SUMMARY

LOWER MAINLAND CONSULTATIONS
SURREY
APRIL 6, 2004

This document is a summary only of presentations made during the regional consultations in Surrey on April 6, 2004 and written submissions provided to the Premier's Technology Council. Every effort has been made to consider all input presented and be as accurate as possible. However, errors or omissions may have occurred. Please notify the PTC of any significant inaccuracies at

Premiers.TechnologyCouncil@gems8.gov.bc.ca.

SURREY CONSULTATIONS

Date	:	Tuesday, April 6, 2004
Time	:	08:00 - 17:00
Location	:	Surrey Chamber of Commerce
		#101 - 14439 - 104th Ave
		Surrey, BC V3R 1M1

In attendance:
- Jim Mutter, PTC President
- Darcy O'Grady, PTC Council Member
- Len Juteau, PTC - Director of Operations
- Pratibha Sharma, PTC - Analyst
- Tia Tjandisaka, PTC - Analyst

AGENDA

Time	Organization	Name	Page
8:20 am	Career Connections Training Centre	Gail Goulet Shirley Gust	1
8:40 am	Samco Software	Ajay Caleb	2
9:00 am	LinuxMagic Inc.	Michael Peddemors	2
9:20 am	Performance Partners LLC	(Charles) Len Shaffer	3
9:40 am	School District 36 (Surrey)	Cynthia Lewis Shelley Wilcox Sharon L. Cohen	4
10:00 am		Allan Alton	5
10:20 am	Focus Foundation of B.C.	Dr. Phil Mann	6
10:40 am	Business Consultant	Benjamin Chua	6
11:00 am	Imagis Technologies	Roy Trivett	8
11:20 am	Lambda Solutions	Shevy Levy Jim Yupangco	8
11:40 am	Women's Enterprise Society of B.C.	Kathryn Loewen	9
1:00 pm	PathNet Services	Lindsay Allan	10
1:20 pm		Miguel Todaro	11
1:40 pm		Geoffrey Gachallan	12
2:00 pm	SFU students	Paul Cyr Zephaniah Wong	12
2:20 pm	Argon Security Technologies	Lee Vishloff	13
2:40 pm	Hi-Performance Enterprises Inc. E-Card ID Products Whistler Chamber of Commerce	Ethan Huberman Les Pilchak Kyle Fairfield Don Dewar	15
3:00 pm	APS Group	Susan Johnson Robert Tremonti	16
3:20 pm	Universal Learning Institute	Karey Mah Bakhtiar Hasan	18
3:40 pm	SFU-Digital Lab for Learning Technologies	Dr. Michael Leung	19
4:00 pm	SFU-Surrey	Joanne Curry Dr. Ron Wakkary	20
4:20 pm	Canadian Waste Services Inc.	Wayne Simle Cam Hantiuk David Riley	22
4:40pm	Canadian Council of the Blind	Michelle Creedy	23

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CAREER CONNECTIONS TRAINING CENTRE
Gail Goulet, Shirley Gust

- Career Connections Training Centre provides employment services and job placement for low income people.
- High-tech businesses are good for communities as they are environmentally cleaner and bring in educated people, and the spin offs generate companies.
- There is a need to continue with excellence in education and training opportunities for students, entrepreneurs, business owners, workers and their children.
- In order to attract people to BC, there is a need to keep the environment clean and to provide a good standard of living. This will include tackling the problems of crime, drug & alcohol addiction and homelessness through education.
- Disadvantaged people should be given incentives to study and have access to resources and programs.
- Invest in adult education at all levels of the socio economic scale. A lot of money is allocated to post secondary education, which is a small percentage of population, there needs to be similar investment for other programs helping those with lower socio-economic status
- Increase integration of foreign trained immigrants into the workforce.
  - credentials for foreign trained immigrants are not recognized. Language and social/cultural issues need to be addressed.
  - Government needs to work with professional associations to ensure integration.
- Work more closely with the Federal government to ensure that the taxpayers in BC, including Employment Insurance (EI) ratepayers, are provided with workforce solutions for British Columbia. Examine the possibility of resurrecting the Labour Market Development Agreement.
  - Funds are consistently sent back to Ottawa, even in areas of high need like Surrey, as the programs Human Resources Skills Development (HRSD) designs do not seem to fit the labour market needs of BC communities:
  - Programs that work and have excellent success rates are not renewed. The services to the unemployed are scattered and difficult to access.
    - o Money available from federal sources is not spent as it takes a long time to apply for funding, and the requirements change often. Funds are allocated on year to year contracts, and innovation is a requirement. Therefore funds are allocated to new ideas each time. If something works consistently then people know where to find it, otherwise advertising costs have to be borne every time and due to lack of awareness the right participants may not join these programs.
    - o The funds don't pay for labour costs, while administration costs, like business licenses are necessary. Rules specify that there should be no profit and no administrative costs.
- Provincially we need access to money, there is a surplus in EI, we are not serving people that need to be served
- Urban divide is different; while connectivity is available training is needed so that people can access programs and education.

Message to the PTC:
- Continue with excellence in education and training opportunities for students, entrepreneurs, business people, workers and their children.

- Continue to provide a good standard of living by keeping environment clean and tackling the problems of crime, addiction and homelessness through education
- Invest in adult education at all levels of the socio economic scale.
- Increase integration of foreign trained immigrants into the workforce.
- Work more closely with the Federal government to ensure that the taxpayers in BC are provided with workforce solutions for British Columbia.
- Clarify the regulations for funding, successful programs that are needed should be renewed as opposed to only renewing new/innovative programs

SAMCO SOFTWARE
Ajay Caleb

- Company works with Radio Frequency Identification (RFID) technology
- Technologies are usually developed in isolation, and are good for specific application – this technology is moving towards integration, and requires planning and preparation
- RFID readers transmit signals to activate RFID tags and extract the data. When linked to management software each tag can reveal characteristics about the item as well as supply chain information.
- They can help in improving efficiency and inventory accuracy, as well as addressing security issues.
- Main areas to benefit will be product receiving, maintaining shelf stock, maintaining product freshness, reducing checkout labour, theft, returns/warranty authentication etc. Detailed histories can be obtained through usage, for tracking various lifecycles of products.
- It reduces time spent on different tasks – time spent in receiving, checkout, physical counting is reduced drastically.
- Current concerns are unplanned deployment, there is no synchronization within the entire industry. The cost of implementation is high and gains can be achieved through cooperative, long term thinking.
- There is a lack of long term vision and because of information security and privacy concerns the technology is being held back.
- Governments and companies must agree to design a system between the extremes of misuse and disuse of policies.

Message to the PTC:
- Governments and companies must work together to design a system between the extremes of misuse and disuse of policies, technology development for Radio Frequency Identification (RFID) technology is being affected by information security concerns.

LINUXMAGIC INC.
Michael Peddemors

- BC government should evaluate Linux
    - create a Linux advisory board to analyze its spending priorities
    - the cost of per use licensing in government is staggering – these savings can be applied elsewhere in government

- There has been a rapid shift for Linux due to better security features, costs of combating viruses. It has been adopted by many.
    - China and India have adopted Linux and endorsed Linux as part of their strategy
    - US uses Linux servers for reasons of security and costs
- US companies may find it cheaper to outsource to Canada as opposed to India or China
- Cost saving for using Linux depends on the type of work:
    - Amazon has saved 25% of Information Technology (IT) budget by switching to Linux.
    - In some cases, switching to Linux is not the most cost effective option because licensing is not the only factor. Productivity should also be considered.
    - On average a call centre can save $300,000 per year for desktops in administration and licensing costs
    - With Linux, the development and product costs are lower
    - Abbotsford school district and British Columbia Institute of Technology (BCIT) are considering switching to Linux, they have approached Linux Magic for advice. Need more resources to conduct evaluation.

Message to PTC:
- Need an independent advisory body to evaluate the use of Linux to support local companies

PERFORMANCE PARTNERS LLC
(Charles) Len Shaffer

- Local communities must position and brand themselves. On the Leading Edge British Columbia website, five out of seven references mention only Vancouver, the focus is mostly on Vancouver. Local communities who wish to have a high tech focus, need to find a strategy to commit to.
- High-tech is focused around creativity and innovation – their needs are quite different. The State of Arizona did a study on six high tech segments, over 95% of them export their products (i.e. they are not selling locally). High tech industry is marketing driven.
- A Harvard study indicated that smaller communities need to find where they can compete, as they cannot compete with everybody and need to have a specific focus.
- Resources cannot be used for two different types of development – high tech versus traditional (industrial) development, communities have to choose which one they will pursue
- Communities need to have a branding strategy
    - They need to clarify what their community offers to the high tech industry.
    - They need to find the primary benefit to the target audience, convey it to them and keep it consistent. Their actions have to deliver on promises.
- Leading Edge British Columbia has fallen into the trap of focusing on Vancouver. Tax money comes from the whole province and they should help local communities fit in. They need to have a kind of process where communities submit information to Leading Edge British Columbia and get help in marketing themselves
- Pitfalls that Leading Edge British Columbia should avoid:
    - paying attention only to the squeaking wheel, some communities don't do much squeaking
    - becoming Canadian centric. In order to sell outside they need to do market research.

- retention issue. Currently advertising to attract people, but also need to retain. Companies get bought out, there is a need to keep them locally and grow them locally
- advertising to themselves. Focus attention on developing clusters, need to target areas in the world with those particular industries.

- BC has a competitive advantage and that is quality of life. With technology, people can do business anywhere in the world, they don't need fixed infrastructure. Should focus on attracting privately held companies, i.e. individuals with families where quality of life is important.
- Local communities, Vancouver and BC should have a powerful message to market globally.
- Transportation and communication systems are critical to economic development

Message to the PTC:

- Need a strategic planning approach to help communities decide whether to commit to high tech developments and which clusters to target
- Develop a roadmap and provide related assistance to committed local communities to brand themselves as the best place in BC or Canada to develop high tech company
- Market BC globally, and work to attract privately held companies.
- Recognize the importance of transportation and communication infrastructures to economic development

SCHOOL DISTRICT 36 (SURREY)
Cynthia Lewis, Shelley Wilcox, Sharon L. Cohen

Current Initiatives:

- Currently revisiting policies on on-line learning
- Creating online communities will enhance learning, need to construct and exchange their own knowledge.
- Integration of wireless technology in classroom, 20 of 120 schools, have conferencing and chat capabilities, with a place to post and exchange documents
- Have to make it usable and accessible to every teacher, and make it sustainable
- Build programs into portfolio, and make it part of graduating requirements
- Use programs to explore parent accounts and accessibilities
- Make use of student accounts for school and district goals
- There is always a face to face component and there is integration of various components
- Online courses offered through cool school and WebCT
- Use courses as resources for teachers and students, helps beginner teachers as courses are laid out. Also it is a resource for students who need extra help or to use if they are away.
- Pilot phase program – Surrey Connect, and Home Learning Program – has 177 students
- Using laptops in classrooms, resources for teachers – templates for course content

Recommendations:

- Need sufficient bandwidth, need it to be able to use engaging (multimedia) elements in online courses

- Need funding for BC Ed Online for course development. For comparison, the cost of developing one course is $30,000, Alberta has $400,000 allocated for their online consortium. BC campus has $8 million per year allocated
- Need for creation of repository of learning objects – need to build a consistent system, working with BCCampus - repository of learning objects that can be accessed by health and education
- If the Province puts in more funding, each School district would likely pay a fee to participate, and will need to partner with post secondary institutions and industry.
- The issues of equity and accessibility in schools need to be addressed. Money should be spent to provide services to children who need it as well for training teachers. Need staffing to support infrastructure, need multimedia staff
- There is a need for a blended model for most children, with both face to face and online learning components.
- Need infrastructure support to sustain computers in schools and replace outdated hardware
- Need a consistent student information system throughout the province which is not a financial burden to districts. The Ministry should fund this kind of initiative.

Message to the PTC:
- Need sufficient bandwidth to be able to use engaging (multimedia) elements in online courses
- Need funding for BC Ed Online for course development
- Need to create a repository of learning objects
- The issues of equity and accessibility in schools need to be addressed.
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ALLAN ALTON

Security for Home Internet Users
- There is a need for public education and awareness regarding security
- Bridging the digital divide is a priority but there is also a need to educate public on security issues
- Once people connect the home computer to internet, there are many security issues, such as hacking, identity theft, unsolicited commercial email (SPAM), stalking, inappropriate material, viruses, worms, scams, frauds, and other privacy threats
- Premier's Technology Council should advocate computer literacy, and recognize the need for security. There is no public education for potential threats
- The US government has recognized the need. The Department of Homeland Security has launched a national cyberspace awareness and training program
- The problem is not isolated to home computer users, it also affects small business owners.
- Would like to recommend an awareness and education program to educate public on security issues
- Have contacted security organizations, such as the Information Systems Security Association (ISSA) but not received any help.

- Currently no government outreach programs exist for public or industry.
- Government can be a catalyst for promoting security and privacy issues

Message to the PTC:

- Premier's Technology Council should advocate computer literacy, and recognize the need for security.
- Government should have an awareness and education program to educate public on security issues

FOCUS FOUNDATION OF B.C.
Dr. Phil Mann

- Examining youth and distance education. Work with youth who don't go to school, disadvantaged youth/youth at risk
- These youth have a variety of disabilities, such as fetal alcohol array, dyslexia etc.
- There are seven or eight ways that people take in information such as visual, oral, written etc. But, there is no software available to have course content adapted to different teaching styles
- Need to set funding aside to develop software for people who have diverse learning needs
- Around 18-20% students don't graduate from high schools, there is a need to reach out to these students. They don't function well in regular school system, they learn a lot through technology
- Isolated areas do not have facilities to help these youth, distance education is useful
- Need to have skills to work with these kinds of youth and need the technology to help them
- School has a big impact on at-risk youth, helps with prevention and bringing these youth back into the system
- Public schools don't have the time to spend on these youth
- Need either software to automate the different styles of learning or some funding to develop their own software, need specific kinds of learning for different kinds of disability
- Ideally would use technology and internet to provide more interactive way to help children learn. Could form a global community of learners, to make education more meaningful to children

Message to the PTC:

- Need to set funding aside to develop software for diverse needs of students, especially youth at risk, and those who have specific learning disabilities

BENJAMIN CHUA

1. Raising BC's profile in the international arena as a vibrant source of technological innovation
   - BC already has a world class technology base, as evident by the recent Severe Acute Respiratory Syndrome (SARS) crisis and the sequencing of the virus strain by a BC company. BC has an active and entrepreneurial, research and development community and is home to many large companies

- Internationally, BC is better known for its geography and geology and not for its capacity for intellectual innovation. This is reflected by lack of investment. The ratio of venture capital dollars to Gross Domestic Product (GDP) for 2002 is 0.14%. Whereas, for 1999 data, the other major centres were Austin – 1.83%, Seattle – 2.71%, and San Francisco – 5.5%.
- Lack of investment dollars hampers business expansion, and development of BC economy. Research conducted for the National Venture Capital Association in US found that venture capital investment between 1970 and 2000 resulted in the creation of companies responsible for 7.6 million jobs (5.9% of jobs) and 13.1% of the Gross Domestic Product of the US in 2000.
- There is a need to create a vehicle for promoting BC industry in the international arena, in order to attract investment from outside BC. This body should be within the Provincial Government and tasked with promoting BC industry nationally and abroad. This body could also help BC companies explore foreign markets; it could have offices in key foreign locations thereby projecting its presence internationally.
- This body should also take the opportunity to leverage the extensive network of contacts of resident immigrants. Region/Country specific business associations established under this body could perform this function, the Government of New South Wales appears to be using a similar model
- An important feature of this body could be an annual 'road show' to showcase BC companies and university research and development, working with the local members to promote the event

2. 2010 Winter Olympics: Catalyst for Innovation
    - in order to utilize the 2010 games as catalyst for technological innovation, an advisory group should be formed, tasked with establishing a technology vision for the games.
    - A specific venture fund could be established to assist BC based companies that produce winning ideas.
    - During the games, subject to IOC rules, an exhibition may be held concurrently to showcase these and other BC companies

3. Development Marketplace: A tool for harnessing ideas
    - In 2000, The World Bank held its first 'Development Marketplace' in Washington, DC. The objective was to promote innovative development ideas through early seed stage funding. It also sought to link social entrepreneurs with poverty fighting ideas to partners with resources to help implement their vision. Since its inception, the World Bank has awarded more than USD $22million to over 370 projects.
    - A similar program could be launched in BC to harness tangible ideas for solving issues faced by the Province. All BC residents could be encouraged to participate. Funding should come from both public and private sector.

Message to the PTC:
- Establish a marketing body within government that is tasked with marketing BC to attract foreign investment as well as helping BC companies target foreign markets. This body should also establish regional offices to help the promotion and conduct annual road shows to increase awareness about BC companies and university research and development

- Utilize the opportunity for 2010 Winter Olympics by establishing an advisory body that formulates the technology vision, and a specific venture capital pool to assist companies. Use the games to showcase BC companies
- Utilize a model similar to The World Banks' Development Market' to encourage people in BC to find innovative solutions to problems in BC

IMAGIS TECHNOLOGIES
Roy Trivett

- Background in telecom software, co-founded company in Ontario called Arcatel, which was sold to Nortel for around $600-700 million
- The company has a focus on facial recognition, have successfully built that technology
- Software development for facial recognition algorithm
- Successfully deployed in California, for gang tracking, and in UK (asylum seekers)
- Current focus is law enforcement and security agencies – to bring data sharing and biometric solutions to new verticals, system used in investigative process – huge data to be analyzed – this technology reduces the workload required to analyze data. King County has had almost state wide rollout of the system
- There is a an architectural mindset in data sharing, that all problems can only be solved by data warehousing, this solution is based on industry standard web services technologies
- This solution solves two problems – there is no need for big expensive data warehouses, and no time factor involved. There are a lot of savings, such as safety of officers.
- Securely integrate numerous disparate databases, with rapid implementation, can turn on facial recognition capability against legacy imaging applications,
- Currently underfinanced and seeking financing
- Need more opportunities to put it into businesses and governments

Message to the PTC:
- Company is seeking financing and opportunities within businesses and governments

LAMBDA SOLUTIONS
Shevy Levy, Jim Yupangco

- Research spin off of Simon Fraser University (SFU), clients include Continuing Legal Education Society of British Columbia (CLE), Creo, Insurance Corporation of British Columbia (ICBC)
- Help companies move from costly models to cost-effective models of training
- CLE, University of British Columbia (UBC), University of Victoria (UVic) all had different approaches and methods, they wanted to standardize the process, provide a hub of resources through a web site
- Built a tutorial builder – to provide ongoing learning support from students, research record – allows students to organize their research and get in sync with the process
- Creo - required a different skill set for trained technicians – needed a learning map, the product Lambda Analyst performs gap analysis – provides recommendations for courses and learning

- ICBC – the competitive market was increasing – they were striving to provide more services to their clients. Provided pilot courses for Autoplan – they had no standards for delivery, were looking for different revenue model. Now they can reuse parts of courses to build other courses because of modular design
- These three had different profiles, similar needs. Needed cost effective solutions – most need to create products – e-learning is about product creation.
- BC has a small market for e-learning.
- BC Ed Online has products but people cannot use them.
- Government can create a need for material, and once developed companies can market to other governments.
- BC doesn't take advantage of opportunity – Canada leads after Sweden in e-learning.
- Need to establish a global standard for e-learning – US Army came up with standards for learning objects – standards already exist for training. BC already leads in education technology – can provide those standards – TRLabs and SFU can help.
- Need to get government to use e-learning – Public Service Agency has some initiatives but nothing established – small initiatives
- There is a big demand in companies locally – BC is a small industry, need to look outside – how to approach outside markets – Asia and other markets.

Message to the PTC:
- Government can utilize local companies for e-learning solutions, and with this expertise companies can market to other governments.
- BC should take advantage of opportunity to lead in e-learning
- Need to establish a global standard for e-learning

WOMEN'S ENTERPRISE SOCIETY OF B.C.
Kathryn Loewen

- Provide services for start ups and expansion, business counseling and resources, business skills training
- In May 2003 started the 'Business Beyond the Box' program, an online training centre
- E-learning is useful because of geographically diverse base. Society's head office is in Kelowna and the target market s the Heartlands area
- Help people meet family/business commitments, and it is an effective way to deliver core business skills
- Short and inexpensive courses for under $100
- Supported by a team of business analysts
- The effort in producing a course is high, 1 hour of online course takes 60 hours of work
- Some e-learning courses are developed in-house but also working with other organizations to provide courses.
- Website has a learning management system – it includes all software to register, pay for courses, has a content management system and resource libraries
- Currently developing Biztown as an online business community, it will be an online portal to help business to business facilitation and mentoring

- Moving forward – need partnerships, would like to share resources, already have infrastructure in place.
- Mentors bring in expertise for entrepreneurs
- Contracted with Desire to Learn, funded by Western Economic Diversification (WED), and the previous Ministry of Competition, Science and Enterprise

Message to the PTC:
- Need partnerships with other organizations, would like to share resources, already have infrastructure in place for e-learning systems

PATHNET SERVICES
Lindsay Allan

- PathNet is a BC Company that provides real time diagnostic information
- Provide access to authorized care provider
- Modernize and secure diagnostic data transmission
- Allows disparate systems to link up & present standardized diagnostic information to physicians
- Currently transmit over 50% of BC's outpatient laboratory data through it
- It is a secure Provincial network that has already been established
- It supports the lowest and highest level of physician office sophistication
- Currently operating at a fraction of its potential
- It can be a single access point for multiple data streams, such as: laboratory results (BC Biodmedical, MDS Metro and Valley Medical), surgical reports (used in Surrey Memorial), drug history (through PharmaNet), and physician to physician connectivity

Next steps
- PathNET currently provides global access to diagnostic information to authorized physicians and other health care providers in emergency departments within Vancouver Coastal Health Authority.
- Collaborating with other vendors of physician office systems
- Next projects will look at providing information at the right time – working with Vancouver Coastal Health Authority –authorized emergency department, preadmission and radiology personnel can have global access to privileged data
- Wireless – can provide alerts and patient record history on handhelds, e-prescribing is next

Benefits of PathNet
- Can help position BC as a leader in local and national Electronic Health Record (EHR) initiatives (through CHI - Canadian Health Infostructure)
- PathNet supports provincial government's economic objectives and IT as a solution
- Infrastructure already exists to support legacy lab and other systems
- Opportunity to build a province-wide system
- Cost Avoidances, can build on what PathNet is doing and invest public health care dollars in other health care priorities. For example:

- the order entry module supported by smart protocols can achieve additional savings in the diagnostic budget (20% of current diagnostic budget - based on a US studies),
- Using the MD Contact software, reduce wait times by 6-8 days for referral to specialists and save $10m per year on 'inappropriate referrals'

Challenges

- Bureaucratic roadblocks – restructuring of health authorities has been a challenge. There are ownership issues and conflicting priorities due to fiscal restraints
- Within each health authority there is a drive to build independent solutions, on surface they appear to be coordinating, but there are data ownership issues
- Change management is required, physician offices are sometimes outdated
- PathNet solution - security of the product has been tested, 5700 users are satisfied, the business model currently is that sender pays, moving towards ASP solution to provide utility for physicians, model is to provide services and support, and use multiple repositories through authorized access
- Can be used as a licensed application, PathNet is filling a void, currently investigating opportunities in other provinces and jurisdictions
- The vision of health authorities is an enormous solution to build, and they are not cooperating
- CHI is aware of PathNet; it is a replicable, scalable, economic solution
- Services can be provided to physicians
- Worked with Centers for Disease Control and Prevention (CDC) and have had discussions with Ministry of Health Resources
- Have basis of EHR, HL7 (Health Level Seven) current capability is 50,000 messages per hour

Message to the PTC:

- PathNet has established a solution that can be used for Electronic Health Record implementation and for providing other services for physicians, this will result in savings and public health care dollars can be invested in other health care priorities

MIGUEL TODARO

- e-learning has not evolved, companies are only interested in making money, and interested only from a business perspective,
- Companies are selling products, can only learn by paying, only courses, lessons pre-packaged material, very little free material is available
- Would like to propose a project – creating an e-learning portal – create an environment where people can find what they want – once this is created – we can add value, if someone wants to buy then they can otherwise free content will be available
- Base products for adults and for children
- Children can learn to use internet to learn
- Products are typically linear and don't allow for natural learning styles
- Inter-modal courses embrace the concept of deciding what to learn and changes courses accordingly

- It is a large project and government should take a similar project into consideration
- Currently the courses have no learning process – static courses – they need to be interactive
- The portal should have freely available courses – it should be a reliable virtual lessons, and courses
- Reliability is important – either universities or government can provide these courses

Message to the PTC:

- Government should provide freely available courses through an online portal

GEOFFREY GACHALLAN

- Worked at Nortel, Bell Northern Research, MDA
- Also an Executive Producer for 'Technically Speaking' which is a radio show, with local hosts and experts who are brought it
- Self professed Technology Handyman – broker of telecom services
- BC has some advantages, natural environment, quality of life, sustainable development, it is the preferred province to retire in Canada, people cannot have this quality of life in Regina
- In the business environment there is a perceived lack of head offices, no jobs, lack of available large scale industrial, lack of redundant highway transportation infrastructure
- From the infrastructure perspective, large capacity in urban infrastructure, we have the cheapest infrastructure capacity, availability of low cost reliable power and water
- Next Generation workers – 80% of new businesses generated from SOHO (Small Home Office), generation of independent creative workers, rebelling from traditional corporate culture, High tech industries – New Media, Health, Environment
- Intellectual Property (IP) of knowledge worker stays with the worker
- Industry and Technology are changing rapidly, SOHOs are creative problem solvers, usually branch office workers working from home.

Recommendations:
- Should promote virtual labs and incubation - to make it easier for them to pitch the ideas

Message to the PTC:
- There is a need to promote virtual labs and incubation

SFU-STUDENT
Paul Cyr, Zephaniah Wong

- 4th year business students at Simon Fraser University (SFU), bringing in the experience from the university environment
- Universities play a big role in technologies
- Universities are a city and an environment. BCIT teaches hard skills, but universities are where thought processes are developed as well methodologies for Information Technology (IT) management are learnt

- Technology connectivity versus readiness – readiness usually not developed yet, ability to use, implement and manage IT is important and universities can help bring it
- Most benefit is obtained from outside classroom learning – through activities, implementing IT in various ways will benefit technology development
- Improve this through case competitions, as an arena for university students to be put in pressure situations, with judging panels where they are forced to come up with a technology driven solution to a technology problem. It is realistic and does not have the risk of real life
- Currently Canada has some case competitions, but only one or two with IT or Management of Information Systems (MIS) component in BC
- In 2002 formed a committee and held a competition at SFU, with sponsorship from local companies – received feedback from students and judges, it was a success only within SFU
- Original vision was to hold a global case competition
- Would like to convey the importance of case competitions to the PTC
- Primary cost is providing the bells and whistles for participants, accommodation costs, utilities cost, judging packages, administrative costs, subsidized hotel rooms and banquet.

Message to the PTC:

- Case competitions, especially in the field of Information Technology are essential in aiding the development of strategic skills for students at universities, there is a lack of such competitions in BC

ARGON SECURITY TECHNOLOGIES
Lee Vishloff

- Argon Security Technology is a new company. They sell mobile wireless surveillance equipment and systems
- Current innovation strategy involves working with universities for basic research, and some applied research, it is mostly industry driven
- Growth strategy includes increasing funding at university. Research money flows in like a funnel – federal programs are putting more money in the funnel. BC should make the funnel bigger by smoothing the technology flow to universities
- There are three problems – time, commercial hardening, and Intellectual Property Rights (IPR) Royalties
- Time: Typically market driven view of research is that once you find a problem and isolate a need, you need to develop a proof of concept, design, produce, and sell, thereby growing the economy.
- Time issue – involves going around research loop, and the process requires a staying power – good research projects require many years
- Process for working with universities is as follows: once you Identify the need, you need to search for a professor, then the professor writes and submits proposal, which is peer reviewed, the professor finds students, they conduct research and write papers, university files patents, company negotiates and then uses the products. The entire process can take from 4-7 years – there is no existing supplier to supply market needs for research
- Commercial hardening - university technology is never in commercial form – it is usually in pre competitive form

- To make it commercial a company needs to improve quality, mix with other forms of technology, and customize for specific application/market. Significant Intellectual Property (IP) is added here by the company.
- Best people to help with hardening are the base technology creators, universities could help with this
- Issues: this work is not publishable or suitable for thesis, no credit for teaching load for consulting, ownership of mixed IPR is an issue, and access to specialized test equipment and university labs with skilled personnel is awkward
- Currently British Columbia Institute of Technology (BCIT) and TRLabs are good at technology transfer
- IPR issues are blocking cooperation – currently university owns it
- If small companies use many different technologies then the royalty issue becomes a problem, there is more value in growing the industry than in universities collecting royalties
- Research pool structures such as Networks of Centres of Excellence (NCE's) and TRLabs work well
- The pre-competitive base technology should be shared with all members – it could be part of membership fee, scale fee with revenue
- Commercialization is via research contracts – companies pay full freight, IPR rests with company or by licenses

Recommendations
- TRLabs – partnership or similar structure in BC – SME program attractive option for us, Access to wireless labs and staff, right attitude
- Provide BCIT tech centre type infrastructure at University of British Columbia (UBC), University of Victoria (UVic), and Simon Fraser University (SFU) for smooth occasional access to university labs and people, fastest way to file technology to an application
- Resolve the IPR impediment – create a pool structure to provide pre-competitive research, more benefit to BC in growing Information and Communication Technology (ICT) businesses that in growing university royalty streams
    - The IPR model works a lot better in hard sciences – life sciences etc.
    - For example Stanford generates very little money on royalties – professors earn a lot of money from research contracts – the industry invests too
    - There is availability of mentors etc. in Bay area
    - In terms of university regulations, UBC is very similar to Maryland. Waterloo is more aggressive

Message to the PTC:
- The process of commercializing research from universities should be made easier
- There is a need for organizations like TRLabs (or a partnership/a similar structure) in BC. It provides access to wireless labs and staff with the right attitude
- There is a need to provide a British Columbia Institute of Technology (BCIT) Technology Centre type of infrastructure at University of British Columbia (UBC), University of Victoria (UVic), and Simon Fraser University (SFU) for a smooth, occasional access to university labs and people, and fitting a technology to an application in the fastest way
- Resolve the Intellectual Property Rights impediment - create a pool structure to access pre-competitive research

HI-PERFORMANCE ENTERPRISES INC., Ethan Huberman
WHISTLER CHAMBER OF COMMERCE, Don Dewar
E-CARD ID PRODUCTS, Les Pilchak, Kyle Fairfield

- Hi-Performance Enterprises Inc. provides web based software development
- Clients include 9 BC chambers which use the product ChamberSuite. Also host the site for Leading Edge British Columbia (Leading Edge BC)
- Database driven websites are used, which include online survey modules – ability to post surveys on their website which are tabulated and graphed online
- Joint project with Whistler Chamber of Commerce, e-card, and Hi-Performance
- E-card – "Learning Communities" project – working with the Resort Municipality of Whistler and Chamber of Commerce, through Human Resources Services Division (HRSD) – objective is to promote lifelong learning and development of community learning and initiatives and have an actively engaged community.
- It is a federally funded program, provides a chance to work with community initiatives – and an opportunity to exchange information.
- Web based business application technology has survey analysis capability. The Chamber of Commerce provides incentives for the community, such as local discounts
- Photo Identification (PhotoID) technology can be used to help provide these incentives.
- Incentives are known to work – currently Whistler spirit program has 2,500 participants. They participate online, and take a four hour workshop on customer service excellence, to get 30% discount on ski passes
- Photo ID authentication can provide proof of eligibility to receive benefits, it will be non-transferable, and an innovative way to demonstrate support and knowledge of service excellence standards
- Promotes Shopping, Learning and Playing locally - promotes businesses, obtains community feedback over web, contributes to guest experience
- Locals participate – shop locally to increase sustainability, promote businesses, part of community web-exchange, and contribute to local experience
- Guests benefits from service standards, and pride/enthusiasm in whistler community experience
- Whistler card holder – received 200+ offer values, incentives, discounts to shop locally on presentation of card
- Another use could be HR distribution target – companies want to buy these cards for their employees - as economic incentives
- Whistler card objectives – advance service experience, develop whistler business, create learning dialogues
- Whistler Card – two sided – bar coded – pre printed – online registration – web survey link , graphical online survey and analysis
- Survey – gives a good cross section understanding of community
- E-Card ID Products is the company that produces these cards, it is based in Delta, BC - has provided solutions for national ID card programs, seasons pass ski card programs, and it's personnel have senior management level experience in large projects such as APEC 97, Mexico City Driver's License, and Canada Winter Games
- The card can contain any of the technologies such as bar code, smart chip, or magnetic stripe, it provides integration, security, accreditation, and association benefits

- There is a greater opportunity at larger scale to explore community engagement and learning province-wide through the web based application, it can be used as a tool to inform, reward, and identify.
- The learning model can be applied to unlimited applications. It can be used to educate and deliver excellence in service messaging standards, it provides value in mutual learning for the benefit of community
- BC tourism industry could use this model for the 2010 Winter Olympics
- Would like to present this learning exchange model to the appropriate Minister, and explore the communication and learning exchange opportunities for BC communities and tourism professionals
- Would like to promote a card like this on wider scale to people who live outside Vancouver and BC

Message to the PTC:

- Would like to present the learning exchange model to the appropriate Minister, and explore the communication and learning exchange opportunities for BC communities and tourism professionals
- Would like to promote a card like this on wider scale to people who live outside Vancouver and BC

APS GROUP
Susan Johnson, Robert Tremonti

- Consumers are concerned about misuse of their personal information, due to recent incidents. Identity theft, junk mail, spam email and intrusive telemarketing practices are annoyances and have financial costs associated with them.
- BC legislation – Personal Information and Protection Act (PIPA) has given BC a leadership role in privacy, as this legislation is stronger than the federal Personal Information Protection and Electronic Documents Act (PIPEDA) legislation

- Security and privacy concerns affect opportunities in four areas:
  1. Supporting e-government initiatives like tele-health – citizens concerns acceptance of e-government
  2. Supporting the development of a vibrant competitive technology industry in BC – Information security and privacy are critical enablers of growth in the PTC identified sectors. Radio Frequency Identification (RFID) is an example of a technology whose implementation has been delayed due to controversy over privacy, privacy issues should be identified and addressed at an early stage of development of commercial applications to avoid costly retrofitting and rework
  3. Developing a knowledge based export industry around information and security – there is an opportunity to develop this industry
  4. Being preferred destinations for outsourcing by BC, Canadian and International companies – BCs privacy legislation can be marketed as a safe haven for personal information

Recommendations for seizing these opportunities

- Educate technology professionals about information security and its role in protecting privacy – security and privacy should be incorporated as part of programs
- Educate business managers about their responsibilities to safeguard personal information of their customers, and teach them practical strategies to enhance security
- Educate consumers about their rights and responsibilities with respect to security and privacy – get a message out that privacy and security is everyone's business
- Public sector privacy legislation review should ensure that every consumer or employee has equivalent privacy protection whether they are dealing with private or public sectors
- Official government policy is that each department must do privacy impact assessments themselves. Independent bodies must perform these assessments, and government should keep a list of such independent bodies
- Alberta government has developed a list of privacy consultants which is provided to businesses and departments
- Funding for research and development at universities should support development of privacy enhancement technologies
- Education and support is needed for BC to become world class in information privacy and security and seize opportunities
- Need support to educate public and consumers, and need to align private and public sector legislation
- Government is currently playing an inadequate role. They are not a resource to get the message out, they are focused internally on the government. Their focus has been on freedom of information, but now mandate has been expanded to include privacy.
- All surveys show that consumers look to companies to trust them
- In BC the legislation can be clear and simple, so that companies can come here and it can be a competitive advantage
- Privacy and security hasn't been on the radar
- Few schools have attempted courses, e.g. Justice Institute. Companies are also looking to train employees and find these resources
- Privacy is good for businesses, companies should embrace it and use it as competitive advantage, in Royal Bank privacy act is 14% of their brand value

Message to the PTC:

- Government should educate technology professionals, consumers and business managers about information security and its role in protecting privacy
- Public sector privacy legislation review should ensure that every consumer or employee has equivalent privacy protection whether they are dealing with private or public sectors
- Independent bodies must perform these privacy and security assessments for departments within government and Crown Corporations, and government should keep a list of such independent bodies
- Funding for research and development at universities should support development of privacy enhancement technologies, and security and privacy should be incorporated as part of programs

UNIVERSAL LEARNING INSTITUTE
Karey Mah, Bakhtiar Hasan

- The objective is making BC a global magnet for businesses and corporations in software development, business applications, infrastructure deployment, and networking services

Challenges and opportunities

- Technology supports global connections, and has been a major catalyst for change
- Coping with change is the key to competing
- As compared to the global market, BC needs more technology driven enterprises and businesses that operate locally, development/support centers for enterprises like Microsoft and Oracle, world class technology conventions for hardware and software, and technology software parks

Recommendations

- Design, build, and implement technology/software park infrastructures in major cities of B.C. Invite corporations from US, Europe, Asia, & Australia such as Microsoft, Oracle, Cisco, Intel, Sun Micro Systems, PeopleSoft, SAP, and ASUS to invest & establish their development, support/call, and R&D centres. Encourage these organizations by providing incentives, tax breaks, union rules and regulations etc. By doing so, in the long run, B.C. would be able to contribute not only in the global market but also it will create a new job horizon for the entire B.C.
- Host annual Technology Convention in Vancouver and invite the world to explore B.C.'s beauty and talents. Show the world what B.C. has and how it will help organizations towards productivity and profitability.
- Expose B.C. and its resources into Canadian and global market for eCommerce and eBusiness operations. B.C. can be great place for hosting and running the eCommerce operations for North America, Pacific Asia, and Europe. With enough power supply, excellent security, and tremendous weather, it is an ideal place for 24 hrs a day, 7 days a week operation.
- 2010 winter Olympics are an ideal timing for B.C to promote its Technology development initiatives to the world. B.C. currently projects beautiful "British Columbia".

Message to the PTC:

- Design, build, and implement technology/software park infrastructures and invite corporations to invest & establish their development, support/call, and R&D centres. Encourage these organizations by providing incentives, tax breaks etc.
- Host annual Technology Convention in Vancouver and invite the world to explore B.C.'s beauty and talents.
- Expose B.C. and its resources into Canadian and global market for eCommerce and eBusiness operations.
- Showcase BC's technology development initiatives to the world during 2010 Winter Olympics.

SFU- DIGITAL LAB LEARNING TECHNOLOGIES
Dr. Michael Leung

- Goal is to contribute to BC's priorities – becoming one of world's top 10 technology centres by 2006, training and retaining people, developing digital media cluster
- This can be done through applied research lab – via SFU/TRLabs partnership, with a focus on digital media, to produce highly qualified professionals relevant to local companies
- TRLabs was formed 18 years ago, it is a non profit research consortium, with two groups – TRTech and Newt
- TRTech focuses on commercialization of inventions and technologies
- Newt focuses on Small and Medium-Sized Enterprises (SMEs) test innovative wireless applications using the wireless labs
- Has 93 members, of which 63 are SMEs, and the rest are major companies and research institutes
- Impact – 152 patents issued/pending – best practices model being used in Singapore
- Current focus is digital media, originally it was telecom computing, now into fine arts technology.
- Digital Media Sector is an emerging sector, no one has leadership yet, applications enable other sectors, it is an engine for knowledge economy
- BC new media sector has 700 firms, majority are young companies, 80% of the firms generate intellectual property.
- Digital media is recognized as an important priority at Media Lab (MIT), Hollywood and Silicon Valley, Hong Kong (Cyberport & Digital Media Centre - $55M), Manitoba (Digital Media Centre by 2005).
- Cluster development in BC will yield highly qualified personnel, academic institutions that are responsive to the industry, technology infrastructure and supportive environment for technology commercialization
- It will be setup at Surrey campus and be open to all BC researchers, students, with the focus on e-learning, education games, and simulation
- The proposed 5 year budget is $23 M – with year 5 staff strength projected to be 60
- BC board of directors include Reg Bird, and Allan Smith (ThinApse), new directors could be from SFU, Government of BC, Electronic Arts Representative, and representatives from other companies
- Funding sources – Government (federal and provincial, municipal) – $12.8M, industry $8.3M, Institute $1.8M (faculty hires) – typically 2/3 funding comes from governments
- It is a shared vision to make Western Canada as a prominent player in Digital Media research; this vision would be shared by: research institutions, universities and colleges, industry and governments.
- Scope – add/expand 4 digital labs in Western Canada
- Proposed research foci – Surrey – e-learning, education games, simulation; Banff – wearable wireless, social and cultural aspects; Regina – visualization, collaborative tools; Winnipeg – animation, digital cinematography
- Related research divisions would be wireless, home technologies; application test beds for these are Newt and TRTech
- Companies have expressed interest in this concept

- Surrey Lab will help local companies but also feed from other labs, it will also link up faculty members

Key advantages

- building leadership and synergy – enhanced BC leadership in Digital Media, scale and synergy for global significance
- Importance of Industry development – R&D investment from major firms, cluster development
- Training and retention of highly qualified personnel
- Key Improvements in this proposal, as opposed to NewMIC are: scale and synergy, model, board and management – established track record, financial leverage to all stakeholders, better case for industry, better case for BC SMEs, researchers and students, it will be an industry led research program
- Working with federal and provincial governments, Winnipeg, Regina, Banff, Surrey
- Industry input and support, they will sign up and put up $2-3 million
- Research focus confirmation – e-learning currently – need confirmation from industry
- Requesting comments and feedback from PTC, on the particular areas to focus on

Message to the PTC:

- Building digital media labs across Western Canada, in partnership with government and industry will help in building synergy and taking a leadership role in digital media
- It will develop the local industry and help train and retain highly qualified personnel
- Requesting feedback and support from the PTC

SFU-SURREY
Joanne Curry, Dr. Ron Wakkary

- Simon Fraser University (SFU) Surrey is SFU's 3rd campus. Capacity for 2500 students by 2009, all 5 faculties will have distinctive programs – degree program starting in September
- Operating from Surrey – transferred TechBC students and programs, half of the students are in applied sciences areas.
- SFU Surrey is connected to the community – Surrey School Board, Chamber of Commerce, Fraser Valley Technology Network

- Five issues and recommendations that impact SFU Surrey's ability to conduct and transfer research to support the technology industry and generate the skilled technology workforce required by BC.
  1. Creation of Post-Secondary Spaces in the South Fraser Region

     The Premier's recent announcement of the creation of 25,000 post-secondary spaces by 2009/10 was applauded by all British Columbians. SFU Surrey urges the Premier's Technology Council to support the creation of additional spaces in the South Fraser Region beyond the initial allocation of 8,000 seats given the Region's rapidly growing population and historically low participation rates in post-secondary education.

2. Network Infrastructure Requirements

    To be able to participate as a peer campus and support planned research programs in networks, information technology, and new media, SFU Surrey asks for the Premier's Technology Council support for the expansion of BC Net's Optical Regional Advanced Network (ORAN) to the SFU Surrey campus and to other institutions in the Fraser Valley. The approximate budget for the extension to the SFU Surrey campus is $2.5M.

3. elearning Practice Informed by Research

    SFU Surrey supports the efforts of the Premier's Technology Council to create an eLearning chair. Our campus' efforts to implement eLearning activities for all students has been positive and increased support of research in eLearning will lead to a greater understanding of learning and economic models that are scaleable and sustainable. School of Interactive Arts & Technology (SIAT) faculty are collaborating with researchers in other SFU faculties including Education to create an eLearning Institute at SFU to connect researchers across SFU's three campuses.

4. Supporting Knowledge and Technology Transfer

    SFU Surrey encourages the Premier's Technology Council to continue its support of BC's existing technology transfer infrastructure including university/industry liaison offices and the Advanced Systems Institute. The concept of technology transfer needs to be expanded to embrace the full range of research knowledge that will benefit BC's technology industry, and BC should support pilot projects seeking to try new methods of transferring those results to government, companies and public organizations. Universities should be invited as active partners in initiatives such as Leading Edge BC, whose programs should be expanded to include the marketing of BC's research capabilities outside the province and the country.

5. Surrey Digital Media Research Lab for Learning Technologies

    SFU Surrey has prioritized the creation of this Research Lab and the partnership with TRLabs as a keystone component of its research and technology transfer strategy. We urge the Premier's Technology Council to consider the benefits the location of this lab would bring to both the Fraser Valley as well as BC.

6. Importance of Interdisciplinary Research

    SFU Surrey supports the Premier's Technology Council's identification of the new media and wireless areas as emerging technologies that are good prospects for BC. We encourage the Council to consider the opportunities of interdisciplinary research and the requirement not only to fund technology development but also support research to analyze social, cultural, economic, aesthetic, and ethical aspects of computational technologies and networked systems

- SFU Surrey academic and research plans will enhance the research and technology infrastructure of the Province of BC.

Message to the PTC:
- Support the creation of additional spaces in the South Fraser Region beyond the initial allocation of 8,000 seats
- Support the expansion of BC Net's Optical Regional Advanced Network (ORAN) to the SFU Surrey campus and to other institutions in the Fraser Valley

- Universities should be invited as active partners in initiatives such as Leading Edge BC, whose programs should be expanded to include the marketing of BC's research capabilities outside the province and the country
- Urge the Premier's Technology Council to consider the benefits of the Digital Media Research Lab to both the Fraser Valley as well as BC
- Consider the opportunities of interdisciplinary research and the requirement not only to fund technology development but also support research to analyze social, cultural, economic, aesthetic, and ethical aspects of computational technologies and networked systems

CANADIAN WASTE SERVICES INC
Wayne Simle, Cam Hantiuk, David Riley

- Waste Management (WM) offers residential, commercial and industrial collection, recycling and disposal services throughout the country.
- WM employs over 3,000 people at 116 locations in 8 provinces, servicing 4.5 million residential customers and 170,000 industrial and commercial customers. WM owns and/or operates 20 recycling recovery facilities and 18 landfills.
- In its fourth report, the Council recognized B.C. as a leader in alternative energy and related technologies. Waste Management is a recognized leader in this area – specifically in landfill and energy from waste technology.
- Waste Management is diligent in its operations to protect the environment and to dispose of waste safely and responsibly.
- The use of Bioreactor techniques helps compact waste more quickly and increases capacity by 15 percent or more. Therefore, landfill space is used more efficiently, land there is less need for expansion
- Waste Management has 10 landfills in North America that use bioreactor methods. The Sainte-Sophie landfill near Montreal, is the first large-scale bioreactor project in Canada
- Working with universities and regulatory bodies to confirm the environmental and economic benefits
- It also has a secondary benefit – development of clean, reliable, renewable energy
- Landfill gas is readily available and is a renewable energy source
- Regulatory agencies have endorsed landfill gas as an environmentally friendly resource that offsets the need for non-renewable resources like coal and oil. Landfill gas is the only renewable energy source that, when used, directly prevents atmospheric pollution.
- Methane gas from the Sainte-Sophie landfill near Montreal will soon help power a local paper mill, it should help meet a large part of its energy requirements for the next 10 years
- Waste Management has been developing landfill gas-to-energy projects for more than 15 years. Currently supply landfill gas to 85 projects in North America, 54 gas to electricity projects provide more than 200 megawatts of energy, enough to power 215,000 homes.
- Replace 2m barrels of oil – very competitive – no exploratory costs – put collection system in place as designing landfills – reduce greenhouse gas emissions
- In 2002 Waste Management donated 120,000 metric tonnes of CO_2 equivalent reduction credits to the 2002 Olympic Winter Games in Salt Lake City. These credits offset all the additional emissions from the event, resulting in the first games in Olympic history to have a net zero effect on the host city's air quality.

- Support PTC initiatives for Alternative Energy and social, economic and environmental sustainability and developing a supportive environment including good public policy, sound regulatory regimes and flexible financial markets.
- These critical development areas and issues of concern are important to more than just the development of a Fuel Cell Industry Strategy
- Just as British Columbia is looking outside of traditional industries for growth opportunities and economic stimulators, it is also necessary to consider the opportunities presented by newer technologies that are emerging from within some of your less obvious partners.
- Benefits will accrue for all the citizens of British Columbia, if companies like Waste Management are in a position to import some of their technologies into the province.

Message to the PTC:

- Government should consider the opportunities presented by newer technologies that are emerging from within some of the less obvious partners

CANADIAN COUNCIL OF THE BLIND
Michelle Creedy

- Presenting the barriers faced by people who are blind or partially sighted in acquiring adaptive technology to meet their daily needs.
- Cost of adaptive technology for blind people – to take Braille notes – it costs $9000 for the computer for presentation, a screen is $12000, and printer $6000

Programs Currently Available

- If the individual is in the school system (Kindergarten to grade twelve) Special Education Technology British Columbia (SETBC) will loan the adaptive technology needed by the student.
- In the post-secondary system, Adaptive Technology British Columbia (ATTIC) will loan equipment to the student. Students may also access the Canada Study Grant to buy their equipment.
- Employers will if needed, help purchase equipment for the employee and ATBC will also loan equipment.

Barriers

- In the elementary and secondary school system:
  - Some districts are not having their needs met in terms of adaptive technology due to funding cuts.
  - There is not enough time to train children on the technology because teachers do not have time. They are thinly spread due to funding cuts.
- In the Post-Secondary System:
  - Students must go through an application process before they can loan equipment. Thus, they often have to wait for the equipment.
  - Students must go through an extremely rigorous process to apply for the Canada Study Grants (CSG). They are sometimes rejected because the committee does not feel the equipment is justified even if the student shows a need for the equipment.

- Students taking Continuing Education courses are not eligible for the same CSG funding as students taking other courses or programs.
- Employment
  - Companies are not always willing to buy adaptive technology and may thus not hire the person.
  - Training is not always readily available for the employee using the equipment.
  - Employers do not know what subsidy programs and grants they can access in order to purchase the adaptive technology and train the employee.
- Seniors and Newly Blinded Individuals
  - There is no comprehensive rehab program that can teach people the adaptive technology skills.
  - There is no funding for newly blinded people and seniors to obtain adaptive technology and training on how to use the technology.
  - Newly-blinded individuals cannot find fulfilling employment due to the fact that there are no programs to assist them in obtaining technology.

- Canadian Council for the Blind have setup a program for people, youth, seniors and newly blind, where people can come in and learn how to use technology if they don't have the financial resources
- Canadian National Institute for the Blind (CNIB) is a non profit organization, they provide services but miss huge pockets of population, such as those seeking employment. Canadian Council for the Blind is a consumer group of blind helping the blind. It has chapters to provide help for the nearly blind, it is also a watchdog for CNIB
- Ontario has a program that provides 70% of costs to get technology. People are eligible every 5 years
- Technology is available for visually impaired, but there are barriers

Recommendations
- Put more support into programs for training for vision impaired people. Provide more financial support and training programs to help people with disabilities, so they can get off of the benefits. If resources can be provided for training they can be employed
- Provide funding for employers to access equipment to hire disabled people
- Examine organizations and their shortcomings related to disability programs
- Clarify grant requirements for post secondary education

Message to the PTC:
- Put more support into programs for training for vision impaired people; provide more financial support and training programs to help people with disabilities, so they can be employable
- Provide funding for employers to access equipment to hire disabled people
- Examine organizations and their shortcomings related to disability programs
- Clarify grant requirements for post secondary education