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Mr. Ed Komarnicki

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

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● (1530)

[*English*]

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

I want to let members know that we'll want to suspend, after hearing from the witnesses, at about 4:40 or 4:45. I want to go over some committee business and the proposed travel, and there are some issues I want to talk to you about, so keep that in mind. We will make sure that we have a full round of questioning and go past our normal break time.

Having said that, I'd like to welcome the presenters today. We have today with us Jason Kee and Avvey Peters from the Entertainment Software Association of Canada. We have the Information and Communications Technology Council here with us as well. We look forward to hearing from you.

I guess you're with Communitech, Avvey; I'm sorry about that mistake.

Each of you will present. Who is going to start first?

Avvey, would you like to go ahead? You will present, and then we'll hear from all of the others. After that, we will open up to questions from each of the parties.

Please go ahead.

Ms. Avvey Peters (Vice-President, External Relations, Communitech): Thank you very much, Mr. Chair.

Good afternoon, ladies and gentlemen of the committee. Thank you for the invitation to join you today.

My name is Avvey Peters, and I'm vice-president of external relations at Communitech. We are the technology organization in the Waterloo region, Ontario. I have also have the pleasure of working with Communitech's national initiative, the Canadian Digital Media Network, which is our effort to connect Canada's digital media industry clusters.

At Communitech we work on the front lines of Canada's tech industry. We serve a network of more than 800 technology companies, which generate more than $25 billion in revenue. Our work connects us to companies at all stages of growth, from more than 350 active start-up companies employing fewer than five people to Canada's largest software company, Open Text, and Canada's largest technology company, Research In Motion. The Waterloo region tech sector employs more than 33,000 Canadians.

I share this background because it's the vantage point that gives us insight into what tech companies need to be successful and into the challenges that they face.

Consistently, technology companies tell us that their number one barrier to continued growth and success is a lack of access to talent, and not just technical talent; business skills are a crucial component for a successful tech company as well.

This challenge has led Communitech to launch a multi-faceted talent strategy focused on helping tech companies secure the skills and experience that they need to grow and to generate greater prosperity in Canada. This strategy includes activities that range from the operation of a region-wide jobs portal, waterlootechjobs.com; a series of recruitment events carried out in tech clusters across the continent; a virtual career fair; training and education events designed to help companies cultivate and retain the talent that they have now; strong partnerships with post-secondary education institutions to increase the ability of tech companies to recruit from colleges and universities; the promotion of a cooperative education system among tech firms as a talent attraction tool; and a youth outreach program developed to encourage greater numbers of students in grades 7 through 12 to pursue studies leading to careers in the STEM disciplines: science, technology, engineering, and mathematics.

I can provide more detailed information about our Waterloo region talent strategy later on, but what I'd like to share with you today is relevant not only to the Waterloo region tech sector but also to tech clusters across Canada that share similar talent shortages.

I'd like to focus on the two key elements I think are vital to improving the ability of Canada's ICT companies to attract top-quality talent. The first is easing just-in-time talent acquisition processes, and the second is creating a culture that builds the right kind of talent.

With respect to just-in-time talent acquisition, some recent work has demonstrated a nearly full employment rate in Canada's tech sector. We are facing a critical shortage of talent. The short-term risk for technology companies is that they can't fully realize the growth opportunities that they have today when they can't recruit the necessary talent to make their businesses grow. We know that the people most in demand in Waterloo region are engineers and software developers and that there's a premium on individuals with at least five years of experience in those fields, but not all engineers and software developers are created equal. Depending on the needs of the business, a tech CEO may want to hire a .NET developer, an AJAX developer, or a Java developer. These skills are not interchangeable. Similarly, she may need a logic design engineer as opposed to a field service engineer or a systems engineer.

The fact is that when companies find themselves at the point of needing specialized skills, they cannot afford lengthy hiring or training processes. The lack of ability to respond just in time puts a damper on that company's growth, so hastening the process by which Canadian firms can land top talent, and top international talent, is key.

One way we can do this is by speeding up the time to secure a labour market opinion so that companies don't lose the opportunity to attract top candidates. In some cases, eliminating the need for that labour market opinion may be the best option.

Just-in-time recruitment is particularly necessary in the attraction of senior business leaders. If a Canadian company cannot easily bring top talent to Canada, it will be likely to set up an office around that talent wherever that talent is. Global tech and business leaders are talent magnets. The loss then is not one Canadian job, but several.

We were encouraged by the government's indication last week in the budget that it would support improvements to foreign credential recognition and move to an increasingly fast and flexible immigration system to meet labour market needs. This is the kind of thinking that will help Canada's tech companies to be successful.

● (1535)

Declining enrollment in STEM disciplines is the canary in the coal mine for the future of Canada's tech industry. Without a steady stream of new high school graduates headed for careers in STEM disciplines, the tech industry and all sectors of the economy will suffer. Across Canada we need to encourage our youth to pursue career paths that will lead to greater economic prosperity for all of us.

A big part of this problem is cultural. We need to instill the excitement of discovery and invention in today's youth and offer them exposure to STEM careers through business visitation programs, experiential learning opportunities, and online engagement. Today's youth are digital natives. They will bring these skills to bear in any industry. The key for us is to pair their digital literacy with a desire to pursue STEM careers and a strong understanding of business.

When secondary school students have moved on to higher education in colleges and universities, cooperative education is a critical way to foster the skills the tech companies need to be successful. Co-op has been a part of this success story in the Waterloo region since the early days of companies like Watcom, MKS, and Research in Motion. These organizations began by employing co-op students and continue to employ them today. In addition, many high-growth tech companies benefit from access to co-op students, relying on them to build their companies.

A co-op employer tax credit is a strong incentive for tech companies to take advantage of the talent produced by local colleges and universities. Co-ops strengthen the affinity students have to their local industry and community and lessens the likelihood that they will seek opportunities in other tech clusters like Silicon Valley or Boston. In Ontario, the co-op employer tax credit reimburses employers 25% of eligible expenditures up to a maximum of $3,000; smaller businesses are eligible for a higher credit rate of 30%.

I urge the federal government to consider matching this kind of incentive to increase the opportunity for Canadian co-op students to gain experience in Canadian companies. This significantly increases the likelihood that they will accept full-time employment in Canada after graduation.

Once technology professionals are on the job, retention of that talent is critical to the success of the company. On-the-job training ensures the longevity of tech skills. Cross-mentoring between professionals who are new graduates with current skills and experienced colleagues whose business skills come from deep-domain expertise or project management experience is vital. We must continually demonstrate the career path for tech professionals through on-the-job training. Making training credits available for this kind of learning can be a significant talent retention tool. After all, today's coder can be tomorrow's chief technology officer.

Canada can produce the best ICT workers in the world, but we need to create strong talent and retain as much of it as possible. Canada's economic health is tied to the prosperity of the ICT sector, which encompasses life sciences, digital media, clean tech, defence and security, and advanced materials. There are close to 10,000 companies, representing 800,000 Canadian jobs; helping this sector find the talent it needs to thrive will yield more economic prosperity for Canadians.

Thank you for your time this afternoon. I look forward to your questions.

● (1540)

The Chair: Thank you for that presentation. Some of the comments you made are very telling, for sure.

Mr. Kee, go ahead.

Mr. Jason Kee (Director, Policy and Legal Affairs, Entertainment Software Association of Canada): Thank you, Mr. Chair.

My name is Jason Kee. I'm the director of policy and legal affairs with the Entertainment Software Association of Canada. We're the industry association representing companies in Canada that develop, publish, and distribute video and computer games across all platforms, including consoles, hand-held and mobile devices, PCs, and the Internet.

Our industry employs approximately 16,000 people in high-paying knowledge economy jobs at about 350 companies across the country. It accounts for an estimated 11,000 more in terms of indirect employment and indirect induced activity. We contribute about $1.7 billion in direct economic activity and cultivate workers with a combination of creative, technological, and management skills, and in such a way we're actually supporting Canada's position in the global economy.

We thank the committee for the opportunity to present.

The global video game industry is an extensively competitive and highly innovative industry, and Canada is rapidly establishing itself as a world leader in game development. Canadian video game companies are behind some of the world's most successful titles and are regularly ranked among the best in the world. Due to the tremendous international success of the game industry, Canada is now the third-largest and most successful producer of video games in the world, second only to the U.S. and Japan. We're actually first on a per capita basis. Indeed, in terms of direct employment, our industry is only two-thirds the size of the U.S. industry, which is an impressive fact considering that they have 10 times our population.

The Canadian industry has expanded at a phenomenal rate and is projected to grow at a 17% growth rate over the next two years despite a challenging economic climate. Entry-level workers earn about twice as much as the average recent college graduate, and the average salary across all Canadian provinces is about $68,000, with higher salaries in major game development hubs such as Vancouver or Montreal.

Furthermore, game companies drive research and innovation, with about 55% of all companies developing proprietary technology and devoting at least one-quarter of all their production budgets to developing proprietary R and D. Moreover, most of this research is successfully commercialized, either by being implemented directly into products and services that are offered onto the marketplace or by being licensed to other companies, which use them to assist with their own game development.

Precisely because of our success and rapid expansion, the Canadian industry is experiencing increasing challenges recruiting highly qualified and experienced talent. Educational programs across the country produce well-trained workers for entry-level and junior positions, and hiring of new graduates is expected to increase over the next two years, with about 60% of all game companies currently hiring new graduates or intending to. This is expected to increase to 77% by 2013.

Similarly, the average number of graduates being hired per company is increasing, and typical mid- to lower-sized companies expect to hire 24 to 26 new graduates in 2013, as opposed to 10 to 16 right now. However, there is a critical shortage of available talent at the intermediate, senior, and expert levels across all disciplines, including programmers, game designers, digital artists, and animators.

Game development is a highly knowledge-intensive, fast-paced, and team-oriented industry. The hiring, training, and supporting of recent graduates and junior employees is entirely dependent on the presence of a solid and experienced core team of senior personnel. Consequently, ready access to experienced talent is absolutely crucial to our industry.

While the industry prefers to hire domestically, the dearth of available qualified talent often requires us to source talent from outside of Canada in order to find those highly skilled senior professionals with the specific skill set needed for a given project. Furthermore, highly skilled foreign workers facilitate knowledge transfer by providing valuable on-the-job training opportunities for recent graduates and junior employees.

In sum, access to the best and brightest in the international games industry is critical to long-term development of the industry in Canada; consequently, the ability to bring in temporary foreign workers is extremely important to our industry. However, recent changes by HRSDC and CIC have erected certain barriers that are causing significant challenges.

Specifically, about two years ago HRSDC eliminated the federal IT workers program that permitted companies to bypass obtaining labour market opinions for seven specified categories of IT workers. This program was widely used by the Canadian games industry to expedite work permits for many core industry positions, and its termination has significantly increased our processing times.

Furthermore, the departments have introduced other policy changes, including new minimum recruiting requirements, the elimination of LMO extension applications—thus requiring new recruitment even to extend an existing work permit—much shorter validity periods for existing LMOs, and a reduction in the length of time for work permits. At the same time, both departments have become much more stringent in their review processes.

● (1545)

While we appreciate that the purpose of this is to curb abuses, at the same time we see that overly rigorous processes are themselves delaying processing times further and causing rejections on seemingly arbitrary grounds. The departments also appear, at least in our experience, to be overemphasizing hiring Canadians while underemphasizing important factors related to temporary foreign workers, such as job creation, retention of skills, and knowledge transfer.

In combination, all of this is causing major delays, interfering with the timely completion of time-sensitive projects, and putting tremendous pressure on our existing domestic talent pool. Since the federal IT worker program was eliminated, total processing time for work permits has tripled or quadrupled in some regions, jumping from four or five weeks to more than 20 weeks, which is basically four to five months.

Processing time for work permit renewal applications has more than doubled—from two months to about four months—meaning that some work permits cannot be renewed before the worker has to leave the country, which causes significant workload and health insurance problems.

We've also increasingly experienced administrative challenges that are causing delays. For instance, LMO applications have not been input or accounted for properly. Applications still cannot be submitted electronically and must be faxed in. There are delays in receiving LMO letters, which are only faxed to the recipients if there's some kind of delay. Further, it appears that additional restructuring, staffing changes, and an increasing workload for Service Canada are aggravating delays.

Also, the existing pay scales HRSDC uses are ill-adapted for our sector. Salaries for TFWs must meet the standards set out in HRSDC pay scales for the relevant employment category, but unfortunately these categories are extremely broad and ill-adapted to the video game sector and do not correspond with existing industry practices.

While this is primarily a federal issue, individual provinces have been working to replace the now defunct federal IT workers program and to expedite LMO processes. Both B.C. and Quebec have exempted certain categories from the requirement to advertise, and we understand that Ontario has a similar project in the works. While this reduces some pressure, unfortunately it only reduces application processing by a few weeks, which is not that significant when you're considering delays on the order of four to five months. For time-sensitive projects like most games, massive delays are simply debilitating.

We must encourage the federal government to leverage its participation in the federal-provincial temporary foreign workers working group and other areas of federal-provincial cooperation to encourage the development and implementation of a cross-departmental strategy to reduce processing times for LMOs and work permits, particularly for high-demand, time-sensitive software and games industry positions. This includes implementing clear guidelines and timelines for HRSDC and Service Canada around deliverables for LMO applications and renewals of work permits that give due weight to skills, economic benefits, knowledge transfer, and consistent implementation.

We also recommend removal of the advertising and salary-scale requirements for LMOs where it can be demonstrated that the removal assists in fulfilling an existing labour shortage, job creation, or job retention.

Finally, we recommend the reintroduction of LMO renewal processes that improve the permit renewal process.

Thank you again for the opportunity to provide our views. We welcome any questions you may have.

● (1550)

The Chair: Thank you for bringing to our attention some of the process issues related to your industry. It's good to hear your concerns.

Mr. Anani, please go ahead.

[*Translation*]

Mr. Namir Anani (President and Chief Executive Officer, Information and Communications Technology Council): Good afternoon; thank you for inviting us to this meeting.

I will give my presentation in English, but feel free to ask me questions either in English or French.

[*English*]

Good afternoon. Thank you for the opportunity to appear before you today.

I'm Namir Anani, president and CEO of the Information and Communications Technology Council. We are the leader in labour market intelligence, workforce solutions, and policy development for the information and communications technology sector. With me is Sandra Saric, the director of talent initiatives.

Despite the challenging global economic environment, the information and communications technology sector in Canada remains resilient in its ability to create jobs and economic growth. It's a sector that now spans multiple facets of our daily lives, including work, business, learning, leisure, and health.

ICTC's own 2011 labour market intelligence report points to a jobless rate of 3% for ICT workers, which is significantly below Canada's average unemployment rate of 7.5%. The ICT sector boasts a contribution to GDP of approximately 5%, which is equivalent to approximately $61.3 billion annually. However, this value to the Canadian economy is much greater when you factor in those ICT workers in other sectors of the economy, such as finance, health, manufacturing, and public administration.

While traditional industries remain an important focus of the economy—oil and gas, mining, energy, forestry, and agriculture—the relentless pace of technology and consumer expectations are rapidly shaping the ICT sector. In the next five years, a whole new breed of technologies and related services will dominate the ICT landscape, spanning several key areas, among them the mobile arena, cloud computing, and creative online content. These segments will potentially have the greatest contribution to the economy and will require fast-tracking as part of the digital strategy.

The global mobile industry is dominated by the half-trillion-dollar U.S. business of wireless telephony and has entered a long period of steady single-digit growth that will see increasing emphasis on content, services, and machine-to-machine communications as part of the value chain.

In terms of the creative content and apps world, by the end of 2011 global apps downloads had reached a cumulative total of $30 billion. A recent TechNet report commissioned in the U.S. revealed that the apps economy has created 466,000 jobs in the U.S. since 2007, the year the iPhone was introduced. The impact of mobile apps on the Canadian economy has the potential to be huge and to generate enormous benefits for Canada's mobile industry.

Cloud computing, on the other hand, is also creating new business paradigms in targeted consumer services in the way data is stored and exchanged. According to Network World, “The number of job postings in the cloud computing industry is growing so rapidly that there aren't enough qualified workers available to fill these positions”.

The need for cybersecurity human resources will also continue to grow in Canada as ICT expands in organizations, governments, and personal banking. While there are currently few leaders in this landscape, the above ICT industries will be dominated by the SMEs, the small and medium-sized enterprises, due to the low cost of entry and infrastructure and the limited barriers in this arena.

We estimate that by 2016 approximately 106,000 ICT jobs will need to be filled in Canada, with demand for critical jobs far exceeding the supply. This figure will be further compounded if we account for new and emerging ICT sectors.

Canada is also competing in an increasingly tight labour market with emerging global economies such as those of Brazil, Russia, India, China, and South Africa—the BRICS countries, as we call them—which are achieving unprecedented economic growth using new energy, telecommunication, and information technologies.

Our ability to prepare tomorrow's workforce and nurture innovative talents in key sectors of the ICT economy will be vital in ensuring Canada's competitive advantage in an increasingly global, connected, and fast-paced environment.

Among the prerequisites for success will be preparing our youth as early as high school for new business paradigms, and accelerating their integration into industry; encouraging all potential human capital resources to take part in ICT, including women, representing more than 51% of the Canadian population, and aboriginal talent, which is Canada's fastest-growing youth demographic; attracting the right global talent with advanced ICT skills to fast-track priority sectors of the ICT economy; and last, enabling enhanced LMI research in emerging industries on a national, provincial, and sectoral level, with better measurement of progress, economic output, and talent.

● (1555)

In conclusion, given the fast ramp-up and increased global competition in these emerging ICT sectors that we have highlighted above, Canada would benefit from establishing a national task force over the next three to five years—made up of select industry leaders and associations, start-ups, academia, and policy-makers—with the aim of nurturing, connecting, and guiding SMEs to establish successful businesses that embrace transformational technological shifts and enable commercialization and economic success of the future.

Thank you. I look forward to answering your questions.

The Chair: Thank you very much for that presentation.

We will commence with Mr. Cash.

Mr. Andrew Cash (Davenport, NDP): Thank you, Mr. Chair.

It's wonderful to be here. I'm a bit of a visitor to this committee—full disclosure—but I'm not a visitor to some of the issues that affect start-ups, especially in cities like Toronto.

In fact, in my riding I have a very large gaming company, Ubisoft. It's very interesting, because when you go and do a tour of a tech company like this.... In fact, the Ubisoft in my riding is actually housed in an old warehouse, so you get the factory floor and you get the new look of the factory floor. The new look of the factory floor is exactly what I saw at Ubisoft.

Now, that company has been very successful. It has a major operation in Montreal, one in Toronto, and I think maybe one in Vancouver. I'm not sure; Mr. Kee, you can clarify.

You mentioned this, but I didn't have a chance to write it down. First of all, what is the overall size of the gaming industry in Canada, and what is it in relation to the global size?

Mr. Jason Kee: The specific size of the industry in Canada is about 16,000 direct employees.

Mr. Andrew Cash: Right: I'm talking dollars.

Mr. Jason Kee: In terms of dollars, we're about $1.7 billion, and it's in direct economic activity. That's in terms of the market, but also in terms of purchasing power and whatnot.

Mr. Andrew Cash: What's the overall size of it globally?

Mr. Jason Kee: Globally it's about $60 billion right now.

Mr. Andrew Cash: Okay.

You talked about, and Ms. Peters mentioned as well, competition for human resources. I understand there is an issue in terms of the middle and upper management positions for these companies.

In terms of competition, I want you to give me a sense of how Canada is viewed as a destination for talent. I'm not talking about the barriers you have. Let's first talk about how Canada is viewed.

Mr. Jason Kee: It's extremely positive; Canada is third in the world in game production, and we're number one on a per capita basis. We know this. Many countries that I visit will complain very loudly about the fact that there is a reverse brain drain. We obviously have some significant challenges with respect to just the administrative and immigration hurdles, but certainly there is a significant desire on behalf of a lot of game developers elsewhere in the world to come here. We're a very attractive destination.

Mr. Andrew Cash: Why do they want to come here?

Mr. Jason Kee: It's for a wide variety of reasons, and partly because we do produce very good talent. At the end of the day, talent is always going to be first and foremost to any company. This is certainly true in the game sector, and it's true of the broader ICT sector. That will always be the primary driver.

In Canada, as a specific example, we also have had a number of very proactive policies implemented by provincial governments, basically offering forms of tax incentives. Federally that's the SR and ED and various other kinds of programs, including IRAP. Provincially we have interactive digital media programs that also incent foreign companies to come and invest in certain jurisdictions.

● (1600)

Mr. Andrew Cash: Are there some other issues around lifestyle, standard of living, and quality of life here in Canada?

Mr. Jason Kee: Absolutely. The cost of living in Canada is not the cheapest in the world, but it's among the best. We're certainly a lot cheaper than a lot of other destinations, particularly the U.S. and the U.K. When you think about Toronto's cost in comparison with, say, London or New York, it's actually a lot cheaper to operate a business.

Also, just in terms of lifestyle and the availability of...well, socialized medicine and access to the kind of lifestyle that is enjoyed by a lot of game developers, who tend to be on the younger end of the spectrum, is also attractive.

Mr. Andrew Cash: So strong public services that aren't actually necessarily available in other countries are also part of the mix when you're talking about competition or competitiveness in drawing talent to Canada.

Mr. Jason Kee: Absolutely.

Mr. Andrew Cash: Okay. Well, that's good to know.

I want to ask you now about the growth rate for the gaming industry. You said that it was a 17% growth rate. Is that for Canada or is that global?

Mr. Jason Kee: That's Canada's.

Mr. Andrew Cash: Okay. That's huge. I understand that the sector has concerns that its growth is going to outpace the ability to actually capitalize on the growth if you don't get the talent you need.

Mr. Jason Kee: That's exactly right.

Mr. Andrew Cash: Okay. What guarantees would Canada have, for example, if we were to change this and put the federal IT workers program back in? What I would want to hear from you is what the plan is for Canadian talent, for homegrown talent. I understand that there's this near-term issue, but what's the long-term plan?

Mr. Jason Kee: That's a great question. I was focusing in my testimony on what we frankly regard as an urgent and critical issue, which is about filling the intermediate and senior jobs and the steps the government can take right now, but there also clearly needs to be a longer-term process—my colleagues touched on it in much greater detail, frankly—to ensure that we're producing the necessary graduates.

If you actually just do the math, our industry is growing at 17%. We're at 16,000 right now. The schools across the country are producing about 11,000 graduates per year. If you do the math, you'll see we can't keep up. Even if we could employ every single one, we're still not going to be able to keep pace with the growth.

Consequently, we need to be considering programs that essentially are producing higher rates of graduates and, also, that the graduates we access, particularly on the technical side, are the same graduates that we've been talking about.... It's the issue about the lack of students going into the STEM occupations and a lot of the technical occupations, where there is a dearth in terms of video game development just as there is for other ICT sectors.

For us, we have the additional aspect that we actually straddle both: we're the conventional ICT sector, but we're also in content. We also employ digital artists and graphic designers and so forth, so we actually need to be looking at making sure those graduates are being employed and trained in basically the right numbers to satisfy the demands of the industry. We have shortages in those kinds of positions equal to the shortages we have on the tech side.

Then there's also the aspect, which I think we also touched on, of management and business skills and the soft skills as well. We have seen an explosion in Canada's small and medium-sized enterprises in the gaming sector, just as we've seen across the ICT sector, which basically means that you have more independent developers that are wearing multiple hats. They're not specializing so much anymore. They're doing everything, which means that they actually have to be running the business, developing the codes, and doing the digital art, all of it themselves.

Often people with technical capabilities don't necessarily have the soft skills—the communication skills, the team-building skills—and looking to how to incorporate that kind of curriculum in a technical curriculum is also something that's critically important.

The Chair: Thank you, Mr. Cash and Mr. Kee.

Your time is up. It was certainly an interesting exchange.

Mr. Butt, go ahead.

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

Thanks to all of you for being here.

I'm going to start with a more generic question so that each of the witnesses from the different organizations has a chance to respond. Then, if I have time, Mr. Chairman, I might drill down on one or two specific questions in the time we have.

Let me start with this. Are there any highly specialized skills within your industry sectors that may not be accurately reflected at the present time in the broad statistical categories of what Statistics Canada and others come up with for computer professionals, or computer technicians, as we would know them? Can you give us some sense of that?

I'm not a tech person at all. There are even some days when my staff don't think I can work my BlackBerry properly, so I'm learning on this, too, but I know that this is a very important emerging economy in Canada. There are going to be thousands and thousands of jobs in the future in these areas. As one member of Parliament, I want to get my head around what skills are required, what's there, what these jobs entail, and what we need to prepare for, because we know that there are going to be thousands of Canadian jobs in these categories in the future.

Mr. Anani, could you go first? Thank you.

● (1605)

Mr. Namir Anani: Maybe I'll start to attack your question.

Clearly, it's a very valid remark that you're making, because the current national occupation code that we have, which represents approximately 14 classifications, doesn't take account of the future and evolving environment. I talked about the SMEs, and we talked about the creative content and all the mobility. That environment requires more business skills and more entrepreneurial skills.

Now, the business analyst concept is not even reflected in that environment, so to be successful in that while going forward, not in a Canadian but a global environment, it's important to have that reflection, and there are others. I think we would be happy to provide you with a report we produced on this environment that is specifically targeted to the business analyst needs going forward.

Mr. Brad Butt: That would be great. I'm sure the clerk would appreciate getting that. We can have it as part of our summary.

Mr. Kee, do you want to go next?

Mr. Jason Kee: Yes, absolutely.

Actually, it's a great question, because particularly from a video game industry perspective, it's all of them. We have a critical issue. Only in 2012 has the North American industry classification system been updated to acknowledge the existence of video game developers as a category. Even so, we're still spread out among a number of independent categories.

If you're developing video games and you're also doing the publication of video games for packaged goods—the kind you actually buy at the retail store—you're in a different classification from producing them for online delivery, which creates complications in terms of tracking.

Because of this issue, StatsCan has actually not tracked our industry as independent of the ICT sector. We have no idea what the long-term growth is, absent our own independent research as an industry association, because StatsCan hasn't tracked it.

We have similar challenges with the national occupation codes. The codes are very broad and very general. They don't drill down. You could fold game development into at least five different classifications, depending on the specifics of what they happen to be doing.

As well, often they're very dated. The closest ones, “computer programmer” and “interactive media developer”, include developing for CDs, DVDs, and game cartridges. These are forms of media in the games industry that basically have barely been used for the past 10 years.

Clearly some of the codes are still in need of updating. We're certainly not adequately captured, and it's been challenging, to say the least.

Mr. Brad Butt: Thank you.

Ms. Peters, did you want to add something?

Ms. Avvey Peters: The only thing I would add to what my colleagues have said is that the ICT industry, and the digital media industry in particular, is moving at such a pace that it's really difficult for these things to keep up.

When we do recruitment events, we travel across the continent and we update our list of the hottest skills in demand every three months. There are careers now in the tech sector in the Waterloo region that didn't exist five years ago. Mobile applications development was really not on anybody's radar. I think the pace of change in the industry has really driven this divide between what the national occupation codes know to be true and what we're seeing day to day in the industry.

Mr. Brad Butt: I'm from the city of Mississauga, and we're very proud of our new Sheridan College campus. It opened up officially just this past September and has many students in high-tech studies. Computer animation is huge. I've talked to the president of the college and I'm thrilled with the programming going on there and the graduates who will eventually come out of it.

Here's my question for you as representatives of those companies that would be hiring these graduates. We always have this dichotomy of, “Well, yes, they've graduated, and they have a skill set, but they have no practical experience, so we're not going to hire them.”

Mr. Kee, you mentioned earlier your frustration over labour market opinions, because you'd like to get from other countries the people with three to five years of experience and get them working immediately for your member companies.

We always have this difficulty of what we do with our new graduates, who are ready to go but don't have that work experience. What can you offer to the committee to help us in our deliberations to make sure that those new graduates who leave the Sheridan College campus in Mississauga on graduation day can start to work in your industry the next day? What can we do? Where are the areas at the federal level where we can be more helpful in making sure that the transition happens so that those new graduates are getting a job literally the next day, when you're telling me there are thousands of jobs available across the country in these sectors?

Did you want to start, Ms. Peters?

Will that then probably be it for me, Mr. Chairman?

● (1610)

The Chair: Yes.

Ms. Avvey Peters: It's an excellent question.

I think probably the key for new grads is that experiential learning component. In the Waterloo region, we really try to leverage the cooperative education model, making those connections between industries and students right from their first year of college or university. It's the opportunity for a student to go into a workplace and to compare what they're learning in the classroom or the lab with what's actually happening in the industry that they want to connect with.

To go back to a point that I tried to make earlier, I think anything we can do to encourage higher adoption of cooperative education by industry and higher participation in cooperative education by students will probably help close that gap.

The Chair: Mr. Kee, do you want to make a remark?

Mr. Jason Kee: Sure, and I would essentially agree with that.

As I indicated, what we have found is that hiring at the junior levels, because we are basically a team-based industry, is typically not as critical an issue, simply by virtue of the fact that we actually need the juniors. We need the recent graduates at the junior levels to be doing the junior-level work, the grunt work, and then they work their way up the ladder. We always have, essentially, opportunities.

There is an issue in the industry, which is a longer-term issue, with respect to the mismatch of the training that's happening in some of the institutions and the skills that the graduates are coming out with and whether or not they're truly qualified. It's a much longer kind of process to try to produce that. Co-ops are, again, a critical issue. Frankly, for our industry, practical experience and a portfolio of work are more important than the degree. That's what the employers want to see, so any program that is constructed to provide that is going to give their graduates a huge leg up in terms of actual jobs in the industry.

The Chair: Thank you.

Go ahead, Mr. Anani.

Mr. Namir Anani: From our point of view, we believe there should be more internship and co-op programs initiated by the industry. A closer focus on attracting that talent early in the game, even at the high school level, and attracting them into the ICT domain is going to be key going forward.

We have initiated a pilot in over 100 schools across the country at the moment, provincially approved, on ICT, to provide not only technical skills but business analytical skills. It's gaining some great support both from academia and the industry. I think that aspect should be enlarged. We should be looking at it from a larger perspective across Canada.

The Chair: Thank you for that.

We'll now turn to Ms. Hughes.

Mrs. Carol Hughes (Algoma—Manitoulin—Kapuskasing, NDP): Thank you very much.

I'm glad that you talked about the practical experience challenges, because we've heard on a number of occasions during the study that no matter what profession is out there, it seems there is a difficulty in people who have the qualifications getting the job because they don't have that experience, so I'm assuming, based on what you've said, that training experience needs to be an integral part of the education component.

I have a variety of questions here.

Ms. Peters, you talked about the declining enrolment in the tech industry. Can you elaborate? Is there a void somewhere?

I'm trying to get some sense of how the relationship between the colleges and your organizations is working out with respect to making sure people are getting the proper training and that people are being enrolled. I know you talked about secondary education in some of your presentations as well.

● (1615)

Ms. Avvey Peters: We have a partnership with an organization in our community called the Business and Education Partnership. Their focus is on helping young students from grades 7 to 12 in making more informed career choices.

What we find is that the biggest influence on the career choices of students tends to be either their peers, their parents, or their guidance counsellors. Their parents and their guidance counsellors don't have an up-to-the-minute view of what career opportunities are available.

I can give you the anecdotal view of this, but what we hear when we go into classrooms and meet with kids and talk to them is that they don't realize what opportunities are available for them that line up with science, technology, engineering, and math. They don't think of those things as cool paths of study leading to cool careers.

As a result, part of the work that we're trying to do in a community sense is showing them what's possible, so we take young entrepreneurs, 20 to 25 years old, into high school classrooms, get them to talk about their latest activity—their new Internet start-up, the application they're building for a BlackBerry or an iPhone—and get kids to start thinking about something they can pursue once they graduate.

Part of it is really an exposure to industry in a way that resonates with them.

Mrs. Carol Hughes: Mr. Anani, you're the ICTC. I noticed that you're one of the sector councils, and you're funded in part by the federal government. Have you got notice? I know that some of the sector councils got notice that their funding is being scaled back. I'm just wondering if you're one of those.

Mr. Namir Anani: That's a fact for all sector councils.

Mrs. Carol Hughes: How much of your funding relied on the federal government, and what will the impact of this be?

Mr. Namir Anani: Some of the funding has been affected. I joined the organization approximately three and a half months ago, but I know that it took effect approximately a year ago.

We're looking at other sources of funding from the industry and we're making inroads. The purpose of our presentation today is in terms of what we need going forward, so we're not looking at the funding aspect.

Mrs. Carol Hughes: I was just trying to get some sense, because obviously you provide some important information on how to try to move forward. That funding model has been there. I'm wondering if other partners are coming to the table. You're saying you're still looking into that.

Mr. Namir Anani: Sure.

Mrs. Carol Hughes: Okay.

Do your organizations have an idea how many temporary foreign workers are being hired across the board at this point? Specifically, how many are being brought in or how many applications are being submitted? I want to get some sense as to what the needs are.

Ms. Avvey Peters: I'm sorry, I don't have a sense of that.

Mr. Jason Kee: I don't have an overall sense. I hear more from the companies with respect to the challenges they have, rather than the overall numbers. The sense I also have is that it's not overwhelmingly large, because again it's for specific positions as they come up, and to meet specific needs, which is why essentially we're looking for a fast and flexible arrangement.

The intention is also that we just want to bring some in as a temporary measure, have them train their juniors, and then two years later be left with a bunch of people who are now at the intermediate level who can handle the job on their own. They tend to leave after a few years.

Mrs. Carol Hughes: Some of the questions I had were answered previously, but the other piece that I had was this: are you coordinating with high schools and the provincial government? I'm trying to get some sense of that as well.

At the elementary level, you mentioned grade 7. I was speaking to my son in French a few years before he started playing games. He learned to speak and to read English playing these video games. Are you doing some outreach there, or is there a role for the federal government to play in getting out some communication? I'm trying to get some sense here, because I think the earlier you educate.... My son is certainly very good on the tech side, but he's going into biomedical science, so....

● (1620)

The Chair: Please give a short answer, if you could. Go ahead, Mr. Anani.

Mr. Namir Anani: I think education at the early stages of the game is very important. I did highlight that. In high school it's very important to give them not only the technical but also the business and analytical communication skills. Part of our role, as I mentioned, is that at the moment we have programs trying to cater to that and build industry support into that as much as academic support. We do that with over 100 schools across the country, with a high success rate of students going into higher education, but also being attracted by the industry, so I encourage it. It's a very important dimension to building the skill sets of tomorrow.

However, I think industry has an important role to promote in terms of the needs of tomorrow, building some internship co-op programs, and starting that cycle as early as possible.

The Chair: Thank you.

Does anyone else want to comment on that?

Go ahead, Mr. Kee.

Mr. Jason Kee: Briefly, no, we have not, at least not in a cohesive way on a national basis. There have been a number of regional or more specific initiatives. Often we find a lot of this happens with individual companies that form individual relationships with their communities. They will actually then do outreach and start to build those kinds of relationships. They foster people coming in, viewing them as long-term investments, long-term people who may come to work at the company.

One thing we can definitely do is look at video games as an entry point into the broader STEM skills. STEM skills by themselves tend not to be the most exciting area to attract young people. Video games are a way of getting them into it, and they involve all of the STEM skills.

Young people relate to video games. Once they understand they can actually be building them, they tend to get much more attracted to these kinds of skill sets.

The Chair: That's a good point.

We will now move to Mr. Shory. Go ahead.

Mr. Devinder Shory (Calgary Northeast, CPC): Thank you, Mr. Chair.

Thank you, witnesses, for coming to this committee. It will definitely help us to figure out solutions, or at least to hear from you with regard to the solutions we are all looking for.

As far as this BlackBerry is concerned, I know for sure that I don't know all of the features. I can play with this and then forget all of the other software. This new technology is developing faster than we breathe, I would say.

Canada is facing shortages of skilled work labour. We all know this. That is why the focus of our study is to garner information on how to deal with these issues. This government is working with businesses like yours to figure out how to meet their needs for skills and labour in the future, and in the short term as well. Also, it's looking for some ideas on solutions that will focus on providing more timely and precise information to job seekers on the skills they need to find meaningful employment.

I'll throw out a couple questions and I would like to hear your comments. My number one question would be whether you feel educational programs are currently providing students with the most relevant and digital skills necessary to function in the software field. Depending on whether it's yes or no, then I'd like you to highlight any particular strategies within your industry to address skills shortages you anticipate stemming from Canada's aging population.

Mr. Namir Anani: I'll start. There is another dimension that is going to compound the premise of our presentation in saying that we know the demand far exceeds supply and by 2016 there will be 160,000 jobs that will need to be filled. It's the emerging sectors of the ICT environment—the mobile, the cloud—and the creative content environment is going to add to this.

With regard to how you build the educational environment to provide that supply going forward, it's important to have a finger on the pulse of this and to have a tighter loop between industry needs and education needs. It all starts with better demand forecasting in order to know what that environment is going to look like.

There has been a lot of discussion on this environment. That's where we're suggesting that in the next number of years, for us to compete in an environment that's becoming very global—many countries have a first-move advantage on that—we need to have a mechanism of being able to forecast the jobs of the future in collaboration with industry, academia, and others.

We need to connect that with academia to measure it and point to programs that are successful. We need to help a sector of the industry that we believe should be nurtured, which is the SMEs of the future. These are the industries of the future for us.

A mechanism of better prediction of that environment is why we are suggesting that perhaps there should be a national task force to manage it. We would be more than happy to help in that environment and provide that to academia to build the workforce of tomorrow.

● (1625)

Mr. Jason Kee: On the first question, my answer is, unhelpfully, going to be that it depends. It depends, actually, entirely on the individual program. What we find is that in industry, you have programs running out of Sheridan or U of Waterloo or the Great Northern Way Campus over in B.C., which is basically a collaboration between Emily Carr and UBC and SFU, that produce exceptional graduates of exceptional talent who have absolutely no difficulty immediately finding jobs and basically have the skill set you need.

There are also a number of programs out there that don't necessarily produce graduates who are, frankly, that employable. There are always exceptions to the rule. It depends. Part of that issue is the level of collaboration between the academic institution and industry, and that depends on a lot of factors that are difficult to account for, not the least of which is the relationship of the faculty to the local industry. If you have strong relationships, you're going to have a good ability to do co-ops, you're going to have the ability to facilitate exchange, and you're going to have graduates who are actually going to have the skill set needed for the sector. If you don't, it can be challenging.

On the other side, there can be institutions that see a trend, such as a lot of people being interested in making video games, and they basically start throwing in some courses that actually aren't equipping their students. One way to address that is to have some kind of consistent accreditation process.

In the games sector, we're still relatively new. We're still young, we're dynamic, and we're constantly changing. The games sector looks very different now from what it did even three years ago. It's difficult to keep up, and as a consequence, there's no kind of accreditation. There's no standard that people who are delivering video game programs or video game courses are actually applying. They're just coming up with whatever they can come up with and having someone come in to teach it. As a consequence, it means that there's no consistency. Developing some kind of consistent accreditation is one way to actually develop that consistency.

Ms. Avvey Peters: I would agree. The overarching piece that will help in this is a constant feedback loop between what's happening in our colleges and universities and what industry is looking for. Co-op programs, apprenticeship programs, and internships are one method by which you can build that feedback loop. Another is collaborative R and D between industry and academic institutions.

We tend to think of tech as a contact sport. It's not helpful to build a new company, to build a new product, completely in a vacuum. You end up with solid new products, new companies, and exciting new initiatives when you are bumping into what's happening on a local campus or in another company and are taking advantage of any opportunity you can to see what else is happening out there. Making sure that researchers and faculty members and students have one foot in industry and one foot in the academic world is a really helpful way to create that feedback loop.

The Chair: Thank you, Mr. Shory. Your time is about up, so we'll move to Mr. Cuzner.

Mr. Rodger Cuzner (Cape Breton—Canso, Lib.): Thank you very much, Chair, and thanks very much to our guests for being here today.

Just to allay the concerns of my Conservative friends across the way, my colleague and former roommate, Mark Eyking, used to think yellow post-it notes were high tech, so you guys are like Mark Zuckerberg compared to Mark.

This is some very good stuff here today. I agree that the practical experience and developing the portfolio is certainly significant. We've heard that in other areas, as well.

You've identified that Ontario does a pretty good job with the co-op placements. Are there other provinces doing that? Are some doing it fairly well and are others not?

● (1630)

Ms. Avvey Peters: I know that there are co-op programs across the country—

Mr. Rodger Cuzner: Do they have a tax incentive?

Ms. Avvey Peters: I'm not aware of other similar tax incentives. I don't know if my colleagues may have more information on that.

Mr. Rodger Cuzner: You're not sure.

Ms. Avvey Peters: I'm not sure.

Mr. Rodger Cuzner: I like your suggestion that the federal government probably could play a role in that as well. We had the community colleges and Polytechnics Canada in the other day, and they said that only 10% of apprentices who enrol in trades ever end up completing the entire apprenticeship and moving on to journeyman. It was 7% to 10%, as a matter of fact. It's getting that opportunity.

With the co-op programs, is there a commitment to stay with that employer for a period of time, or is it just a placement, and then you just move on?

Ms. Avvey Peters: It's a placement, but if a company manages to attract a student as a co-op employee, in our experience it becomes a "try before you buy" scenario for both the student and the company. The company has the ability to see that student in action and assess whether or not he or she will make a suitable full-time employee; the student has the opportunity to see what a career in that particular company would be like.

We see a stickiness factor emerge. A student who has had good co-op experiences in Ontario is far more likely to take a full-time job in Ontario, rather than sail off to Silicon Valley, Boston, or some other technology cluster.

Mr. Rodger Cuzner: Successful businesses usually come from a cluster. There's a natural affinity. There's a synergy that comes with groups working together. You identified Vancouver as being hot right now. Montreal is hot right now. Obviously there has to be a good working relationship in both of these communities, integrated with post-secondary education, community colleges, and what have you.

Who is doing it really well? Where are they getting it done really well in the country?

Ms. Avvey Peters: From our perspective there are a number of really strong tech clusters across the country. They're right across the board—Vancouver certainly, Calgary, and Montreal. There's a cluster emerging in Moncton. It depends on the kinds of industries there, the really important relationship between industry and the post-secondary environment, and the regional strength. It's a matter of building those collaborative relationships as a means of attracting key talent.

Mr. Rodger Cuzner: Are there places in Canada that have been more successful in turning out the intermediate- and senior-level employees, as opposed to entry-level and junior-level employees? Are you seeing more entry-level and junior-level employees coming out of the tech schools, and senior-level employees coming out of universities?

Mr. Jason Kee: At least from the games perspective, that aspect doesn't matter very much. What distinguishes those at the junior level versus those at the intermediate and senior levels really comes down to experience. What matters in experience are the products you have worked on, your experience, and your portfolio. Having a solid skill set built through post-secondary education at either the college or university level is critically important when you're starting, but by the time you hit five years, your experience is far more important than the actual education you had. We find more experienced personnel coming out of the clusters because the clusters are producing more people. Proportionately, there are more people at the higher levels.

For the games sector, Montreal is among the top places. Montreal has a mature sector. It has been around since about the mid-1990s. It has a lot of large players, such as Ubisoft, Electronic Arts, Funcom, and a number of other sectors. It also has a very burgeoning small to medium-size enterprise industry and well-established relationships with the schools, such as the Université de Montréal and a number of the others. They're all producing the graduates who will then come up through the ranks.

For the others, it depends on the specifics. Vancouver, for the games industry, is changing a lot. It was a very mature cluster and focused on building console games; now that's shifting to building games for smart phones, which is a completely different skill set. They're changing in terms of the nature of the jobs they're offering.

● (1635)

Mr. Rodger Cuzner: We've just come through the budget process. I'm sure your organizations have had the opportunity to assess what's in it for them. Usually that's how people look at it.

Is it good or bad? Do you have any comments? Are there things that will help your industry in the budget? Your criticism is well founded and well taken. Would you care to comment?

Ms. Avvey Peters: From our perspective, the number one challenge for tech companies today is talent. Close behind that is access to capital. At a very high level, the measures we saw in the budget around additional risk capital being made available are a positive sign for our industry.

Mr. Rodger Cuzner: It's a positive thing.

Ms. Avvey Peters: Certainly. Yes.

The Chair: We'll conclude with Mr. Daniel.

You have seven minutes. You don't need to necessarily use them up, but you're welcome to.

Mr. Joe Daniel (Don Valley East, CPC): All right. Thank you very much, Mr. Chair. Thank you, witnesses.

One of the questions I want to ask has to do with outsourcing. In almost all of the other high-tech industries that we have here in Canada, they're outsourcing both software development and hardware development to places like India, just as an example—to Bangalore, to Hyderabad, to Trivandrum, etc.

Is there any outsourcing going on, and if there isn't, why not? You have a great skill set that's available at a price that's way cheaper than in Canada to fill some of these gaps.

This question is open to all of you.

Mr. Jason Kee: Yes, there is outsourcing that's going on. In the video games sector it's a bit different from the other tech sectors, not the least of it being that at the end of the day we are creating a creative product that is built entirely around teams that work together, often in the same physical location. They don't have to; often you can be divided up in different locations. As a consequence, though, especially on the content side of the equation, it's difficult to outsource that. It's particularly difficult to outsource that to a cultural environment that's vastly different from your own cultural environment, where the cultural touchstones about making a game are not going to be the same.

The games produced by China and India, which incidentally have extremely strong game development communities themselves, are very different from a lot of the games we produce here. As a consequence, we tend not to outsource that much to them.

In terms of very run-of-the-mill grunt work, some of that will get outsourced if it's economical, but often we find that the calibre of the work being done locally is much higher. As well, there's the fact that, again, if they're working locally—in local teams in the same physical location—it facilitates communication in a way that you just don't have when you're working with someone on the other side of the world.

Ms. Sandra Saric (Director, Talent Initiatives, Information and Communications Technology Council): With respect to skills and labour shortages, these are the areas that are not being offshored, so when we look at that—as Mr. Kee mentioned, we're talking about the content side—we're also looking at security occupations, management occupations, and analysis, meaning a lot of the mid- to senior-level occupations. With intellectual property, the challenge is that you don't want to lose that intellectual property, so the areas where we're really seeing a shift in Canada are around those occupations. That's not to say that occupations for new graduate are not there, but those are really a lot of the areas of labour and skill shortages.

Mr. Joe Daniel: Would you like to comment, Madam Peters? No?

All right, then, I'll switch subjects. Somebody mentioned that about 1,200 are coming out each year. How many of those are actually poached to other countries, such as the U.S.? How many of them actually stay in Canada?

Mr. Namir Anani: I'm sorry; I didn't hear the question.

Mr. Joe Daniel: Of the graduates who come out each year, how many of them actually take up jobs here in Canada versus going to pick something up in the U.S. or Europe or somewhere else? Do you have any idea?

● (1640)

Mr. Namir Anani: I don't think we have anything specific on that.

Ms. Sandra Saric: It's a good question. We've just completed a study on the impact of immigration, not emigration, but we can definitely look into all the data and get our research analysts to look into it. It's very difficult, with respect to exit, to track individuals other than at border crossings.

Mr. Jason Kee: I don't have any concrete data. I know that in the games sector, because of the way we're regarded internationally, we are a destination for people to come to. People tend not to leave, as a consequence. We accept more people from other jurisdictions.

Four years ago, the U.K. in particular was number three and we were number four. Now we're number three and the U.K. is number six. The U.K. blames us. A lot of their developers have actually come here.

Mr. Joe Daniel: Would you like to comment, Ms. Peters?

Ms. Avvey Peters: I can say anecdotally that we have a sense that our regional technology companies aren't capturing as many of our local grads as we would like. These are really talented people. They can work anywhere in the world. We do our best to try to build an affinity for them locally so that they stay, if not in Waterloo region, then at least in Ontario or Canada, but I don't have any hard numbers.

Mr. Joe Daniel: Okay.

Given that the industry is so dynamic, with many changes in techniques, etc., in just a few years, what sort of things do you think you need to feed back from industry to the educational institutions in terms of changing the skills being taught so that you actually get what you need?

Ms. Avvey Peters: I would go back to the point that Jason made earlier, around the system in general, which is that the principles of speed and flexibility are really paramount. I know, having some spent time working at a university, that it's really difficult for an academic institution to overhaul a curriculum and change direction drastically, but I think those two principles are things that industry is really seeking and that we should be trying to build into our partnerships with academic players.

Mr. Jason Kee: I would agree entirely. In my own view and I think generally the industry's view, the most successful partnerships, the most successful programs, are ones that were built with input from industry and are ones that are also based largely on personal relationships in the community where you have that kind of flexibility built in.

Trying to do something from the top down is very tough, because the academic environment is such that it's extremely difficult to make quick changes, so building in that kind of approach from the outset is critical.

Mr. Namir Anani: I think this environment is changing at such a dramatic pace that whatever we know today is not whatever is coming out tomorrow. I keep saying that the iPad 1, which we think of as ancient technology, came out in March 2010, which is not that long ago.

The reality is there should be some better forecasting from the industry in terms of the job needs of tomorrow. When we talk about the job needs of tomorrow, we mean the predicted jobs—where things are going. There's a good indication of where that demand's going to happen, whether it's in the mobile arena, whether it's in the....There are some great indicators that are taking place at the moment that can give that projection.

You have to factor the lead-in time to build that through academia, so I think better forecasting, a better handle on that environment and on connecting with academia, is going to be important going forward.

Mr. Joe Daniel: I have one other question, then.

Coming from an engineering background, I know that being a good engineer means you get promoted into management and you make a lousy manager. What is the industry doing to ensure that people in the supervisory roles are actually not just technically savvy, but also have some good management skills?

Ms. Sandra Saric: I can speak to some of the programs. I can actually speak to it in terms of one of our programs that we do for internationally educated professionals who are managers. One of our programs is called coaching to career. It's really focused on what you need to be looking at and doing if you are a manager, and then it matches you to a coach who's in the industry in that occupation. The hope is that the individual in that occupation also learns leadership through this. That's an example of one thing industry is doing.

I appreciate the comments, because it's definitely a challenge in our sector.

Mr. Joe Daniel: Does anybody else want to comment?

Mr. Jason Kee: I would agree entirely that it is a bit of a challenge. I'm not speaking now of what the industry does, but my own philosophy when it comes to this aspect is that often it's a lot easier to train a business person about some of the details of the industry than it is to train a technical person or a creative person about the details of the business.

Often we find the technical guys remain technical guys; they may become technical directors and have a team under them, but they'll still be involved in that side, while we have producers and business and legal people handling the more business-oriented aspects of it, which is an arrangement that people tend to be more satisfied with.

● (1645)

The Chair: Your time is up, Mr. Daniel. I know you'd want to pursue it a little further, but we've come to the point where I'm going to suspend for a few moments while we go in camera.

I'd like to thank each and every one of you for your presentations and for identifying some of the concerns in your industry and sector and for your suggestions as well. It's obviously a growing and dynamic sector, and to learn about anything we can do to assist and ensure you can continue growing and expanding by having the human resources you need is very helpful for us for sure.

Thank you once again for attending before us.

With that, I'll suspend the meeting.

[*Proceedings continue in camera*]

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