



INNOVATE
CALGARY

Innovate Calgary Newsletter

Winter 2013

2013 proved to be a truly exciting year at Innovate Calgary!

We have had the opportunity to serve over 500 entrepreneur, researcher and investor clients in the year, and have made tremendous progress building our team and refining our service offering. Many new initiatives were launched in the year, and challenging plans have been developed for 2014.

Through the fall of 2013, I have personally hosted or been part of 5 different roundtable discussions of how the innovation sector of the economy should be developed and supported. These roundtable events brought together people representing a broad range of perspectives, and resulted in identification of numerous great new thoughts and ideas – many of which we have now incorporated into our 2014 Innovate Calgary Strategic Plan. In fact, the roundtable discussions were so valuable that we have now launched a number of new Advisory Councils to keep the discussions going on a quarterly basis.

As part of our strategic planning activity,

we looked at where the innovation sector should get to over the coming years, and what role Innovate Calgary should play. In short order it became very clear that partnerships and collaboration across a wide variety of organizations will be necessary to realize the vision. None of us can or should try to do it alone. I am very hopeful that in 2014 we can collectively continue the trend started in 2013 of working together across organizations to build an ever-more effective innovation eco-system in Calgary and across Alberta.

I want to thank our team at Innovate Calgary, all of our clients, as well as all of the individuals that we are partnered with, for the exemplary year we've had. Innovation is fundamentally a contact sport, where good people working together cooperatively, is critical to getting the job done. We have seen numerous success stories being built as a result of good people doing good things together. To one and all, thank you.

The summer of 2013 posed great challenge for our city and province. But out of that adversity sprang tremendous pride of community and a realization that we succeed together. That spirit gives me great



confidence that the future of innovation in our community is very bright!

I want to conclude by offering you and yours best wishes for the holiday season, and to say that I very much look forward to working together in 2014!

PETER GARRETT - PRESIDENT,
INNOVATE CALGARY



Client Highlights

“Client success is at the heart of what Innovate Calgary does – being results focused is fundamental.”

PETER GARRETT - PRESIDENT, INNOVATE CALGARY

New technology destroys PCBs using UV light

University of Calgary researchers, have developed a new technology that is a safer, cheaper way to clean up hazardous PCBs in soil using ultraviolet light. This technology was developed in collaboration with industry partners, TransCanada, Innovate Calgary, SAIT Polytechnic and IPAC Services Corp.

The project has taken 13-years of research and development and received support from the Natural Sciences and Engineering Research Council of Canada. The system is a significant improvement on the current disposal method for PCB contaminated soil, which is to truck the soil to a specialized site where it is incinerated. This new method is safer, more convenient, much less costly and better for the environment.

The system, developed by Dr. Gopal Achari, professor of civil engineering in the Schulich School of Engineering’s Centre for Environmental Engineering Research and Education and Dr. Cooper Langford, professor of chemistry in the Faculty of Science, and an internationally recognized expert in photochemistry, has the potential to clean millions of tonnes of PCBs that remain in the soil globally.

“We are thrilled to be partners on this project,” says Dr. Jim Wilson, Intellectual Property Manager, Health & Environmental Technology, Innovate Calgary. “The system is a Soil Remediation Trailer and it effectively cleans PCBs out of the soil at the site of contamination, thus eliminating the need for transportation of dangerously contaminated soil on public roads.”

Innovate Calgary, who serves as the University of Calgary’s technology transfer office, have managed the overall project and the patenting of this technology.

“We are now looking for partner that would like to use this mobile cleanup unit, giving the team an opportunity to field test the technology,” explains Wilson. “Our hope is to have this technology licensed and deployed to contaminated sites around Canada and North America.”

The mobile cleanup unit is capable of removing, in a few treatment cycles, the PCBs from soil and then degrading them



Dr. Gopal Achari, left, and Dr. Cooper Langford stand inside the mobile PCB cleanup unit. *Photo by Riley Brandt, University of Calgary*

in a photoreactor using specialized UV lamps. The unique photochemistry approach which was discovered at the University of Calgary, can now arrive at contaminated sites and treat tonnes of soil daily.

Innovate Calgary, the University of Calgary, SAIT and TransCanada hosted media on September 11 as members from the Calgary Herald, CBC, Global TV and Enviroline learned about this technology and helped to share this story.

Learn more about this technology by contacting:

Jim Wilson, Intellectual Property Manager

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Cutting edge fluid additives for oil & gas industry

Drilling fluid is an important part of an oil and gas drilling operation. It is used to cool the drill bit, remove cuttings, lubricate the wellbore and provide hydrostatic pressure to balance the pressure from the reservoir.

The loss of drilling fluid into the cracks and pores of the surrounding geology is not only a safety risk but can also be very costly and lead to negative environmental consequences.

nFluids Inc., a privately held University of Calgary spinoff company created in collaboration with Innovate Calgary's Company Creation program, is developing a product that has the potential to dramatically reduce the loss of fluid while providing a more efficient, environmentally friendly, cost effective and safer drilling operation.

"I was working on forming nanoparticles for several different uses when I was approached by Dr. Geir Hareland saying that nanoparticles have applications in drilling fluids," says Dr. Maen Husein, Chief Technology Officer of nFluids, and an Associate Professor in the department of Chemical and Petroleum Engineer at the University of Calgary's Schulich School of Engineering.

"Dr. Hareland and I agreed to start a project together and so we began exploring what nanoparticles can do for drilling fluids," he says. "The application of nanoparticles and drilling fluids has been tested by other people in different universities and different research centres. However, our approach is unique and, as a result, we've seen much better properties compared to what is being reported in the literature."

While on research scholarship leave in Norway, Dr. Husein was presenting the team's research when he was approached by a leading oil and gas production company. They expressed interest in the research and introduced him to a venture capitalist.

"I spoke to him and he was very encouraging but he told us that we have to come up with a business plan. Being an engineer, I knew nothing about management or business planning so we got in touch with Innovate Calgary," he says.

nFluids was formed in mid 2012 based on the patent pending drilling fluid additive technology being developed by Drs. Husein and Mohammad Zakaria in the labs of Dr. Hareland, also a



nFluids Inc. has had impressive lab results, and the technology demonstrates the ability to reduce drilling fluid loss by up to 90% (as per API test standards).

professor in the Chemical and Petroleum Engineering Department at the University of Calgary.

The additive has harnessed the potential of nanotechnology to increase lubrication, strengthen geological formations and seal porous rocks. The primary goal is to provide increased wellbore stability while reducing the amount of drilling fluid that seeps into the reservoir formation.

The loss of drilling fluid into the cracks and pores of geological formations is not only a safety risk but can also be very costly and lead to negative environmental consequences. Thus far, the technology has had impressive lab results that demonstrate the ability to reduce drilling fluid loss by up to 90% (as per API test standards).

"The formation of nFluids Inc. came as a kind of capstone accomplishment of converting the lab results into a field application and then hopefully trying to commercialize the method and also the product," says Dr. Husein. "Since forming nFluids, we have been in touch with so many different industry representatives. People started talking openly once they started dealing with a company as opposed to dealing with just me as a professor."

Currently, nFluids is in the process of making arrangements for field testing.

"I'm very encouraged and hopefully the sky is the limit from here," says Dr. Husein.

Learn more about nFluids Inc. at www.nfluids.com.

Developing revolutionary tactile computing

Invinci is a local company developing a revolutionary multi-touch computer interface and software platform, designed with the unique needs of blind and visually impaired users in mind. Founded in 2012, they aim to deliver a bold new human computer interface concept that allows users to access maps, graphs, calendars, apps and more.

Joined by nearly 20 local startup companies Invinci participated in the Perfect Pitch Competition at the 2013 Innovate Calgary Tech Showcase. Founder and CEO Douglas Hagedorn, delivered a winning pitch, garnering overwhelming support from judges and the startup community to take home top honours.

“I did my masters degree at the University of Calgary in geography,” explains Hagedorn. “The research looked specifically for methods for people who cannot see maps because they are blind or visually impaired, Invinci is an extension of that.”

Looking forward Invinci will get their product in the hands of the end users to get valuable feedback on what works and what needs to be refined. Winning the Perfect Pitch Competition is a first step for the company who is looking to grow their products and network.

“My ask was three things,” says Hagedorn. “We are looking for mentors and advisors who have been down this road, this is a massive project and I haven’t done anything like this before in my life, so I want to rely on people who have been successful doing this to share their insight. We are looking to grow the team, so obviously that takes funds, but we also wanted to get the word out and have people realize that we are here for people who are blind.”

Invinci is preparing to launch the Invinci Interface in March 2014. Along with the Invinci Interface, the Invinci Classroom is a product that will aim to break down barriers between teachers and students, creating an accessible learning environment. It is a networked installation of Invinci Interface devices that allow visually impaired students and their teachers to create and share educational resources with ease. This system will provide the functionality of a whiteboard, wiki, textbook and tablet in one flexible interface.

“With our system, students can access all types of curriculum materials in a tactile format. Whether its maps in geography class, graphs in math class, or chemical models and the periodic table in a chemistry class,” says Hagedorn. “More importantly, our products give teachers a way to quickly sketch up new diagrams while they’re teaching and then immediately display them on their students’ interface devices just as you would use a regular whiteboard to illustrate concepts discussed in class.”

In addition to funding from the Canadian National Institute for the Blind, Invinci has received broad support from Calgary’s



Peter Garrett (left), President, Innovate Calgary, congratulates Douglas Hagedorn, founder and CEO, Invinci Technologies – winner of the 2013 Perfect Pitch Competition at the annual Innovate Calgary Tech Showcase.

technology startup community, such as a voucher for business opportunity assessment services from Alberta Innovates Technology Futures. At the 2012 Startup Calgary Launch Party, Invinci was awarded Best Geo-technology Startup by TECTERRA Inc., an organization that supports the commercialization of geomatics technologies. TECTERRA has also provided further support through their Tradeshow Attendance Program, which will help Invinci launch their products at the prestigious CSUN International Technology and Persons with Disabilities Conference in San Diego, California.

Most recently Invinci was voted the Best Presenter in the 2013 Banff Venture Forum’s Information Technology First Look Category. Earlier in September the company was also named the winner of the 2013 Perfect Pitch Competition at the 14th annual Innovate Calgary Tech Showcase, winning a cash prize along with a host services to help accelerate Invinci Technologies’ success.

Learn more about Invinci Technologies at www.invinci.ca.

Partnerships

“This initiative will result in enhanced growth capacity for technology companies.”

MARK FRANCIS - WESTERN CANADA ADVISOR, CNSX



Richard Carleton, CEO, CNSX (right)

Bringing growth opportunities for startups

Innovate Calgary and Alberta Deal Generator (ADG), announced in April, a strategic partnership with the Canadian National Stock Exchange (CNSX). This partnership was forged to enhance and support the technology and startup sector in Canada. Innovate Calgary is the first commercialization centre in Canada to develop a joint venture with CNSX.

Technology entrepreneurs can now access the combined bench-strength of Innovate Calgary, ADG and CNSX providing more options for technology company investment and exit strategies.

“This launches a major initiative to magnify the Alberta technology capital market,” states Peter Garrett, President, Innovate Calgary.

“In partnering with CNSX we assert our intention to bring additional angel investors seeking to add tech deals to their portfolio understanding how CNSX can provide another road to liquidity,” explains Henry Kutarna, Vice President, Investment and Market Development, Innovate Calgary. “We are able to offer investors another path to exit – a value add for tech entrepreneurs.”

“This initiative will result in enhanced growth capacity for technology companies improving the financial environment for technology companies,” states Mark Francis, Western Canada Advisor, CNSX.

Accelerate growth of wireless companies in Alberta

Wavefront, Canada’s Centre of Excellence for Wireless Commercialization, and Innovate Calgary announced in May, an opportunity for Innovate Calgary member companies to access Wavefront’s programs and services including:

- Sophisticated mobile application testing resources
- Business partnering opportunities with international carriers
- Access to outbound market entry programs into global markets
- Advisory and mentorship programs including the Wavefront Machine-to-Machine (M2M) Accelerator program

“Bringing Wavefront’s valuable programs and services to companies within our network will provide unprecedented access

to critical wireless resources and expertise for Alberta-based companies,” states Peter Garrett, President, Innovate Calgary.

“We strive to continually expand our reach to grow the national wireless ecosystem and enable commercial outcomes for Canadian companies,” explains James Maynard, President and CEO, Wavefront. “Our relationship with Innovate Calgary will directly support the growth of the wireless and emerging technology sectors.”

AIM Partnership

Alta Injection Molding is an Alberta-based full service injection molding company that provides commercialization services that span from product design and testing to production and packaging, servicing a variety of clientele ranging from entrepreneurs to Fortune 500 companies.

Innovate Calgary and Alta Injection Molding have joined forces to assist emerging western Canadian manufacturing companies to accelerate their time to market, access new markets and ensure their viability, leading to a more sustainable manufacturing capability in Western Canada.

Key services to be provided by the partnership include market and IP assessments, manufacturing and design feasibility studies, other services designed to help clients become export-ready and well prepared for full-scale production.

Norton Rose

With this partnership, ADG will be able to efficiently deliver new basic legal screening services for companies seeking accredited Angel capital investment. This will ensure that presenting companies meet a minimum standard of maturity prior to presenting their business at ADG’s quarterly forums. Presenting companies and Norton Rose will also mutually benefit from additional exposure to stakeholders with the innovation ecosystem.



Tech Showcase 2013

It Happened Here..

“The Board couldn’t be more proud of the team’s performance in setting and meeting their strategic goals.”

MICHAEL WHITT - BOARD CHAIR, INNOVATE CALGARY

2013 marked an industrious year for Innovate Calgary. Below is an overview of some of the great things that happened here.

Achievements in Innovation

Recognition was held to honor leaders within the University of Calgary and Calgary technology community. It celebrated and recognized individuals with patents issued over the past 30 years through Innovate Calgary and with over 250 individuals recognized, it is a clear reflection that growth and innovation is a part of Calgary’s history.

Innovate Calgary Speaker Series

Designed to facilitate learning and discussion on technology commercialization and business incubation, 2013 marked the first year in which Innovate Calgary hosted the series in the spring and fall. Over 450 attended throughout the series and had the opportunity to network with the panelists and members of the tech community.

Session topics included: student entrepreneurship, PR for your startup, bringing oil and gas and medical tech to market, how to start a startup, and the price of money.

YYCTech: Spotlight on Innovation

Over 300 attended TechRev’s Spotlight on Innovation event held in April. Stakeholders from Calgary’s tech sector had the opportunity to meet some of Calgary’s leading innovators to learn about the challenges, opportunities and successes of local tech companies and to be inspired by the reflections and encouragement of keynote Speaker Todd Simpson, former Chief of Innovation at Mozilla.

The event opened with remarks by Peter Garrett, President, Innovate Calgary, the Honourable Thomas Lukaszuk, Deputy Premier and Minister of Enterprise and Advanced Education and Dr. Elizabeth Cannon, President, University of Calgary. Each shared their vision for a thriving tech sector, their perspective on contributing to a foundation for sustainable tech companies and their admiration for those Calgarians who are changing the world through innovation.

Catch video highlights from the evening [here](#).

New Tech Meetup

March 26th marked the official founding of Calgary’s [New Tech Meetup](#). Led by Mark Willams, Entrepreneur-in-Residence at Innovate Calgary, New Tech Meetup brings together Calgary’s tech ecosystem of startups, businesses, academia and investors providing an opportunity to learn about and foster support for the latest technology and technology startups. With over 300 members having hosted five meetups to date, these monthly events provide a great networking opportunity for Calgary’s tech community.

ARTC Flood Relief Fundraiser

June rain brought unprecedented flooding across Calgary significantly impacting businesses, friends and family. This year, the Alastair Ross Technology Centre evolved the annual cook-off event into a fundraiser for disaster relief in support of the Canadian Red Cross. More than 200 guests participated in fundraising through donations, dunking their bosses in the dunk tank, raffle prizes and more. The event raised over \$4,500 for the Red Cross Flood Relief Fund. Hats off and thank you to everyone who supported this initiative.

Welcome Science, Technology & Innovation Council

In September, Innovate Calgary hosted the Science, Technology and Innovation Council’s (STIC) [State of the Nation \(SON\) 2012 Report to the Community](#). Over 80 guests heard from STIC Chair Howard Alper on the findings relative to innovation and commercialization successes, challenges and opportunities for Canada.

Following the report, we hosted the Innovation and Commercialization Thought Leader Roundtable which included members from the University of Calgary, the University of Lethbridge, the University of Alberta, STIC, the Alberta Research and Innovation Authority, Alta Injection Molding Inc., SMART Technologies, Suncor, Chrysalix, BioAlberta and General Electric as they engaged in a constructive dialogue on STI issues, opportunities and challenges within the innovation eco-system and the commercialization of innovation in Alberta.

A Year in Review

It was amazing at Tech Showcase 2013!

Guests were amazed during the annual Tech Showcase as Innovate Calgary partnered as a Program Partner with Beakerhead. It was an afternoon of interactive displays and futuristic fun! Over 46 exhibitors showcased, wowing over 400 guests, as they learned about robotics, Calgary's most dynamic and interactive technology companies and the tech community as a whole.

Displays included; unmanned vehicles, robotics, a bug's life, IT, applications, music hardware, swimming smartphones, an art car, and much more! A special thank you to this year's supporters; Bennett Jones (Primary Sponsor of the Bennett Jones Event Tent), Alberta Deal Generator, Alberta Innovates Tech Connector, BioAlberta, Boast Capital, Calgary Chamber, Calgary Herald, Design4Change, the Manning Innovations Awards, R&R Associates, Reality Engine, SkyFire Energy, Thecis, and Wedge Networks.

Congratulations to Invisi Technologies for winning the Perfect Pitch Competition and taking home the \$15,000 prize package! We are looking forward to making our 15th annual Tech Showcase just as amazing!

NEXT

A pre-accelerator program delivered by Startup Calgary and Innovate Calgary officially launched in October. [NEXT](#) aims to help early stage entrepreneurs turn their ideas into full-fledged startups by validating the market, acquiring customers and building minimum viable products. For more on this bi-annual program, Just Ask.

Introducing the new InnovateCalgary.com

November introduced the launch of Innovate Calgary's new website. Focusing on our tech community, visitors can submit their tech events on a community events calendar, seek information relating to the commercialization of innovation/discoveries, and connect to additional resources and people to assist in accelerating your startup, business and/or technology. It's simple, Just Ask.

Welcome 2014

It's all about community. It's one thing to talk about it, it's another to take action and get involved. At Innovate Calgary, we're all in! We are working to support a variety of activities in 2014 including; Propel Energy Forum, the ENV Competition, Canada 3.0, SME Program, Start up Visa Program. Look forward to more great events, initiatives and opportunities to accelerate the growth and development for your technology, company, investment and business. Great things are happening here.



Achievements in Innovation



Fundraiser for Flood Relief



STIC's SON 2012 Report

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Just ask.
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