



# ENTREVESTOR INTELLIGENCE

NURTURING FOUNDERS

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How to Teach Sales **7** | Genesis Centre Evolves **9** | University Startups Outperform **16**

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### Entrevestor Intelligence

Entrevestor Intelligence is published quarterly to provide a deeper analysis of the Atlantic Canadian startup world than can be delivered in daily Entrevestor news stories. We're financed by paid advertising, including ads from universities and government agencies. Entrevestor compiles data on the startup community and sells analysis of this data to clients, including government agencies and departments.

**Cover photo:** Trish Arcaro pitches her business, a clothing line based on Mi'kmaq designs, at the UNB Summer Institute. Photo by Gracen Johnson.

**Entrevestor Intelligence Design:** Roxanna Boers

# A New Mission for Our Universities

## We're teaching more entrepreneurship because it makes economic sense and produces more well-rounded graduates.

By Peter Moreira

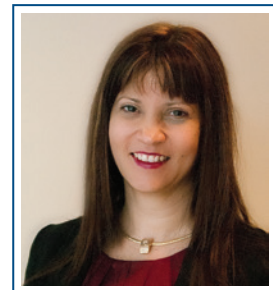
Entrepreneurship took centre stage when Atlantic Canadian university educators gathered for their annual summit in January.

The speakers at the Atlantic Leaders' Summit, organized by the Atlantic Association of Universities, were discussing trends in university education, but repeatedly the discussion honed in on ways to imbue students with entrepreneurial spirit and skills.

The speakers ranged from Dalhousie University Vice President of Research Martha Crago, to businessman, philanthropist and University of New Brunswick alumnus Gururaj Deshpande, to former head of the Privy Council Kevin Lynch. But there was a unity in their message: bring more entrepreneurial content into the curriculum of the region's universities.

"Why don't we make it a hallmark [of Atlantic Canadian universities] that everyone who comes here will have some entrepreneurial experience?" asked Crago.

No one would argue that the entrepreneurial experience is now the hallmark of four years at an Atlantic Canadian university. But what you could argue – and we'll argue it strongly in this report – is that the region's higher education institutions in the past couple of years have introduced a range of entrepreneurial programs. They're not just teaching entrepreneurship. They're launching business founders and startups that are exceeding the performance of other startups in the region. Entrevestor now follows about 300 startups in Atlantic Canada, and 115 of them have links to universities (They either grew out of university research or entrepreneurship courses, or have relied on university research or facilities to grow.)



Dawn Jutla

"There is a growing expectation among governments and political representatives about an increased role for universities in teaching and inspiring entrepreneurship among students," Peter Halpin, Executive Director of the AAU, said in an interview. "Generating considerably more new business startups has become integral to regional and provincial economic development and talent retention strategies."

St. Mary's University Professor Dawn Jutla added: "Entrepreneurship education in Atlantic Canada is benefitting from its institutions' years of experimentation in active learning techniques, which emphasize applied and professional learning experiences and the linking of theory and practice for its students."

How hot is entrepreneurship right now? Consider that there are now lean methodology courses in at least four of the region's universities. (Lean methodology is the process of assessing a business idea's potential success before you spend money developing a product.) Two universities offered summer programs to support young businesses. Three



# The current job market demands more entrepreneurial education

## A Focus on

# ENTREPRENEURSHIP



Here are a few of the agencies and meeting spaces within universities that are helping students learn about entrepreneurship

### Acadia Entrepreneurship Centre Acadia University

Dating back to before the startup boom, the AEC takes a unique focus, applying cutting-edge technology to agricultural and rural initiatives. It works closely with the Acadia Institute for Big Data, which has launched several projects involving the wine and agricultural industries.

### Genesis Centre Memorial University of Newfoundland

The commercialization centre of Memorial University has opened its doors to other companies, including startups developed outside the university. It will move to new headquarters in the Battery development in two years.

### The Collider Dalhousie University

For the past few years, the Starting Lean course at Dal has met in room 2600 of the Killam Library. Now the room has a new name and purpose. It's The Collider, where students come together and collaborate on projects. It will be the headquarters of Launch Dal, the new entrepreneurship initiative.

### Technology, Management and Entrepreneurship University of New Brunswick

Housed within the Faculty of Engineering, the Dr. J. Herbert Smith Centre for Technology, Management and Entrepreneurship emphasizes the role of engineering and design within the development of a product. The university's research has been vital to many of the leading companies in the Fredericton area.

### UIT Cape Breton University

The UIT program operates in its own universe, meeting off campus. It is nonetheless an integral part of the burgeoning technology hub developing at the university and in the surrounding community.

years ago, there was no post-graduate program entrepreneurship in the region. As of the 2015-16 school year, there will be two—at Saint Mary's and University of New Brunswick. And Atlantic Canada will likely soon be home to the country's only program teaching international technology sales. That doesn't even include all the extra-curricular activity that has popped up to teach kids to earn a buck by starting a business. Many of these developments fell into place simply because young people are more entrepreneurial than their parents or grandparents.

"The wave of entrepreneurship did not change our teaching methods," said Jutla, the head of SMU's Masters of Technology, Entrepreneurship and Innovation program. "Instead we were ready to create a tsunami of new programs to support and further build out more entrepreneurship."

So why all the focus on entrepreneurship? There are probably three reasons: fashion; economics and personal development.

The plain fact is that the generation born after 1990 is entrepreneurial and innovative. These young people grew up with the internet and digital products, and feel comfortable with the concepts underlying modern entrepreneurship. Around the world, young people are choosing entrepreneurship as a career path. Startups are a craze today as surely as rock 'n' roll was in the 1960s.

But the reality of the market place – especially the market for jobs – is also pushing young people to start businesses. According to Statistics Canada, the Canadian unemployment rate for people aged 15 to 24 was 12.9 percent in June; almost double the rate of 6.8 percent for the population as a whole. It's obvious that large employers in both public and private sectors are not hiring graduates as vigorously as they did a generation ago.

"Look at the graduate labour market," Colin Mason, professor of entrepreneurship at the Adam Smith School of Business at the University of Glasgow, said during a visit to Nova Scotia this summer. "Look at the demand for graduates. It's a plateauing if not a declining labour market. Meanwhile the supply of graduates continues to increase. If a student doesn't want to work at McDonald's all the time, they have to create their own employment opportunities."

Entrepreneurial education is more than a route to income. It's also part of the universities' age-old mission to build the well-rounded graduate. Past generations taught Latin and the classics to create the complete individual. We still encourage sports and community service at universities for the same reason. Similarly, teaching entrepreneurship instills a mindset in which the individual can identify a problem, come up with a solution and test it in the market. It teaches people to be flexible in their thinking and resilient when they face a job loss.

And the region's universities are doing more to grow entrepreneurial brains. For 28 years, UNB has had the Technology, Management and Entrepreneurship, or TME, program at the heart of its engineering school. Then three years ago, Mary Kilfoil and Ed Leach began the Starting Lean program at Dalhousie, which has evolved into the multi-faceted program Dal Launch.

Both UNB and Dal have made entrepreneurship a year-round initiative as the former has its Summer Institute and the latter its Launchpad accelerator throughout the summer.

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## In three years, two masters programs in entrepreneurship have launched

UNB's Summer Institute encourages passion and design. This year's students ranged from a Briton making cardboard furniture to Trish Arcaro, who is developing her own clothing line based on Mi'kmaq designs. Launchpad ushered 10 companies through its curriculum. One was WorkLocal.jobs, whose CEO Leslie Gallagher will represent Nova Scotia at the G20 Young Entrepreneurs' Summit in Istanbul this year.

"The [Summer Institute] program focuses on creative economy firms and we are simply amazed by the participants' passion, drive and creativity, which will have a huge impact on our community," said Dharendra Shukla, the chair of the TME program.

This autumn, the university is launching a TME masters program, with the added bonus that international students completing the degree will have their application for permanent residency fast-tracked under the New Brunswick Provincial Nominee Program. St. Mary's University in Halifax was the first in the region with a post-graduate degree in entrepreneurship when it launched its Masters of Technology, Entrepreneurship and Innovation course two years ago.

The result of all this activity is that startups are emerging from universities, and some of them are gaining notice quickly. We take a look at a few of the more exciting startups affiliated with universities on pages 12 and 14.



Zak Single works at the Fredericton Makerspace during his time at the UNB Summer Institute. Photo by Gracen Johnson

And on pages 16 to 17, we analyse how companies with ties to universities perform. (Spoiler alert: they perform really well.)

As well as data on startups affiliated with universities, this report will tell some of the stories of the entrepreneurs coming out of these institutions, the companies they're building and how universities are helping.

At the Atlantic Leaders' Summit, Deshpande urged educators to pursue experiential learning because it shows students that they can apply their knowledge to solving problems, and that leads to entrepreneurship. He asked them to give their students knowledge that has an impact on the wider world.

"Universities should have the goal of getting everyone into that entrepreneurial experience," said Deshpande. He added such experience teaches students to solve problems that impact society. "When you have a society of problem-solvers, you live in a very healthy society. ★

## THE ART OF THE DEAL

A veteran of Toronto literary circles is now at the centre of a pioneering movement in Atlantic Canadian university entrepreneurship.

Don Sedgwick's career is steeped in publishing, having edited more than 100 books, ghost-written more than a dozen, and acted as agent for such luminaries as Scotiabank Giller Prize-winner Linden MacIntyre. Now he is spear-heading efforts by the University of King's College to teach journalism students to start their own ventures, not just look for traditional media jobs.

"I teach in the New Ventures stream and will be attending a prestigious training session in the Lean Startup methodology in Santa Clara, California, in November," said Sedgwick. "This will enable King's to host additional events in the fields of entrepreneurship and innovation."

The university-within-a-university is working

on an important facet of the startup movement – teaching entrepreneurship not just in business, engineering or computer schools, but also in general arts programs.

"As science and technology moves forward . . . it is abundantly clear that we also need to include the liberal arts in our entrepreneurship programs," said Dalhousie University entrepreneurship professor Mary Kilfoil. "Since research has shown that 'entrepreneurially minded' individuals are spread out across the disciplines, it only stands to reason that there would be great contributors in the liberal arts."

It's not always an easy fit, largely because too few arts students think of themselves as budding entrepreneurs. But King's is just one institution moving to introduce entrepreneurship to the humanities.

Professor Gary Markle, who teaches fashion at NSCAD University, has been looking into

creating a fashion line for seniors, called Well Worn. Inspired by his mother, who has dementia, Markle wants to make clothes that are fashionable, comfortable, and easy to take on and off.

Back at King's, the journalism school is involved in a range of activities to encourage new enterprises.

These include a masters program in new ventures, which includes an entrepreneurship course from the Dalhousie MBA program taught by Dr. David Roach.

King's is also launching an Innovation and Entrepreneurship Society in September 2015.

"This society was actually active many years ago," said Sedgwick. "But there is renewed interest in student projects in light of new technology and changing uses of media."

# So What Does a SALES PROGRAM Look Like?

After Gerry Pond proposed a tech sales program in Atlantic Canada, we checked in with the leading university sales program in the U.S.

By Peter Moreira

Not long after Gerry Pond offered half a million bucks to any Atlantic Canadian university that initiates an international tech sales program, some people began to ask: what would such a program look like?

Pond, the chair of East Valley Ventures, surprised the Atlantic Leadership Summit in February by offering \$500,000 to any institution that would establish a full program that would teach international technology sales. Pond and the universities are still talking, and there may be an announcement this year.

The more I discussed it, the more questions arose about the structure and curriculum of such a program. So I went looking for a good university sales program, and that search led me to Daniel P. Strunk. His full title is Executive in Residence and Managing Director Center for Sales Leadership at the Driehaus College of Business at DePaul University in Chicago. It would be simpler to say he and his colleagues have put together one of the best – possibly the best – sales education programs in the U.S.

With 44 years of sales experience for such brands as Polaroid, Converse and Quaker Oats, Strunk is on a mission to modernize sales education in the U.S. And in an 80-minute interview he drove home the need for better curriculums and familiarizing students with modern sales methods.

“If you look at what’s happened in the past, students have come to the workforce without being work-ready,” said Strunk. “Part of this dilemma is on schools for not listening to business. We’ve lost our focus ... [and chose to teach] subject matter that has little relevance today.”

Strunk and his colleagues at DePaul have listened to business and worked with corporations like Salesforce.com to develop a curriculum that mirrors business demands. DePaul University’s Center for Sales Leadership is the largest sales education program in the U.S., based on graduation rate. It comprises 11 courses, eight of them focused on B2B sales. At any given time, there are about 1,000 students in the program, and between 200 and 215 graduate each year.

The Sales Strategy & Technology course developed by Strunk in 2005 features a simulation titled The A&W Case, which is now taught at 36 U.S. universities (though none in Canada yet). More than 5,000 students have completed the simulation, and Strunk said it has proven popular with students, in part because they see the job offers that graduates receive.

The DePaul program addresses many of the shortfalls in sales mentorship that Gerry Pond has identified in the Atlantic Canadian ecosystem. But Strunk stressed the program applies to all sectors, and does not distinguish between selling technology or any other product. He added that the lessons

from the program can be applied to any country or culture, because modern sales techniques are applicable around the globe.

The goal is to help the student understand what the modern business world needs in sales people. Because of corporate restructuring in the past few decades, a sales person must manage fewer and larger accounts. He or she must work with product managers and other colleagues to reach people at various positions in various silos in the target company.

Learning to use the right customer relationship management tool is part of the program, but Strunk wants students to go beyond dexterity with CRM.

“Most of all, it’s about strategy,” he said. “It’s not about the technology. . . . It’s about how you apply technology to sales process. In meeting sales education challenges, we have to identify what will be needed from the sales force of tomorrow.”

The program teaches students how to communicate with customers through other tools, to introduce new accounts, and to use prospecting tools. In all of the courses, students are required to sell. Recognizing objectives, strategizing activity and exceeding quota are all important lessons to be learned.

In one course called The Fundamentals of Sales and Networking, students have a \$3,000 actual quota, and they must create value-added projects and sell them to local businesses. (The proceeds of their work contribute about \$65,000 annually to a scholarship fund for Chicago public schools’ students who can’t afford to attend the university.)

Above all, said Strunk, the program teaches students three real skills: the ability to actively listen to clients; the creative thinking skills necessary to understand a problem; and the analytical skills to create a financially acceptable solution. Of course, technology supports each of these.

“I can’t think of three more necessary skills than these,” he said. “It’s all about being able to serve a client’s real needs and to create value that counts in the long run.” ★



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# The Evolution of GENESIS

A year or two before it moves to the Battery complex, Newfoundland's Genesis Centre is evolving. We spoke to the new CEO to learn more.

By Peter Moreira

There is still more than a year left before the Genesis Centre staff pack up the boxes at their St. John's Bruneau Centre office and move to new digs at the Battery. But that's certainly not to say change is not afoot at the Memorial University of Newfoundland incubator.

The centre is under new management, is expanding to a new town and has different entrance criteria.

"We're working with several areas within MUN and the community to look at how we can all support IP development, the ecosystem and innovation overall," said Greg Hood, who became the CEO of the centre this year after a career in the private sector.

The Genesis Centre and its affiliate the Genesis Group were originally formed to serve as an incubator for St. John's startups, including some that were commercializing intellectual property developed at the university. It had considerable success, producing such companies as Verafin, which develops software that prevents fraud and money laundering, as well as nautical and military manufacturer Rutter.

Now the centre is changing in step with the evolving situation at the university and changes in the broader innovation landscape. CEO David King, who had been with the Genesis organization since 1993, left last year to take up a teaching position in Qatar. Around the same time, Memorial University reclaimed the task of negotiating with outside parties interested in IP developed at the university. And at about this time the Genesis Centre announced it would be leaving its elegant offices on the Memorial campus for the university's new development at the Battery, on the side of Signal Hill. The Battery complex will host a range of functions for MUN, and graduate students will move into the facility next month. So far everything is on track and the Genesis Centre is due to move in the winter of 2016-17.

Genesis Centre tenants now include such young companies as HeyOrca!, which is developing an online platform to help marketers collaborate on

social media projects, and Vish Solutions, which is making software for hair colouring salons. Is it just hair colouring??

Meanwhile, the startup community in Newfoundland and Labrador has changed. Genesis clients today are more than likely to be working with other support groups. HeyOrca! And Vish for example were both members of the PropellCT tech accelerator.

"There are a lot of players in the ecosystem, and we all have to work together," said Hood. He said there is some overlap but what's important is that Genesis Centre and other groups do what's best for the companies they're nurturing. "We can all move together in a cohesive manner and I think you'll see that's happening."

As an example of the collaboration, Hood points to the Genesis Centre's announcement in June that it would establish a base at the Beachhead Innovation Center in Holyrood, on Conception Bay, about 50 kilometres west of St. John's. The partnership will allow Genesis clients and graduates to work out of the Beachhead facility, which will be valuable for ocean-related research.

While the Genesis Centre will continue to be involved in ocean research and advanced manufacturing, the reality is that most startups in the current environment are involved in digital technology.

"In our most recent pitching competitions, 70 percent of the participants were doing apps," said Hood. "Maybe it's a change in the St. John's community or maybe it's something bigger than that. But the question is, how do we tap into it?"

Hood and his staff are planning for the new Genesis Centre to have a more open layout to facilitate more collaboration – a popular concept with the IT community. And he also wants the Genesis group to maintain support for longer with the companies that pass through the incubator.

"When the organizations graduate from our program, what do we do with them?" he asked. "I think there's a need for us to continue working with them and see that they succeed." ★



Greg Hood

**WE ALL HAVE TO WORK TOGETHER.**

**"When the organizations graduate from our program, what do we do with them? I think there's a need for us to continue working with them and see that they succeed." – Greg Hood**



# Raising an Entrepreneur

The life of an entrepreneur is never easy -- just ask their parents. Carol Moreira spoke to the parents of three founders to learn what it's like to have children who start businesses.

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## CASTAWAY GOLF: A Family Affair Keith and Matt Vance and Judy Crowell-Vance

Kevin Vance expected his son Matt to become an engineer. But Matt is creating a new business for them both based on golf, a sport his dad introduced him to as a child.

Matt, 25, is the founder of Fredericton-based Castaway Golf Technologies, a company that has developed an automated system for retrieving and sorting balls lost in water hazards.

This year, Castaway won the \$287,250 first prize in the Breakthru competition run by the New Brunswick Innovation Foundation.

"We celebrated as if we'd won the Stanley Cup," said Truro-based Kevin, 48, a heavy duty mechanic and welder. "The Breakthru money has allowed us to grow. We now have eight employees, and sales are picking up."

Matt loved golf from a young age.

"He would bike to the Truro golf course and play 36 holes," his dad said. "Then he traded golf balls for clubs. That paid for his membership. He saw the value in recovering golf balls."

Kevin helped Matt create Castaway's first prototype 13 years ago.

"Matt asked if I could build it, so me and his grandfather Lloyd Crowell, a flooring contractor, went to work in the garage and came up with the prototype."



Keith Vance, left, celebrates winning the Breakthru competition with Josh Oden, Matt Vance and Alex Dickens.

Kevin won't describe the prototype because Castaway is seeking a patent, but said it's a simple device that can be cast manually and retrieve balls lost in water hazards.

Matt's entrepreneurship was a surprise to his dad, who said he has always taken the safe route in his own life.

"I've been in the transportation industry in Truro my whole career," Kevin said.

"Myself and my wife, Judy Crowell-Vance, thought Matt would become a civil engineer. Matt was studying engineering at UNB in Fredericton."

But then Matt took UNB's Technology, Management and Entrepreneurship program, and began to show an interest in entrepreneurship.

He graduated with his degree and moved to Toronto to work for a major oil company. But he soon realized that his passion was Castaway Golf and moved back to Fredericton after eight months.

"Matt called and said he was going to start this company. I was (to be) VP of Operations—that's what he labeled me. Josh Ogden, who he met through TME, was CEO."

Kevin said Fredericton's innovation community has been incredibly supportive, especially Dharendra Shukla, the head of TME.

"Matt and Josh idolize Dr. Shukla," he said. "Matt is encouraging his sister Emily to take TME while she studies engineering."

"My focus is Matt and Josh. I want the young fellows build their lives with this. If they need the old guy for anything, I'm here."

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## SENTINEL ALERT: Self-Driven Tim and Sarah Murphy and Kathryn Musseau

During a brief conversation about his daughter Sarah, Tim Murphy uses the phrase 'self-driven' three times to describe her.

It's clear that although the older Murphy didn't know what his daughter meant when she declared she'd one day make her living from the internet, he's not surprised she's succeeding.

"She was always a bright and social girl. She gets the most out of every situation. She's self-driven, a Type A," said Murphy of his daughter.

Sarah is now 27 and a co-founder of Sentinel Alert, a St. John's start-up that is developing a wearable technology to enhance worker safety.



Sentinel Alert CEO Sarah Murphy: Selected for the Women Entrepreneurs Bootcamp

The technology involves a personal safety device for workers. The device relies on a mix of sensors to identify risky actions or movement patterns that might suggest a worker is at risk of having an injury, like falling.

Sarah has recently been selected to take part in the Women Entrepreneurs Bootcamp at Communitech in Kitchener-Waterloo.

Sarah's mother, public relations and marketing executive Kathryn Musseau, is unsurprised her daughter is building a startup.

"When Sarah was young, she had a lemonade stand," Musseau said. "She asked me to provide free chips, because the chips would make the clients buy more lemonade.

"She was always a self-starter, quick to adapt, and liking freedom and control. She would climb out of her crib to go and get breakfast. We called her The Boss."

Musseau hopes that exposure to her own work, which involved taking Sarah on fun projects, like filming and telethons, may have boosted her daughter's creativity.

Halifax-based Tim has spent his career as an engineering consultant, becoming self-employed last year.

"Sarah is more organized, more driven than I was," he said. "She amazes me with her energy."

Tim said the family always supported Sarah academically.

Moncton-born Sarah completed her degree in business administration at Nova Scotia's St. Francis Xavier University.

Her parents said she helped pay her tuition costs by winning scholarships and competition prize money.

"She's not settling for something safe," her dad said. "I respect entrepreneurs who create jobs for other people. They gamble on themselves. There's no safety net. It takes a certain amount of guts and initiative."

## WORKLOCAL.JOBS: An unexpected entrepreneur Jack and Leslie Gallagher

Leslie Gallagher's family did not expect her to become an entrepreneur. The young woman gained a degree in English and Creative Writing from Dalhousie University and then worked as an assistant editor.

Leslie seemed destined for a life with words, but it was her contact with

entrepreneurs while working at Halifax-based Progress magazine that encouraged her to start the jobsite WorkLocal.jobs.

WorkLocal.jobs allows job-seekers to include one-minute video interview messages with their job applications.

The question posed in the interview message is selected beforehand by the employer. For example, an employer might ask: "What makes you the best candidate for this position?"

Candidates then have three minutes and three chances to record their response, allowing employers to gain a thorough early impression of job-seekers.

The success of the site is one reason Leslie was chosen to attend the G20 Young Entrepreneurs' Alliance summit in Istanbul this year.

Leslie's father, Jack, said his daughter, now 26, had not previously shown entrepreneurial leanings, although she is descended from a line of entrepreneurs and her brother, Robert, has always been interested in business.

"When Leslie was studying English I had no idea she'd now be running a business," said Jack who has run marine consulting agency Hammurabi with his wife Lori, for the last 15 years.

"But she got talking to entrepreneurs who couldn't find talent. And she spoke to students who couldn't find work. That gave her the idea for WorkLocal.jobs."

Jack is amazed by how much his daughter has learned in the year since she became an entrepreneur.

"As parents, our difficulty is keeping up with her. We have to research the things she talks about.

"High tech businesses require coding, trademarking and intellectual property protection, which are areas we know little about. And the pace of business is much faster than we are used to. Things happen quickly and at all hours of the day."

Jack said he and his wife assist Leslie where they can and offer advice when they have relevant experience.

"Leslie's had access to lots of ideas as she listened to clients and mentors and did Dalhousie's LaunchPad accelerator," Jack said. "We're proud of her." ★



Photo by Michelle Dourcette

Leslie Gallagher, Founder of WorkLocal.Jobs, was chosen for the G20 Young Entrepreneurs' Alliance summit in Istanbul.



# THE HONOUR ROLL

There is no shortage of impressive Atlantic Canadian startups affiliated with the region's universities. They are winning awards, making sales and forming partnerships with multinational companies.

Here and on Page 14, we showcase a few exemplars that are hitting benchmarks and making news this year.



## Afri-Sea

St. Mary's University  
Sulayman Cham, left, Tim Cranston, and Zivai Taruvinga

Tim Cranston and his teammates were disappointed not to reach the finals of the Canadian Business Model Competition in March, but undaunted they applied to the International Business Model Competition in Provo, Utah. They had faith in their technology and business model. The company, which grew out of St. Mary's University, has devised a seaweed-based product that mixes with soil to help retain moisture and ease the effects of drought, especially in Africa. The gambit paid off. Afri-Sea ended up placing fifth at the International Business Model Competition this year, the first Canadian team ever to place.



## Spring Loaded Technologies

Dalhousie University  
Chris Cowper-Smith and Bob Garrish

When Chris Cowper-Smith (pictured) found out he had been nominated for the 2015 BDC Young Entrepreneur of the Year award, he launched into a full-tilt marketing drive. The competition was based in part on public voting for the winner. So Cowper-Smith saturated social media with information on the company, which grew out of Dal's Starting Lean program. Spring Loaded has developed a knee brace that strengthens and stabilizes the knee joint. It plans to launch this year. Cowper-Smith won the \$100,000 BDC Young Entrepreneur of the Year award, and doubled the company's contact list in the process.



## Eigen Innovations

University of New Brunswick  
Richard Jones and Scott Everett

Eigen Innovations reached an important benchmark in its current funding round when it secured \$250,000 in funding from the New Brunswick Innovation Foundation in May. The company makes automated systems to help manufacturers refine their processes, and is a key member of New Brunswick's industrial Internet of Things cluster. A graduate of the PropellCT tech accelerator, Eigen has developed Intellexon, which helps manufacturers improve production efficiency and reduce waste. The system uses algorithms developed under the guidance of researcher and co-founder Rickey Dubay at the University of New Brunswick. Eigen chief technology officer Scott Everett (pictured) is a graduate research assistant at the university.

# GOT A START UP?

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For startups who have gained initial market traction

## **LAUNCH**

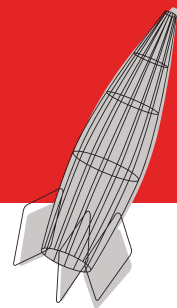
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# SHOWCASING Leading Startups Affiliated with East Coast Universities



## HeyOrca!

**Memorial University of  
Newfoundland  
Joseph Teo and Sahand Seifi**

Accepting a place in the PropellCT Build program was not the easy route for HeyOrca!, but it was the right route. HeyOrca! is an online platform that helps marketers collaborate on social media content. Working out of the Genesis Centre at Memorial University, it is conducting pilots of the products with marketing agencies. And throughout the summer founders Joseph Teo and Sahand Seifi have been traveling between St. John's and Moncton to attend the Build program, which nurtures growth stage companies. HeyOrca! is the first Newfoundland and Labrador company accepted into Build, and Teo and Seifi hope it will help to accelerate the product's sales.



Photo by Danny Abriel

## PetKonekt

**Dalhousie University  
Julia Bulfon, Justin Javorek, and  
Shawn MacBurnie**

The PetKonekt team took their project through the Starting Lean Course at Dalhousie, and then won \$10,000 to go through Dal's Launchpad summer program. The team led by CEO Justin Javorek has developed an app that helps link pet owners with the people who care for those pets. Through extensive research, the team found that only about half of owners take their pets in for regular checkups, so PetKonekt helps veterinarians maintain contact and remind the owners. The team is preparing to launch the product later this year.



## BlueLight Analytics

**Dalhousie University  
Colin Deacon**

BlueLight has a habit of securing big partners to help distribute its flagship product, checkMARC. Developed from an idea generated at Dalhousie University, checkMARC helps dentists ensure the energy levels on their curing lights are optimal. It's an important tool because there are huge health risks if the curing lights have too little or too much heat. In May, the company led by CEO Colin Deacon said it had signed a distribution agreement with 3M ESPE, a Canadian division of the American conglomerate 3M Co. That followed on its previously announced partnership with Henry Schein, the Melville, N.Y.-based medical product distributor whose 2014 sales exceeded US\$10 billion.



## SGS Solutions

**St. Mary's University  
Shelley Simpson-McKay**

As she proceeded through the MTEI program at St. Mary's, Simpson-McKay found new customers for her ShowBattery product and added to her collection of trophies. SGS has produced portable batteries for exhibitions and trade shows that allow exhibitors to save thousands of dollars by avoiding electric installations. Last year, SGS introduced its ShowBattery at the ExhibitorLive conference in Las Vegas and won the buyers' choice award. This year, the company returned to the annual trade show — attended by 6,000 people from the trade show industry, representing 30 countries — to introduce a smaller version of the ShowBattery, and it won the award again. ★

# The **NEW WAVE** of Tech Ed

Offering concise, intense courses, coding bootcamps help to meet the endless demand for programming talent.

By Sabina Wex

When Josh Davies learned the next nine-week programming course at CodeCore began in a few days, he cancelled his flight to Barcelona. And he's glad he did.

Davies was taking a sabbatical from his IT job at Oracle's Vancouver office because he wanted more creativity in his life and was planning to spend time in the Spanish city. But then he learned of CodeCore, an application and web development school that offers coding bootcamps.

"Without the bootcamp, there's no way I would have been able to jumpstart my freelance career," said Davies, who was offered a six-month contract as a developer the day after he completed the course.

Davies is just one programmer who has benefited from the coding academies, which focus on learning as doing.

In Oct. 2014, the *New York Times* reported that since 2012, more than 60 coding academies have opened in the US. Most of their teachers are professional developers, and they teach students the skills and coding languages they need to succeed in creating programs and applications for real-world clients. Most academies base grades on projects instead of papers or memorization tests.

The Times article said three-quarters of these schools' graduates are employed, and that has certainly been the experience of Canadian code academies. CodeCore owner Tam Kbeili said almost 100 percent of his students are employed after finishing his program.

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**'Whether or not you actually want to be a developer, I think it's very appropriate to understand the technology because we interact with our computers and smart devices more than our TVs now.'**

~ Duncan McCall, Founder of BrainStation Academy

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"A lot of more traditional institutions are not necessarily offering these types of programs," said Duncan McCall, founder of Toronto digital education school BrainStation Academy. "A computer science degree is different than building web applications."

Coding academy students hail from all backgrounds. They can be recent high school graduates, career changers, and employees sent by their employers to sharpen their skills.

Many students see coding skills as the key to a future with a job and a good salary. The Times reported that those employed after graduating from the coding academies averaged an annual income of \$76,000.



*CodeCore owner Tam Kbeili works with students during a classroom session at the Vancouver coding bootcamp.*

"It's very satisfying seeing people doing something great with their lives," Kbeili said.

But coding academies aren't cheap. CodeCore's nine-week, full-time program costs \$7,600 and BrainStation's 10-week coding bootcamp is \$6,000.

CodeCore offers \$500 off for female and mature veteran students to encourage greater diversity in the tech sector. Both BrainStation and CodeCore offer payment plans to allow for payment flexibility.

Kbeili said that coding academy prices look expensive upfront, but not in comparison to a four-year computer science degree. Plus, the UBC computer engineering graduate added, the job prospects are greater.

"You're paying a lot less for a much shorter time span," he said.

With employers seeing the benefits of coding academies, many send and pay for their employees to participate.

BrainStation offers courses designed for specific fields, such as visual design and digital marketing.

"It can cost hundreds of thousands—if not millions—of dollars when mistakes are made," McCall said, "just because people don't understand what can and can't be done or they can't communicate properly with their technical team."

McCall said that everyone can benefit from learning coding.

The experience was certainly beneficial for Josh Davies, who also got to make his trip to Barcelona, a few months later than he'd planned.

Once Davies completed his six-month contract, he became a freelance developer. He's been a working and successful freelance developer for the past year and a half, and travels around the world for work. That's how he wound up in Barcelona for a month.

"For me, [CodeCore] was 100 percent the right decision," he said. "Coding is very creative. There's always the challenge because there's five ways to do it, you have to find the best way to do it." ✪



# Accelerated Sales Growth

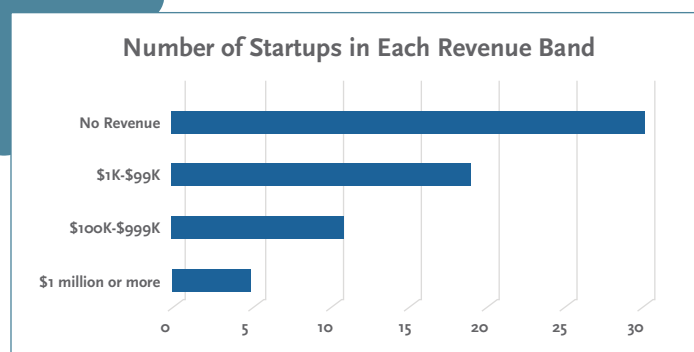
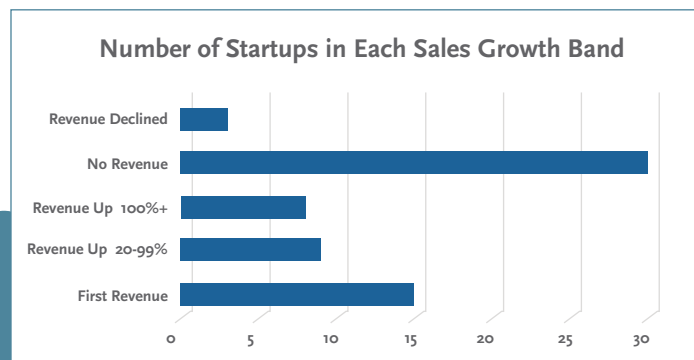
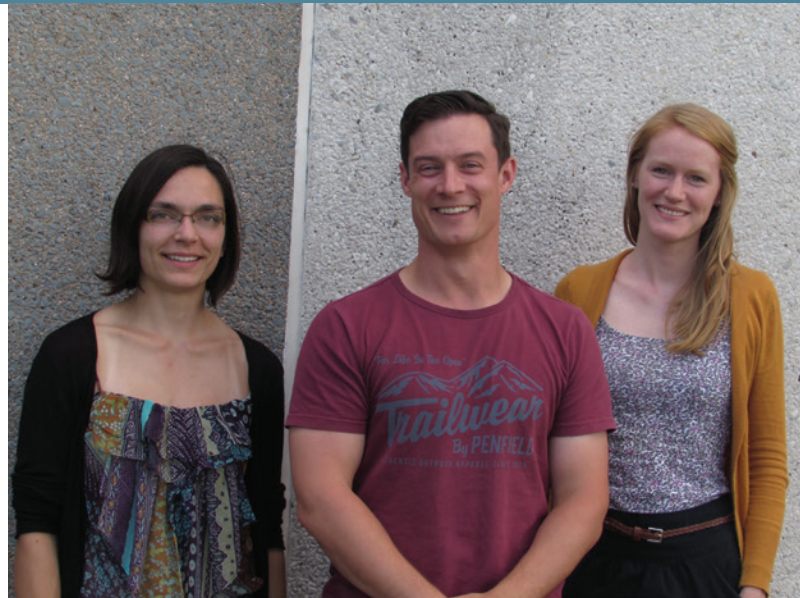
Our research shows that startups affiliated with the region's universities grow twice as fast as the community overall.

By Peter Moreira

When Gordon McArthur presented Forerunner Research at the Atlantic Venture Forum in June, he revealed some interesting facts about the company that started in a lab at St. Francis Xavier University in Antigonish.

Forerunner, whose technology detects gases in soils, is linking up with some key partners and clients, and its sales are skyrocketing. The company spent last winter at the accelerator operated by Surge Ventures of Houston, a funding and mentoring organization specializing in energy technology.

"We've gone from being a laboratory prototype company to having a platform that allows you to measure accurately what's coming out of the ground," said McArthur in an interview just before the forum.



Does revenue growth at university-related startups look strong because it's starting from a low base? Is it distorted by one or two large companies? According to these graphs, the answers are No. A broad range of these startups have impressive revenue AND are growing sales strongly.

The growth has been spectacular, allowing the company to grow mainly through revenue. According to material released at the AVF, Forerunner's revenues increased 150 percent in 2014, and were at the time on pace to rise 80 percent this year. The company is forecasting almost 70 percent revenue growth in 2016.

All of which makes Forerunner – believe it or not – a fairly typical Atlantic Canadian startup that has grown out of university research. When Entrevestor collected 2014 data on Atlantic Canadian startups, we took the time to study companies that grew out of or work with the region's institutions of higher education. What we learned is that revenue at startups with links to universities grows about twice as fast as East Coast startups overall.

"Those researchers that are commercializing aspects of their research are more likely to be working on real problems and have identified solutions leading to breakthrough or high potential products or services," said Mary Kilfoil, who heads the entrepreneurship program at Dalhousie University. "These products have a built-in market-based advantage over, say, another app."

Of the 286 startups we track in Atlantic Canada, 122 shared their revenue data with us and their sales rose 38.5 percent in 2014. It's an impressive number.

But when we examined only the startups with links to universities, we found a huge improvement in the already-strong numbers. We assessed



## PERFORMANCE OF STARTUPS AFFILIATED WITH UNIVERSITIES AND COLLEGES

	Spinoffs from University IP	Other Relationship with Universities	Both
Number of Startups	41	74	115
Jobs	170	330.5	500.5
Revenue	\$4.49M*	\$7.44M†	\$11.93M
Revenue Growth	81.8%	65.3%	71.1%
Funding	\$63.82M	\$23.62M	\$87.44M
No. of Cos. Funded	18	29	47

\* Data from 23 companies.

† Data from 41 companies; excludes one company with more than \$25 million in revenue.

Dataset: Unless mentioned otherwise, 286 startups

Forerunner Research CEO Gordon McArthur with his colleagues Willow Sereda-Meichel, left, and Colleen Gosse.

the revenue performance of 23 companies that grew out of university research, and we found their revenues rose 81.8 percent in 2014. Then we examined the data from 41 other companies with relationships with universities – usually that means they have gone through a university entrepreneurship program or used universities for lab facilities or research. Their revenue rose 65.3 percent.

In total, the startups connected with post-secondary institutions experienced revenue growth of 71.1 percent in 2014.

The number seems astonishing. Is it that the 65 university-linked startups are starting from a low base in revenue? Not compared with other startups in the region. Eleven of the university-related startups that shared their revenue with us had six figures of revenue in 2014, and five others had sales of more than \$1 million. Fifteen of the companies reported revenue for the first time, and eight more than doubled revenue last year – factors that contributed to the high growth rates.

Let's stress something: this is actual data on companies selling their product to clients. It's not like winning a competition, which depends on the opinion of judges. It's not making a list of ones-to-watch in a magazine. It says even more about these companies than landing VC funding. These are sales that these companies have actually booked.

Of course, the startups affiliated with universities also attracted a great deal of capital to the region. Forty-seven that either grew out of university IP or have some other relationship with universities raised a total of \$87.44

million. One was St. John's-based Verafin, which raised \$60 million in a landmark private equity funding. Even if we remove the Verafin funding, these startups attracted investment of \$27.44 million. That is about half of the funding raised in the entire startup community in most recent years.

In total, the startups affiliated with universities employed 453 people as of the end of 2014.

According to the literature distributed at the Atlantic Venture Forum, seven of those employees work for Forerunner Research – a company financed almost entirely by revenues.

Forerunner has developed a range of products that measure the flux and concentration of gas in soils – and is an important product in ensuring the responsible use of hydraulic fracturing. They have been used to assess ground gas levels around the world, including for projects above the Arctic Circle and below the Antarctic Circle.

The technology was developed in a St. Francis Xavier University lab run by David Risk, and is gaining traction mainly with researchers but also with energy companies. The company's clients include University of California at Berkeley, Oak Ridge National Laboratory and the U.S. Environmental Protection Agency.

"As we transition over the next year into more industrial and commercial applications," said the company in the AVF literature, "our customer base will increasingly be comprised of oil and gas and oilfield service providers." \*



# Paul and Sean have skin in the game.

DeCell Technologies' cofounders Paul Gratzer and Sean Margueratt have created a better way to heal your wounds. Well, at least the physical ones.

The company's technology produces a biological dressing from donated human tissues – free of bacteria and viruses – so any chance of infection or patient rejection is so “yesterday's news.”

What's more, DeCell's technology not only encourages healing, it actively promotes new tissue regeneration when applied to a wound. Now that's what we call synergy.

Today, the company is focused on treating chronic foot ulcers, a common ailment of diabetics that can take months to heal, is prone to infection, and can lead to amputation. But DeCell's technology can also help heal other chronic wounds, burns, and surgical reconstructions.

Equity investment from Innovacorp is helping Paul and Sean bring their product to the marketplace. To get patients back to 100 per cent, we're happy to be behind them 100 per cent.



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EARLY STAGE VENTURE CAPITAL

**We get invested.**



As the UIT program begins Year 2, Cape Breton University President David Wheeler sees the benefit of preparing students for the new economy.

## Cloning More Gavins

By Peter Moreira

One night in July, the dozen members of the first UIT program from Cape Breton University gathered at a restaurant in Sydney and held a mock graduation.

Even though the tech and entrepreneurship program does not grant degrees, they wore academic gowns. Family and mentors were there to congratulate them on completing the 10-month program. They were off to pursue entrepreneurial ventures.

"It was an informal setting but we treated the students like CBU grads and it was just a lovely event," said CBU President David Wheeler, looking back on the faux-commencement a few weeks later.

"It's another positive signal for the Cape Breton Island community that this kind of activity is important for CBU."

When Wheeler speaks of this kind of activity, he's referring to all that UIT stands for and its role in transforming education and the economy on Cape Breton Island.

Wheeler had been at the helm of the university for about a year when a notable alumnus Gavin Uhma proposed a new program to teach young people how to build a startup. Uhma had co-founded Golnstant, one of Nova Scotia's most successful startups, and he wanted to give young Cape Bretoners the opportunity to enjoy the type of success he had. (UIT actually stands for the Uhma Institute of Technology.)

"It's a very good development for many reasons, not the least of which is we do need to clone more Gavins," said Wheeler, who has retained the gentle accent of his native England. "It was clearly a great fit for CBU and where we're headed. I was a big supporter from the get-go."

Under Wheeler's stewardship, CBU is working on 'cloning more Gavins.' With a background



Gavin Uhma

in business and sustainability, Wheeler gets innovation and entrepreneurship. Before becoming president of the Sydney university two years ago, the microbiologist held such posts as the Chair of Business and Sustainability at York University and the Executive Director of Social and Environmental Policy at international beauty enterprise, The Body Shop.

As well as UIT, the university is home to the Shannon Business School and the Verschuren Centre for Sustainability in Energy & the Environment. And it is a pillar of the burgeoning IT community growing in what was once known as industrial Cape Breton.

"We're a university that was founded specifically to meet the economic and social needs of the island, and that has always been part of the DNA of the institution," said Wheeler.

He said these needs are changing as the global economy is now relying more on individual enterprise rather than the traditional employer-employee relationship. To nurture – indeed benefit from – this change, CBU and its surrounding community must encourage more and more students to understand how to start their own businesses and to make these businesses succeed.

"But for the future, when the traditional way of thinking about where graduates of higher educational institutions go may no longer

be valid, more and more they will be starting their own businesses," he said. "We have to update for 2015 and begin foregrounding entrepreneurial pursuits in all programs."

The university is now looking at re-launching its business and technology program to teach more IT. And now that the first cohort of UIT has graduated, the program is gearing up for a second year. The attendance will increase from 12 to 20 participants. It's becoming part of the fabric of the bustling tech sector in the Sydney region. So far, the experiment is proving a success.

"Year 2 will be important because if you can pull it off twice and you're still growing and developing, then you're on to something," said Wheeler. "We're very, very positive it will continue to thrive and grow. It could even be exported to other parts of the region, or elsewhere." \*

**...the global economy is now relying more on individual enterprise rather than the traditional employer-employee relationship.**



David Wheeler



# STARTING UP? START HERE.



Braden Murphy's start-up thinking began at Dalhousie. The engineering student explored the idea of developing a durable, more efficient and easier to maintain motor. Supported by professors and backed by investors, he built prototypes, developed the technology and filed for patents. Now a graduate, Murphy has created Atlantic Motor Labs, a Halifax-based company whose unique technology holds real promise—in the form of cost savings, reduced waste and greater reliability—for the oil, gas and mining industries.

Start up at Dal.



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