AN INDEPENDENT SECTION BY MEDIAPLANET TO THE VANCOUVER SUN



The DNA of our forests Genomics battles climate change



Innovation in business Creative entrepreneurship



May 2012

BC INNOVATION

SUCCESSFUL TECHNOLOGY COMPANIES FROM BC

3

## THE FOUNDATION FOR

# A HEALTHY FUTURE

Why British Columbia has all of the ingredients for innovation and prosperity



www.genomebc.ca

# Genome BritishCol BritishColumbia

Leading > Investing > Connecting

### CHALLENGES



Brain power, young talent, internationally-renowned academic institutions, government support and entrepreneurship: British Columbia has all of the tools needed for successful innovation.

## Dedicated to innovation

ot so long ago, picks and shovels were the most important tools in mining ore and gems from BC soil. Back then, a tall wood building was your

neighbour's two-story house. And seniors losing their eyesight because of macular degeneration could only hope the process was slow, because there was no way to treat it.

Today, miners still use pickaxes, but they also use software and services developed in British Columbia that are key to designing mines and making opera-

equipment through our BC Knowledge Development Fund, supported leading scholars through organizations like Genome BC and the Michael Smith Foundation for Health Research and nurtured spinoff companies through venture capital programs, the BC Innovation Council and global business accelerators.

Unique commercialization centres Wavefront, the Centre for Drug Research and Development, and the Centre for Digital media, for examplehelp commercialize BC discoveries. Our province's four research-intensive universities consistently rank in the top five institutions in their size classes in the country, and we have strengthened our talent pipeline by expanding their graduate programs and supporting internships.



BC innovations add to the competitiveness of each of those sectors by providing new and improved processes, products and business models.

Through our technology sector, we are opening up new economic opportunities for the other seven BC Jobs Plan sectors: forestry, mining, natural gas, international education, agrifoods, transportation and tourism.

In the days and years ahead, we will expand the skilled workforce that is so vital to an economy driven by innovation. We will leverage our research investments to develop more commercial opportunities and provide the services British Columbians rely upon, from health care to education. And we will capitalize on the unprecedented opportunities to export our cutting-edge products and services to burgeoning markets like India and China. A vibrant knowledge-based economy is an essential part of a 21st-century economy. BC is already recognized as an innovative jurisdiction, rich in home-grown talent, and attractive to immigrants who see not only our accomplishments to date, but our potential. We will continue to support the growth of our technology sector to provide jobs for British Columbians today-and tomorrow.

### WE RECOMMEND **Digital media**

ind out how BC



of \$1.2 billion."

"The industry has become an important engine of economic growth for British Columbia, with some 900 companies and 14,000 people generating annual revenue

p. 05 **Health innovation** Vith regenerative medicine in BC p. 06

**Panel of Experts** Discussing the importance of innovation to heavy industry



#### **BC INNOVATION** FIRST EDITION, MAY 2012

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tions efficient and cost-effective. Meanwhile, firms are vying to design and construct a wood building in Prince George of at least six storeys, which will showcase British Columbia's global reputation as a leader in wood construction and design, and engineered wood products.And BC is a world leader in finding effective treatment for macular degeneration.

The link between better mines, taller wood buildings and seniors' eyesight is innovation, which is the foundation of a strong economy that will provide more jobs for British Columbians.Our government has invested \$1.8 billion in innovation and the research that leads to it more than any other government in the history of this province.

We have invested in research labs and

In short, we have created the conditions that have helped BC develop a world-leading knowledge economy.

Our strengths include the life sciences, oceanography, alternative energies, digital media, particle physics, materials science - including wood science - and effective management of our wealth of natural resources.

These strengths also support every one of the key sectors we've identified in Canada Starts Here: The BC Jobs Plan as having strategic competitive advantages that will result in more jobs being created in every region of our province.



linister of Jobs, Innovation and Tourism for British Columbia

#### BIOGRAPHY

Pat Bell was appointed Minister of Jobs, Tourism and Innovation on March 14, 2011. He also chairs the Small Business Roundtable and the Cabinet Committee on Jobs and Economic Growth.

Before becoming an MLA, Pat served on the board of directors for Tourism Prince George. He has worked in the hospitality business, both at the corporate level and as a small business owner. He has also owned a trucking company and coowned a logging company.

PAT BELL MINISTER OF JOBS, TOURISM AND INNOVATION editorial@mediaplanet.com

### ow innovation happer

#### What makes an idea a good one? How do you turn it into reality? And most importantly how do you ensure success in the marketplace?

There are two answers to these questions. The first is a rebuttal: if the answer were simple and reproducible, then we wouldn't need to ask the question! The second answer is more subtle: good ideas, like any organism, need nurturing to reach their full potential. In the case of moving from innovation to commercialization, nurturing can take the form of mentorship, funding, training and networking, just to name a few.

Sure, inspiration can happen in the shower or while chopping vegetables, but it gets legs and becomes unstoppable when it's exposed to other great minds that can carry it forward.

Albert Einstein put it best, "We cannot solve our problems with the same thin-



A gold foil is used to prepare a sample for study at TRIUMF's materials science facility PHOTO: TRIUM

king we used when we created them."

The most reliable route to changing our thinking from that which 'created' or 'saw' the problem to that which can offer a reliable, robust solution (e.g., a business) is to involve different thinkers: people with different backgrounds, training, tools and experiences. In the case of technology, ideas are often bred by a scientist or an engineer with little or no business acumen necessary to start a company. It is the collaboration or combination of complementary skills, i.e., technical and business, that are often needed to get a startup off the ground.

How do we foster more of this collaborative spirit in British Columbia? Through the creation and utilization of an ecosystem, or network, that helps create successful companies. Here in BC, the BC Innovation Council (BCIC) accelerates the commercialization of technology through supporting startups and the development of entrepreneurs.BCIC does this by developing programs and providing support for initiatives that develop entrepreneurs and promote the commercialization of technology. In other words - by bringing together great (albeit different) minds.

Idea-generating laboratories like TRI-UMF fit into this ecosystem as well. As a national laboratory based in Vancouver with expertise in accelerators, isotopes and basic physics, TRIUMF is full of ideas: good ideas, mediocre ideas, and ... some bad ideas. The best ideas move forward by connecting our scientists with business experts, marketing savants and

adventurous customers and clients. For instance, the laboratory recently developed a breakthrough in the technology of producing conventional isotopes. In order to move this technology forward, the laboratory had to "broaden its thinking" to engage and then partner with organizations and companies to move this key ingredient of personalized medicine from 'idea' into 'commercially available'. BC is rich in these partners and organizations like BCIC make a critical difference in bridging the gaps.

While there may not be any guarantees or roadmaps for success, meeting and partnering with others who have been there and done that can help entrepreneurs avoid the pitfalls that are common among startups and open their eyes to opportunities they may not have known existed.

> T.I. MEYER. TRIUME AND L. CHAN, BCIC editorial@mediaplanet.com

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#### **GOING GREEN INITIATIVE**



#### What a waste

During the construction and demolition (C&D) process, a large volume of waste is generated among which concrete is the largest (52 per cent by weight). In the Interior BC alone the composite manufacturing companies produce about 1,000 metric tonnes of annual composite scrap. Due to stricter regulations much of the current waste cannot simply be dumped in the local landfill, but must be hauled to specialty landfills, making it more expensive and harmful to the environment.

#### Waste not

A research group in the School of Engineering at UBC's Okanagan campus is conducting research to find ways to utilize various types of waste in producing newgeneration green concrete. This project will focus on formulating comprehensive guidelines to assist the concrete industry to produce ready mix green concrete with a combination of various industrial and C&D wastes. The impact of this research is tremendous as it will not only help reduce the total carbon footprint of a project, but also lead to sustainable construction by utilizing local wastes, reducing the load on the landfill and by alleviating the demand to natural aggregate.

> DR. SHAHRIA ALAM editorial@mediaplanet.com

INSIGHT

# Innovation and education

This article is being written during a business trip with the Canadian Friends of Hebrew University to Israel to learn more about what makes this country so innovative in spite of the everpresent Middle Eastern tensions.

As mentioned in the bestseller, Start-Up Nation, Israel ranks just behind the USA in the number of technology companies listed on the NASDAQ stock exchange. Universities such as Haifa's Technion are quick to point to their success in creating new technology ventures. Hebrew University generates a whopping \$60 million in annual royalties on a research budget of \$150 million. No wonder, Israel spends almost 5% of GDP on R&D!

Entrepreneurship and innovation are pervasive here. Entrepreneurs are the champions of innovation: they take the risks associated with bringing new products and services to market.

Albert Einstein, who bequeathed his estate to Hebrew University, said: "anyone who has never made a mistake has "In Canada, we're lucky - we have the basic ingredients to foster innovation. After all, we have great natural resources and we don't worry daily about threats to our national security! Perhaps we should challenge ourselves with goals that scare us."

#### **Michael Volker**

Director of Simon Fraser University's Innovation Office. Active entrepreneur in the development of new high technology ventures

never tried anything new." And, that's the essence of innovation: doing something new or different. Apple Computer, the world's most successful technology company had as its slogan, "think different".

In Canada, unlike Israel or California's Silicon Valley, we're not good at handling failure. We tend to pass mediocre results rather than declare failure and push harder.

Harvard's Howard Stevenson opined on entrepreneurship saying that entrepreneurs are not limited by the resources available to them; they garner whatever is needed to achieve their objectives. While some people may argue that entrepreneurship can't be taught, you can teach entrepreneurs business skills. A constant thirst for knowledge is a necessary entrepreneurial trait as is the acceptance of failure as a valuable learning experience.

In Canada, we're lucky — we have the basic ingredients to foster innovation. After all, we have great natural resources and we don't worry daily about threats to our national security! Perhaps we should challenge ourselves with goals that scare us.

> MICHAEL VOLKER ediitorial@mediaplanet.com

# Join the culture of innovation at the Faculty of Management in the beautiful Okanagan Valley.

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### WHERE IDEAS GROW

Since the creation of Canada's first Executive MBA in 1968, SFU's Beedie School of Business has emerged as a dynamic learning setting, and one of the world's top 100 business schools for research. Our focus on innovation and technology, sustainability, international business and capital markets is a reflection of British Columbia's emerging place in the world economy. Through our global, we are Engaging the World.

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- for Executives

### Executive MBA in Aboriginal Business





a place of mind THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Management

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**How Innovation Happens: Explore** Imagine Deliver  $\rightarrow$ 

In 2008, Canadians experienced a shortage of Tc-99m, a vital medical isotope produced by nuclear reactors, interrupting thousands of life-saving diagnostic procedures. Recognizing a need for action, TRIUMF and its team of partners sought an innovative alternative.



Imagine: Based on decades of experience with accelerators and isotopes, TRIUMF's team thought small medical cyclotrons already available in hospitals could be used to produce Tc-99m across the country.

Explore: With support from NSERC, CIHR, NRCan and others, the team jumped into action. They developed an "upgrade kit" for the most popular models of cyclotrons, enabling these machines to produce Tc-99m everyday right in hospitals.





Deliver: In February 2012, the team announced success in both BC and Ontario. Working with its academic and commercial partners as well as provincial health authorities, the team expects to launch production shortly.



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**Question:** What is Genomics and how does it affect the forest industry in British Columbia? Answer: Genomics is the study of the genomes of organisms, and this field is being used to protect our precious trees against climate change and harmful pathogens.

# Cutting edge technology fosters new knowledge about our forests

More complex than humans?

As in humans, genomics has given us

major focus as the cause of the tree's de te, in which they will be growing in 50 struction, but scientists have also known or 100 years from now. "We have the abithat a fungus carried by the beetle plays lity to study the genes of trees that maa major role in the damage. If scientists ke them adaptive to different temperatucan't predict early enough, then they can't res and moisture," says Sally Aitken, who treat the disease. "Accurate information helps in the decision making, and genomis leading the AdapTree project. "Our research is informing a provincial process ics is one factor that we can't ignore," says that is now in place to move away from Bohlmann. "If we had the knowledge, we using local seed in anticipation of climawould have tackled the pine beetle epite change." Warmer temperatures won't demic differently, and controlled the outmean the extinction of our forests, but break. Ten years ago, Dr. Bohlmann and colleagues were among the first in the what we will see are more unhealthy forests and less productive ones, and more world to launch research in tree and forest prone to invasive species. With changes to health genomics. He is now leading the seed sources used, we'll still plant native SMarTForests Project, which is sequenspecies, but trees will be better adapted to cing the spruce genome for the developchanging temperature and moisture. ment of improved breeding technologies.

If you've ever thought about some of your relationships, you'd be inclined to think that humans are pretty complex. And we are, but not as complex as most trees. The human genome-the complete set of DNAis made up of a mind boggling 3.2 billion base pairs. Rather simple compared to the white spruce that grows in BC, and is comprised of more than 20 billion base pairs.

But what does all this mean for us? Rapid advances in the science of human genomics has allowed us to better diagnose disease, and detect the genetic predisposition to diseases far earlier than we could before. That same technology is being used to better understand and improve the health of our forests. And much of this leading edge knowledge is being cultivated here in BC. "During the 1990s, there was an intense focus on human genomes," says Brad Popovich, Genome BC's Chief Scientific Officer. "It was never our mandate to focus solely on human health. We realized that we could steer this technology to key economic sectors, such as forestry, fisheries, agriculture, and the environment."

a better magnifying glass to further understand for example why the same species of one tree grows bigger than others, or produces a better wood product, or is more resistant to diseases."This level of investment in forest health is groundbreaking, but necessary because forest health is important to Canadians, and our forests are being threatened by invasive diseases," says Richard Hamelin, a leading genomic scientist at UBC. "When our forests are threatened, so too are ecosystems, and once destroyed they won't come back." Hamelin and his team are sequencing the genomes of diseases to identify what makes a tree pathogen a tree killer.

#### The effects of climate change

A week doesn't go by without news of climate change, and while the debate seemingly goes on our forests are already seeing the impact, according to researchers in BC.Warmer temperatures have brought more insects and disease. Traditionally, foresters used local seed for reforestation, ones that were well adapted to their natural environment, but the challenge today is mat-

#### FACTS

Proportion of forested land in BC:



**Total amount** of funding to date awarded to genomic researchers in BC:



To learn more about Genomes and the leading edge research being performed in BC or for resources geared for teachers, visit www.genomebc.ca SOURCE: BC MINISTRY OF FORESTS AND GENOME BC

#### **Battling harmful invaders**

Like his scientific peers, Joerg Bohlmann knows how vulnerable forests are to changes in the environment. He also knows how research has helped answer the fundamental question of how the mountain pine beetle devastated huge swaths of forest in BC. At first, the beetle itself was a

**KEN DONOHUE** editorial@mediaplanet.com



#### Cross-laminated timber: building reinvented.

Cross-laminated timber (CLT) panel systems offer outstanding structural, thermal, seismic and acoustic performance. They allow for new open-plan design possibilities, and for faster, cleaner, safer and quieter construction.



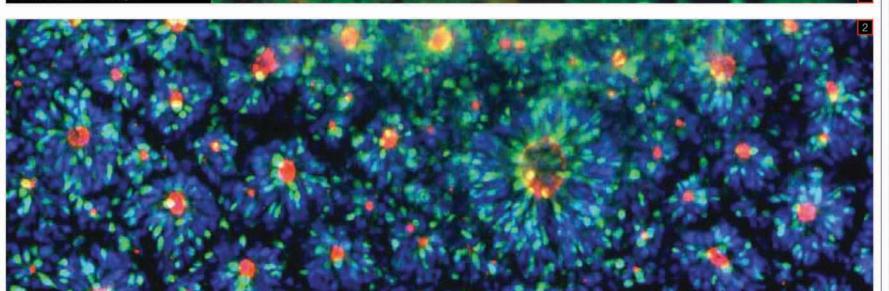


#### AN INDEPENDENT SECTION BY MEDIAPLANET TO THE VANCOUVER SUN

METROLYRICS, HE MOST LYRICS WEBSITE WORLDWIDE STARTED IN VANCOUVER, BC

#### 1. This image shows two types of cells that are found within the central nervous system: neurons, which have been stained red and astrocytes, which have been stained green using specific antibodies that target these cell types. These cells were grown and differentiated from neural stem cells of a mouse. This image shows brain (neural) cells generated from human embryonic stem cells and viewed under a micr oscope These cells have organized themselves into neural tube-like structures icating brain development in the dish.

D: STEMCELL TECHNOLOGIES, INC



#### HEALTH INNOVATION

#### Cutting-edge stem cell research in BC

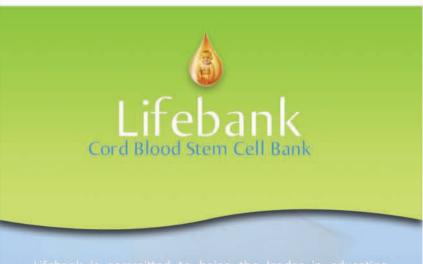
Medical conditions that are currently thought of as irreversible may one day be treatable, as scientists are discovering how to harness stem cells as therapies. This was a historic month for stem cell research globally, as Health Canada approved the first-ever market release of a clinical stem cell therapy. The drug, Prochymal® (Osiris Therapeutics, Inc.), derived from bone marrow stem cells, will be used to treat acute graft-vs.-host disease (GvHD) in children who undergo bone marrow transplants.

Cells are highly specialized for their given roles. Once mature, a cell typically cannot switch into a different kind of cell. Stem cells, however, are pluripotent, meaning that they have the potential to develop into any cell type. While stem cells can be obtained from human embryonic tissues, it is now possible to collect them from other sources such as umbilical cord blood and fat tissue. Even more exciting was the 2006 discovery of how to make stem cells from mature cells by reprogramming them backward to become induced pluripotent stem cells and then forward again into a different tissue type. These recent developments have revolutionized stem cell research, eliminating many ethical concerns that previously limited the field from moving forward.

Researchers in British Colum- $\rightarrow$  bia are global leaders in supporting stem cell research. In 2011, a BC company was recognized by scientists around the world for providing the most innovative products for stem cell research globally. Stem cell research throughout the world is now focusing on developing treatments for chronic disorders. For example, researchers are reprogramming skin cells into different tissue types to treat diseases, including generating insulin-producing cells to treat diabetes and dopamine-secreting cells to treat Parkinson's disease. Heart and liver cells derived from induced pluripotent stem cells are also being used to test the toxicity of new drugs, reducing the need for lab animals. Many researchers suggest that stem cells induced from mature cells from our own bodies may one day be used to

grow entire organs suitable for transplantation.

> NICOLE QUINN, PH. D. STEMCELL TECHNOLOGIES, INC. editorial@mediaplanet.com



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#### Who wouldn't bank their newborn's cord blood?

Most expectant parents would, and could bank their newborn's cord blood, if they only knew all the facts:

If they knew that cord blood contains stem cells that may one day save their child's life,

Or that over 40 life-threatening diseases have been treated with cord blood stem cells.

If they knew that stem of 'incurable' diseases such and heart and neurological



cells provide hope for treatment as diabetes, spinal cord injury, disorders, just to name a few,

And that banking cord a cup of coffee a day over priceless in the years ahead.

blood for 18 years costs less than that period of time, but may be

If they knew that there is only one chance to store cord blood: At birth,

And that registration takes only 5 minutes...

#### Register today at www.healthcord.com/register

Or call to learn more about this life saving service, and to learn about Healthcord, Canada's leading cord blood bank.





for more information or to register

Healthcord Baby Gift Basket (\$100 value) provided free to registrants citing 'Vancouver Sun' until June 15, 2012.

Healthcord is Canada's nation-wide cord blood bank. AABB Accredited. Health Canada Inspected.

#### AN INDEPENDENT SECTION BY MEDIAPLANET TO THE VANCOUVER SUN

### PANEL OF EXPERTS



**Question 1:** 

to your industry?

Michael Weedon Executive Director, BC Bioenergy Network



Innovation is key to advancement in bioenergy. Whether it's the latest developments in liquid biofuels or simply finding better methods of drying woody biomass, innovation drives the improvements in environmental and economic benefits that make it possible to widely deploy a host of clean energy products that use waste residuals as their basic feedstocks. These include woody biomass residuals, municipal waste that can't be recycled, and agricultural residues, such as crop and animal waste. Partnerships and collaboration among our leading provincial and national research institutions, post-secondary institutions, and private sector innovative companies is essential.

Mike Scott President and CEO, Nexterra Systems Corp.

**Fossil fuels** such as natural gas and oil will always be the main competition for the renewable energy industry. Because these fuels are relatively cheap, abundant and widely available, they have become the dominant energy source for industry, transportation and residential use. To gain wider adoption, the clean energy sector needs to continue innovating to create solutions that are cheaper, more efficient and better integrated than competing fossil fuel-based solutions: simply being "green" isn't sufficient.

In the renewable energy sector, one of

the most interesting innovations has been

the movement from centralized power gene-

ration to a "distributed" model where indu-

stries, municipalities and institutions such

as universities can self-generate their own

heat and power. Not only is distributed gene-

ration more efficient with less transmission

losses, but it also enables the integration of

small scale renewable and local waste-deri-

ved energy sources into the system. For ex-

ample, UBC's new Bioenergy plant will allow

the university to self-generate its own heat

and power from biomass for use within their

campus.

Gavin Dirom, M.Sc., P.Ag. President and CEO, AMEBC



**Throughout the ages,** successful mineral explorers and developers have always benefitted from the early adoption of new ideas and innovations. Given that mineable deposits are rare and elusive to find, being innovative is critically important in order to make new discoveries and develop mineral resources in a responsible manner to the net-benefit of society. Innovation in the mineral exploration context is about creating a positive change in the exploration process through the development of new approaches, tools and technologies that improve efficiency and effectiveness. It is the key to success.

**Mineral exploration** represents the research component of mining. As deposits are mined out, it is the discoveries that sustain the industry. There have been many noteworthy innovations developed for the mineral exploration and development sector, such as: surface & airborne geophysical survey technologies (induced polarity, electromagnetics & gravity), radiometrics, geochemical analytical methods, portable field sampling & surveying instruments, directional & deep drill hole technology, and geoscience database & modeling software. Recently, a new technology is being tested that can take 3-D images of dense ore deposits using cosmic ray muons.

# The future looks very bright. Mineral exploration and development is an expensive and time-consuming process. Innovations increase the success of exploration while at the same time reduce environmental impacts, make it safer and less costly overall. It's clear that BC's mineral wealth and talented geoscientists, engineers and technologists have created a deep pool of expertise that has developed into a world renowned centre of excellence in mineral exploration and development. I have no doubt that the sector will continue to attract energetic people that are innovative and do new and great things.

#### **Question 2:**

What is the most interesting innovation from your sector in the last 5 years?

Why is innovation important

**It's hard to pick just one.** If we are talking about innovation on the feedstock side, over the past 5 years, we have seen woody biomass residuals evolve from a waste that was being combusted in bee hive burners, to a valuable resource in the province and internationally, with the beginning of a longer term sustainable supply chain that is providing diversified revenue streams for forest products companies and communities. The application of world leading research is helping us identify the highest and best use fossil fuel replacement products from our residuals, ideally in integrated platforms known as biorefineries.

**Question 3:** 

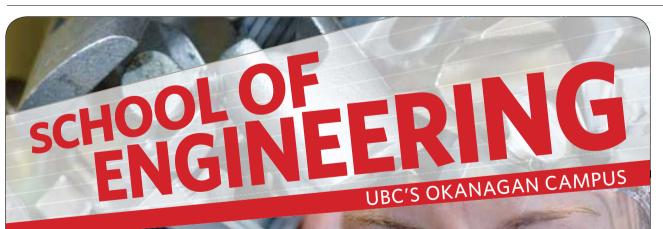
What does the future of innovation look like in your sector/industry?

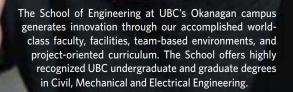
We can expect to see a period of continuous innovation. As we see oil prices moving well past \$100 a barrel and increasing concern on the environmental impact of fossil fuels, applications for biomass to energy are growing rapidly. And innovation doesn't just mean at the research level. British Columbia, through its carbon tax and policy leadership, has provided an enabling environment at the provincial and municipal level that encourages innovation, replacement of fossil fuels, and investment in the province.

In the future we will see "smart" distributed generation systems where multiple sources of renewable energy and storage are integrated together to provide the heat and power for a community. There will be control systems that balance the supply and demand of the local community and sell excess capacity to the grid. In addition, there are extensive R&D programs to develop renewable "green gas" and "green chemical" solutions that leverage the advantages of existing core technologies such as gasification.



Highland Valley Copper Mine. The safest large mine in BC.



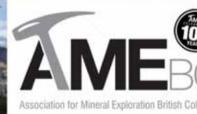


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#### Creativity is thinking up new things Innovation is doing new things

Innovation is a key element in the mineral exploration and development sector.

Everyday many of the 4,800 members of the Association for Mineral Exploration British Columbia are developing leading-edge technologies to make the mineral discoveries of tomorrow.

To learn more about AME BC in our centennial year visit: www.amebc.ca

a place of mind THE UNIVERSITY OF BRITISH COLUMBIA

School of Engineering Faculty of Applied Science NEWS

#### AN INDEPENDENT SECTION BY MEDIAPLANET TO THE VANCOUVER SUN

# Vancouver making waves in visual effects

CLUB PENGUIN, AN ONLINE ROLE-PLAYING GAME FOR KIDS STARTED IN KELOWNA, BC



#### **Rallying the home team**

June is the unofficial Technology Month in BC. For the past nineteen years, the BCTechnology Industry Association has hosted the Technology Impact Awards (TIAs) - the largest, most inclusive technology celebration in the province. Involving companies of all sizes and from all sectors, the awards shine a spotlight on the people and innovation that is fueling the growth of our industry.

BC's technology sector has a lot to celebrate. Over the past ten years, the industry has become a cornerstone of BC's economy, contributing significantly to our GDP growth and job creation. Technology exports have near doubled to over \$4 billion, propelling the technology industry to be one of the top 3 industry sectors in British Columbia.

Over 800 of BC's tech community will gather on June 14th to celebrate British Columbia's status as innovators in a cross-section of technologies including enterprise software, digital media, consumer electronics, and medical devices. The breadth of technologies that continue to be developed, and exported to almost every country around the world, supports the fact that BC's Technology Industry is strong, growing, and important to British Columbia.

The accomplishments of our industry over the past 10 years is just the beginning of bigger things to come. Let's support the industry, and pause from time to time to applaud the efforts of every entrepreneur in British Columbia. They are the real ga-



#### SHOWCASE

#### Motion picture action

Vancouver has become a digital media hub rivalling Los Angeles and London. An attractive location and talent pool produced by universities such as the Centre for Digital Media and Bosa Centre for Film and Animation are key to its success.

The most elaborate visual effects (VFX) scene in the new Hollywood blockbuster Men In Black 3 comes at its climax. Agents J and K, who have travelled back in time to 1969, confront the film's villain Boris in an epic showdown on the launch pad of Apollo 11. The VFX team had to recreate the iconic moon launch, while at the same time adding elements to heighten the drama and pacing. This included changing the number of floors on the rocket tower, the amount of steam and smoke blowing out of air vents and the distance between rocket and beach.

Who added the high-priced sizzle to MIB 3, accounting for as much as one-third of the film's \$215 million budget? The answer is Vancouver's Sony Imageworks, a company riding the city's wave of success as a digitalmedia hub rivalling Los Angeles and London.

#### **Boosting BC's economy**

The industry has become an important engine of economic growth for British Columbia, with some 900 companies and 14,000 people generating annual revenue of \$1.2 billion, according to industry association DigiBC. Much of this is concentrated in video gaming, animation and internet advertising. However, digital VFX have in the last three years experienced the strongest growth, driven by action films, like MIB and The Avengers, that increasingly rely on a blend of reality and fantasy for visual impact.

Why has Vancouver become a global centre for digital media and media arts? "It's a bit of a lucky accident," says Richard Smith, director of Vancouver's Cen-



tre for Digital Media, which operates an MBA-style program tightly focused around the industry's needs. "Vancouver is a great place to live and it's close to both to Los Angeles and Silicon Valley." Smith expects digital media to continue its rapid growth over at least the next few years, outpacing the rest of the B.C. economy.

But a great location and shared time zone with California are not the only reasons why Vancouver has become a new-economy incubator. There are also many educational programs in digital media and media arts offered by universities and private schools.

The Centre for Digital Media and Capilano University's Bosa Centre for Film and Animation are leading the way with first-rate training that attracts international faculty and students. For example the Centre for Digital Media, operated jointly by Simon Fraser University, UBC, BCIT and Emily Carr University of Art + Design, offers a professional program which aims to graduate digital-media leaders and entrepreneurs. It was established with a \$40.5 million grant from

the B.C.government in 2007, and this fall moves into a new \$15 million facility.

me changers — the ones who are making a difference in our province and around the world.

**ERIK HEINRICH** editorial@mediaplanet.com BILL TAM PRESIDENT & CEO, BCTIA editorial@mediaplanet.com

### creative research with impact

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8 · MAY 2012

MEDIA PLANET

### INSIGHT

British Columbia is already a vibrant centre for social innovation, but it has the potential to become the leading hub in the world for enabling collaboration between the public, private, and nonprofit sectors to tackle some of the most pressing problems we face as a species.

## Social innovation

#### Question: What is social innovation?

A: Social innovation has many companions, including social entrepreneurship, social finance, social economy and, through the lens of the pri-

shared value.' Rather than trying to pin down a precise definition, it is better to think of social innovation as an umbrella concept that involves new approaches to old problems and col-

vate sector, the concept of 'creating laboratively engages public, private and nonprofit sectors. Social innovation as a concept reminds us that the goal of a society that lives and works together is not simply to deliver abstract goals like maximizing profit,

reducing bureaucracy or improving reciprocity, but also to solve social problems and improve human well-being. Social innovation captures three key global trends across the three sectors – social innovation in the public sector, strategic corporate social responsibility and scaling nonprofit social innovation.

#### **Question:** Why is it important for our society?

A: As the most successful species on the planet, we now face challenges that are mostly of our own creation. Global warming is the by-product of our success and expanding energy sources and it now threatens to change the planet at an unprecedented rate. Economic growth has been unequal and excludes some socio-demographic groups from participating in the benefits secured by the majority. For some populations, the social services that are supposed to protect and support them have created cycles of dependency that seem hard to break.

At the heart of social innovation are two core observations. Firstly, in the 21st century most of the problems we face are social in origin. Secondly, for many of the challenges we face, no single sector can make progress alone. To break down the silos between the sectors we need new processes of innovation and new forms of collaboration.

**Question:** What's an example of social innovation in BC?

A: Registered Disability Savings Plans (RDSP), because it allows families to plan for long term well-being for their children with disabilities.

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