, what is there that Canada is the best in the world at? What specific field is there where it is absolutely the best in the world?

Mr. Bernard Courtois: There are several.

Mr. André Arthur: Name just one. Be very specific, very narrow.

Mr. Bernard Courtois: The BlackBerry, which really is quite important. There are several other similar areas. Also, in Waterloo, we have the Perimeter Institute, which has attracted 80 Nobel prize calibre researchers. They are all potential candidates for a Nobel prize, and they come to Canada because this is where they find the most attractive environment in terms of the quality of their work and what they can accomplish.

● (1020)

Mr. André Arthur: Thank you, Mr. Courtois.

[*English*]

The Chair: Thank you, Monsieur Arthur.

I think Madame Brunelle as well wanted to respond to your questions.

Voices: Oh, oh!

The Chair: I'll go to Ms. Nash, please.

Ms. Peggy Nash: Thank you.

I want to go back to the line of questioning I had raised earlier, about the disconnect between your sector and other education or investment needs, and I'd like to ask you specifically about small business.

Mr. Courtois, you said that in a lot of the small businesses, especially in manufacturing—but also, I would argue, retail, hospitality, or whatever the sector—there is a need, especially with the high dollar, to be investing in new technology. But sometimes, when you're up to your nose in a storm, it's difficult to kind of look around and see how you should be getting yourself out of the water.

How can government help businesses, small businesses especially, in terms of assisting them to make the investments in technology that would assist them in being more successful?

Mr. Bernard Courtois: Studies show that the problem about the use of technology in Canada lies mainly with smaller firms and—you're right—across all sectors of the economy. Those macro-economic studies demonstrate that. In our industry, you can imagine what position that leaves us in if people are not using our technology and the economy is suffering as a result.

We find that smaller businesses will not react as well to someone saying “I have a product to sell you” as they will to someone in their industry, one of their peers or someone else, saying “Here's what you can do.” We carried out studies on what was in their mindset and how we could tackle the problem. They understand that information and communications technology can help them save costs. What they do not understand is what's really missing—that you can use technology to produce better products more quickly, to grow faster, and to be more competitive.

The gap there is that they do not have access to those resources. They're too small to have true expertise on what you can do with technology to transform your firm. That obviously opens the door to asking if that is something the government can help with.

Ms. Peggy Nash: There are organizations that.... I'm from Toronto, and the Toronto Association of Business Improvement Areas offers advice on such things as energy efficiency and cost savings.

It seems to me there's a gap in terms of getting the kind of expertise that you folks have into those small community-based organizations where the smaller businesses are likely to be able to access it.

Mr. Bernard Courtois: That is where governments can help.

For example, in Ontario we're engaged in discussions with the Ministry of Small Business and Entrepreneurship. They reach out to many places throughout the province to try to see whether they can put on programs to educate smaller businesses on what they can do to better succeed.

That's the kind of thing we obviously try—that's what our people do, they sell our products—but there's a role here, apparently, for the government to take to help break the logjam.

Ms. Peggy Nash: Thank you.

There's another aspect to this that I'm interested in, and I have a question for all of you.

While business obviously has an incentive to want to invest in new technology in order to be successful, many community and non-profit organizations are increasingly cash-strapped. They perform tremendous work for our communities and yet they're often scrambling to keep up. I know that there are programs for school boards and that kind of investment. Can you tell us some of the things you offer for not-for-profit organizations?

Mr. Marc Seaman: From Microsoft's perspective, any charitable organization receives their entire software inventory free of charge. So we will donate that, and we've been doing that year over year. It's about $16 million to $20 million per year. We'll donate to any organization that submits an application for their software requirements. They will receive them free for that very reason. We don't think they should be encumbered with IT costs when their business is about doing things for the community. So I think that's an important one.

On your previous question, on ICT investment, I can argue that the study is quite significantly behind, from small businesses in Canada as it is in the United States. So as to your question on what the government can do, I think an ICT tax credit, and certainly the ability to depreciate costs over a period of time that is more manageable for businesses, would hopefully help stimulate some ICT investment from small and medium-sized businesses.

● (1025)

Mr. Matthew Ivis: From IBM's perspective, we have a team of corporate community relations that focus specifically on outreach. We focus a lot of our effort on the K-to-12 space for a lot of the reasons we've discussed today, in that there's a real need to help with education and to make sure that the skills are there for the next generation of jobs.

So we do spend a lot of time on that aspect, but we have various programs that focus on the non-profit sector and on reaching out to specific communities. If you're interested, that would be something we would be happy to elaborate on after this meeting and to provide you with materials.

The Chair: Okay, thank you.

Thank you very much, Ms. Nash.

We'll go now to Mr. Eyking, please.

Hon. Mark Eyking (Sydney—Victoria, Lib.): Thank you, Mr. Chairman.

I thank the guests for coming here.

It's been noted, I guess, this morning that your industry is going to need more personnel. I think that's a given. Where do you get that personnel? The youth have been talked about quite a bit and as having them prepared and ready, but yesterday we had a group of manufacturers here, and they figure in the next six months there will be 50,000 losing their jobs, and there's a good chance a lot of them aren't coming back. That's probably about 2,000 a week.

So you would do the correlation, and say if your industry needs a certain number of personnel, and maybe there's some way to switch.... And it's very difficult, of course, because there's training, location, and so on.

Over the next year or so, how many people are you looking for in your industry? And secondly, how can we help those people and help you with that transition process?

In my region we've gone through a major transition in the last ten years in Cape Breton. We've worked coal and steel and groundfish. Those three industries have disappeared, so we have gone through our transition. One of the key things we find is the partnershipping that is happening between the new companies that are coming in and the university and of course government, and it's working quite well.

I guess this is more to my point about bridging the manufacturing jobs to yours. Realistically, how many do you need, and how many can we help transfer? What regions? Just give a little snapshot on how we can cushion their blow.

Mr. Bernard Courtois: The Information and Communications Technology Sector Council, which is a governmental body, and there are councils in various industries, has estimated that over the coming few years there's going to be a shortage of 89,000 people due to retirements, growth in the industry that cannot be fulfilled. But those are specialist jobs. In addition to that, our industry, as it grows, needs people to take care of sales and administration, logistics and all that.

So in a way, it might be difficult to envision someone working on a manufacturing assembly line to be transferred into a computer engineer or a computer developer; but on the other hand, there are a lot of other jobs in our industry that do not require necessarily that degree of expertise and some effort on retraining and support. The economy, as I mentioned earlier, over the last seven or eight years has absorbed those things very well, but for the people who are out of a job, it's a societal problem that needs to be addressed, and therefore there has to be some focus on helping these people retrain.

Hon. Mark Eyking: In each area of the country, and probably in every one of the MPs' ridings, we have an HRDC office and they deal with human resources for the country. Should there be something more that these offices provide to help do the matchmaking and the bridging? Should they have certain people who may be in their offices, who can be experts in the transition?

Mr. Bernard Courtois: I really haven't been able to give that much thought. That's one possibility. Another possibility is to use the colleges, because the infrastructure is there and they are more equipped to do retraining and that kind of thing. Maybe someone could manage a program like that, but it would be delivered through the institutions that already specialize in that kind of activity.

● (1030)

Hon. Mark Eyking: That's it, unless somebody else wants some of my time.

The Chair: Mr. Ivis, do you want to comment?

Mr. Matthew Ivis: I think you raise a good point. One of the challenges in defining strategies and policies to deal with some of these challenges is having the appropriate data to understand what's really happening, not just in manufacturing but also in the services sector—to understand where the growth is and where the need is across the country. There are different areas of competitive advantage between British Columbia and Alberta, and right across the country. There are different industries and different service needs. Because service has often been a bit overlooked, I'm not sure we have the data necessary available to make those really good decisions on how we can answer some of those questions.

Hon. Mark Eyking: Some universities or regions would be more adept at going through the transition than others, for various reasons, so that data would help with the matchmaking.

Mr. Bernard Courtois: We have a lot of difficulty accessing the data from the universities, because they are very skittish about publishing any data that might show they're not doing extremely well in everything they do. Therefore, as an industry we have to see the government collecting the solid data.

So we need the data and we need a comprehensive strategy to bring all these various activities and efforts together.

The Chair: Thank you.

Thank you, Mr. Eyking.

We'll go to Mr. Albrecht.

Mr. Harold Albrecht (Kitchener—Conestoga, CPC): Thank you, Mr. Chair.

Up until today my colleagues from Manitoba probably though U of W was University of Winnipeg, but I'm glad you've identified the University of Waterloo and the Microsoft presence there with the co-op program that is very successful. Recently Google announced that they're going to have a major presence there as well.

On the Institute for Quantum Computing there, with Professor Ray Laflamme and the Perimeter Institute, that's an amazing story about what Canada is doing in research and development.

What are your thoughts on the recent announcement in March or May of this year on the science and technology strategy? Do you think that will have any impact on some of the challenges you're facing?

Any one of you may answer.

Mr. Bernard Courtois: We reacted very positively to that announcement. We've been talking about the problems here today of the skill shortage, and women and girls not being attracted to the careers. We were very happy to see the Prime Minister personally say that's not right for Canada and needs to be addressed.

We talk about attracting the best and brightest from around the world, because that's what our future is about. Something has to be said about personal income taxes. That's a negative, and addressing personal income taxes in the higher tax bracket is not expensive, just because of the demographics. There aren't as many people there.

Politically you might say let's not do that, but we're not talking about people who are bank presidents; we're talking about people who are engineers or PhDs doing research. When you're trying to attract the best and brightest from around the world, our personal income taxes are not competitive. It's something a country like ours should certainly be able to address.

Mr. Harold Albrecht: I'd like to follow up on that and the challenge we're facing in getting people to fill these 8,000 positions. Is there presently a huge brain drain—for lack of a better word—to the U.S. as far as the positions you're looking to fill? Is it the other way, or is it equal?

Mr. Bernard Courtois: For some time there has been a sort of two-way street. People are attracted primarily by the interest, the work, and the working environment. Of course, when we try to attract people from around the world, personal income taxes in Canada are in the negative column.

In very recent years the environment is such that for many people Canada seems to be a more attractive place to go. These high-quality people are still driven first and foremost by the quality of the work they're going to do, so we need to make sure we seize that opportunity while it's there.

Mr. Harold Albrecht: There's another question I want to follow up on with Mr. Seaman. I may not have picked up the entire answer, but I thought you said you make your software available at no charge for charitable groups. Is that accurate?

● (1035)

Mr. Marc Seaman: For charitable organizations, yes.

Mr. Harold Albrecht: Does that include all charitable organizations in Canada, like religious organizations, churches?

Mr. Marc Seaman: There are some criteria. Sports organizations wouldn't necessarily...and religious.

Mr. Harold Albrecht: Would not?

Mr. Marc Seaman: Not necessarily, no. Most organizations that are under charitable status would receive it.

Mr. Harold Albrecht: Do I have any time left?

The Chair: You have a minute and a half.

Mr. Harold Albrecht: We talked a bit about the legislation in terms of piracy and intellectual property protection. I think you're all endorsing any moves to strengthen that piece. I thought I may have picked up a little nuance that it's fine to have the legislation, but we also need the enforcement arm. Are you suggesting there may be a disconnect between the legislation and the ability to enforce legislation that's being considered or even that's currently there?

Mr. Marc Seaman: Certainly from our end, we're not suggesting there's a disconnect. We're just saying it's equally important that if you have the legislation, you also have the enforcement. We recognize that the RCMP at a border in B.C. may have more pressing issues to deal with than a counterfeit raid or opening some boxes, but it has to be integrated. What we're suggesting is that there has to be support for the border services, there has to be support for the RCMP, and there has to be legislation in place. It has to be part of an integration, which we're hopeful we'll see from the government.

Mr. Harold Albrecht: Mr. Courtois, do you want to respond to that?

Mr. Bernard Courtois: Yes, I would say the same thing. We went through a similar experience in terms of satellite signals. We need a package. We need the law to give the right protection and we need enforcement to send the right signal. One of the advantages that a law, rightly done, can do is that instead of going after the poor consumer, it can go after the bad guys who are cheating and making money on this, but that requires enforcement. Then, accompanied with education of the public about the right behaviour, those things together will provide the solution.

Mr. Harold Albrecht: Thank you.

The Chair: Thank you.

Mr. Ivis, did you want to briefly comment?

Mr. Matthew Ivis: I assume I wouldn't have two seconds to touch the S and T strategy question.

The Chair: Okay, just very briefly.

Mr. Matthew Ivis: One of the most important things that came out of that is the fact that we're focusing on four priority areas where we think we are or can be world leaders. That's important in a global environment where you have to pick your areas of competitive advantage. On some of the questions we've talked about today, such as whether we are aligning some of the necessary infrastructure, whether it be legal, which you just mentioned, or education, in aligning against those priorities that's where the role of government and industry can interplay. We can collaborate and ask how we best align our infrastructure to achieve these goals that I think we all believe are the right ones, to pick out the strategic areas where we can drive the most growth and prosperity moving forward.

The Chair: Thank you.

Thank you, Mr. Albrecht.

We'll go to Mr. McTeague.

Hon. Dan McTeague: I'm going to pick up where Mr. Albrecht took us with respect to S and T. I was very happy to hear some of your remarks.

I'm wondering if any of you here share the view that $167 million funding for the centres for excellence and commercialization research is sufficient; If indeed there is a requirement, above all, that there be substantial private sector funding needed; if in fact it only provides for the same old, who've been in the past, benefactors of this particular strategy, and the eligibility criteria and procedural rules having changed, if you see that as a positive step forward in terms of a strategy on S and T.

I'm of course not trying to be partisan here. I don't want to create that impression. I am, however, interested in your take on the adequacy of the centres of excellence and commercialization research, given its limited funding and the four other deficiencies, as I see them.

Mr. Bernard Courtois: There are a number of moving pieces with TPC. Others may be downscaled and some things going the right way. The concept is very much the right one. The future has to be based on developing collaboratively between enterprises and where we have the most advanced research skills, in universities, and maybe collaboration across different enterprises, to really seize the opportunity and develop the most advanced solutions. So it is a very welcome step.

Will it suffice? I don't think so. I think we're going to find ourselves, though, going in that direction, I hope, quite a bit more. They don't necessarily have to be big, formal centres of excellence. They have to be areas where we've had a lot of demand in education from within our industry, that people are prepared to sometimes even have big companies have smaller companies coat-tail with them and develop something collaboratively. Governments have a unique role to play in being able to bring the educational institutions and these enterprises get together and collaborate. With centres of excellence sometimes it's a formal title and a formal type of institution. It is the right concept, but we need to do more of those kinds of things. That's the way of the future, to secure our future for a developed economy like ours.

● (1040)

Hon. Dan McTeague: I had an opportunity to speak to some people in the province of Ontario in the Ministry of Research and Innovation who were almost off the record about this, but said that the particular proposal was a disaster. The problem was that it was limited; because of the eligibility criteria changing all the time, it's somewhat of a moving target and there'd be only a handful of people who would continue to qualify. There would be no new entrants and no realistic chance of commercializing R and D being done here in Canada, certainly in smaller institutions or smaller groups.

I appreciate that you represent much larger organizations, so allow me to shift to something that is of grave concern to the committee and I think of grave concern to Canadians in general. In your industries generally, do you have a concern with respect to the implications for the service sector in terms of lawful access questions? There has been some concern that other service sectors seem to be having some difficulty—ISPs pitted against ISPs—on subjects that maybe have delved into areas of law but that nevertheless have an impact on services.

Mr. Bernard Courtois: Obviously we have the carriers, the ISPs—just about everybody involved in lawful access—within our membership, so we've been following that file very closely.

I will just mention on the centres of excellence, though, that I'm certainly aware of projects that are going to be great if they go ahead. They will start a lot of small enterprises and so on, but I agree with you that it all happened very fast and it had to be done, so there are a lot of great things that will not get to the finish line.

On lawful access, the view of our industry is a balanced one. To the extent that you can do a lot of law enforcement with the old technology, we say there is certainly no reason not to do law enforcement with the new technology, so by all means let's have lawful access legislation that applies to the new technology.

The important element there is that there is no problem today. Collaboration on an ad hoc basis between the authorities and the industry is working very well. The purpose of legislation would be to develop more standards-based approaches, and to make sure everybody is obligated and not simply proceeding on the collaborative basis that takes place today.

It's a burden on our industry, a burden that our industry is prepared to take on, provided it applies to generally commercially available or standards-based equipment that the manufacturers will have and also provided that they continue to get reimbursed for the considerable efforts they make on a seven-day, 24-hour basis to the public authorities. There is actually an opportunity for legislation to clarify a couple of exceptional cases in which there is some friction going on and to resolve that problem.

Hon. Dan McTeague: Mr. Courtois, in the less than ten seconds I have left, that point is the most salient in the question of how enforcement agencies in this country are able to afford to apprehend those who are responsible for the dissemination of information that is terribly unlawful.

In other jurisdictions they have simply a question of thou shalt provide. It's a question of cost. In my city of Toronto or in Durham Region, the cost is $1 million per case. When there are tens of thousands of these, it makes it impossible without cooperation, so we're pleased to hear that.

Mr. Bernard Courtois: Yes, our industry spends a lot of money on providing expert technical advice for that. In many other jurisdictions the government clearly funds that capability, and obviously we will need to do that in this country.

The Chair: Thank you very much, Mr. McTeague and Mr. Courtois.

I know that members would like to continue this discussion, but we do have to go in camera.

I just want to make a few comments to wrap this up. I thought we had an excellent discussion on labour. If you have anything further you'd like to submit to the committee on that, you can.

Also, Mr. Courtois, you mentioned the SR&ED review. I received a copy of your organization's submission, but you may want to send that to all members of the committee; it's a very good submission. If the other two organizations have anything on that, please let us know. It is an issue that is raised in both of the studies we're doing now.

With respect to questions about IP, obviously it was in the throne speech, and there is talk of a bill coming forward, so I just want to highlight that for you.

As for the international trade aspect you raised, Mr. Ivis, if there's anything further you want to submit on that, you can do so.

The last thing I want to point out—and I think you're all going to agree with this—is that you, Mr. Courtois, pointed to the trends in resource extraction, manufacturing, and services in looking at ICT. One of the things that struck this committee when we did our manufacturing tour, and when we've done other sessions, is the way that ICT has transformed manufacturing and resource extraction. We did an auto tour, and if you look at the robotics in Oshawa, in Mr. Carrie's riding, you will see that because of the simulations they do at the GM research centre, they no longer crash as many vehicles as they used to; they actually do this on a computer. It was astounding. When we did the manufacturing tour of the forestry centres, they actually measured with a computer system each and every piece of wood they cut. At the oil sands, every single truck is on GPS at a massive centre. At the Diavik mine in the Northwest Territories, every single thing is tracked. Technology is also transforming electronic health records. And this thing here, the BlackBerry, has transformed politics more than anything else in the last twenty years.

Some hon. members: Oh, oh!

The Chair: And there is tourism, travel, financial services and banking online. It's amazing the way your sector has transformed everything, right from resource extraction on through. I would just point that out, as the chair. I assume you all agree with that.

I want to thank you for coming forward. If there's anything further you want to submit on any of those topics or anything else, please feel free to submit that.

We are going to take a break and then we'll go in camera.

Members, if you perhaps want to thank the witnesses briefly, we'll then move in camera in a couple of minutes.

Thank you very much for appearing here today.

[*Proceedings continue in camera*]

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