

# Startup East

APRIL 2014 • VOLUME 3 , ISSUE 1

## A Year of Advances

2013 was highlighted by rising employment, a wave of new startups and key investments in growth-stage companies.

With his company's sales ramping up, Kumaran Thillainadarajah felt pumped about attending the Interpack conference in Dusseldorf, Germany, in May.

The company, Smart Skin Technologies of Fredericton, has designed technology that can help beverage companies save money by avoiding snarls in their production lines. And Thillainadarajah was looking forward to meeting potential customers at the world's largest packaging convention.

"Sales are pretty hot right now," said the Smart Skin CEO. "We're focused on a few big fish. In the market, there are four or five customers who make up about 50 percent of the market. We're now focusing on that type of business."

In many ways, Smart Skin and Thillainadarajah exemplify what is happening in the Atlantic Canadian startup community these days. It has announced a seven-figure round of venture capital funding -- a \$3.9 million round from Rho Canada Ventures, Build Ventures and GrowthWorks Atlantic Venture Fund. It has developed its product in the Industrial Internet space -- easily the hottest portion of the startup community. It is selling in international markets. And it is staffing up.

Most Atlantic Canadian startups have been adding staff in the past year, and continue to do so. Our research (laid out in an article on Page 10) shows there are about 3,000 Atlantic Canadians whose jobs were created by the startup boom. U.S. Economists believe each high tech job leads to the creation of 4.3 other jobs in the economy, suggesting the startup movement could account for 15,000 Atlantic Canadian jobs.

Smart Skin's funding also reveals current trends in the sector. One of the participants was Rho, which has offices in San Francisco, New



*Kumaran Thillainadarajah*

York and Montreal. That's important, because this region is attracting more institutional investment from outside the region.

And another investor is Build Ventures, the new regional VC fund. We should highlight that because the launch of Build was one of several

*Continued on Page 12*

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### Entrevestor Intelligence

Entrevestor publishes its Intelligence reports to provide a deeper analysis of the Atlantic Canadian startup world than can be delivered in a daily news report. We'd like to give special thanks to Allan Gates, Donna Gates and Lise Hansen of Bonfire Communications in Saint John for the stunning infographic accompanying this report.

# Come-From-Away Capital

The highlight of fundraising in 2013 was institutional capital flowing into the region.

When Karma Gaming CEO Paul LeBlanc learned that a prominent venture capital investor was attending DemoCamp in Halifax in the autumn of 2012, he pounced on the opportunity to meet him.

Jeff Grammer, a partner with Rho Canada Ventures, the Canadian arm of Rho Capital Partners, had never made an investment in Atlantic Canada, but LeBlanc hoped Karma, which makes video games for regulated lotteries, might be the first.

"During his speech he said he'd have a beer with anyone to hear their idea, so I left his session a minute early to get two beers at the bar and wait for him to come through the door," said LeBlanc.



LeBlanc's investment in a beer paid off. A few months later, Grammer and Rho led a \$4 million round of venture capital financing for Karma Gaming. By this time, Grammer was visiting Atlantic Canada regularly, and he was interested in other companies he found here. As well as Karma, he participated in the \$1.4 million funding round in Halifax-based Analyze Re, which is making risk assessment software for reinsurance companies, and a \$3.9 million round by Smart Skin Technologies, which has developed various applications for a pressure-sensitive surface.

The Rho investments highlight the most important trend we're witnessing in equity financing in the Atlantic Canadian startup community. We're not seeing a rise in funding – total funding in 2013 was at a three-year low. What we are seeing is an increase in institutional money from outside the region.

At least 11 startups from the region attracted external institutional financing in 2013 – up from a minimum of four the year before. (Given that these are private companies, there is a possibility there are other companies that attracted VC investment without revealing it publicly.)

Overall, the total numbers for equity investment in Atlantic Canadian startups have not changed dramatically in the past three years. The total reported investment in 2013 was \$51.3 million – the lowest level over the three years. (The 2011 figure of \$80.8 million was inflated by one massive \$30 million investment in Unique Solutions of Dartmouth.)

The investment tallies for venture capital (which comprises all institutional equity investment, including debt that converts to equity) were \$30.8 million – up by one-third from 2012, though falling short of the 2011 total.

Yet in many respects, 2013 was the healthiest year ever in VC investment in the region because there was more outside money going to more Atlantic Canadian companies than before. What's more, there were three investments of \$1.5 million each by Build Ventures, the regional VC fund.

What's important is the quality of the investors. The fact that more outside investment is coming into the region indicates that the quality of company in Atlantic Canada is improving, and that the target companies are gaining exposure to the networks of their backers.

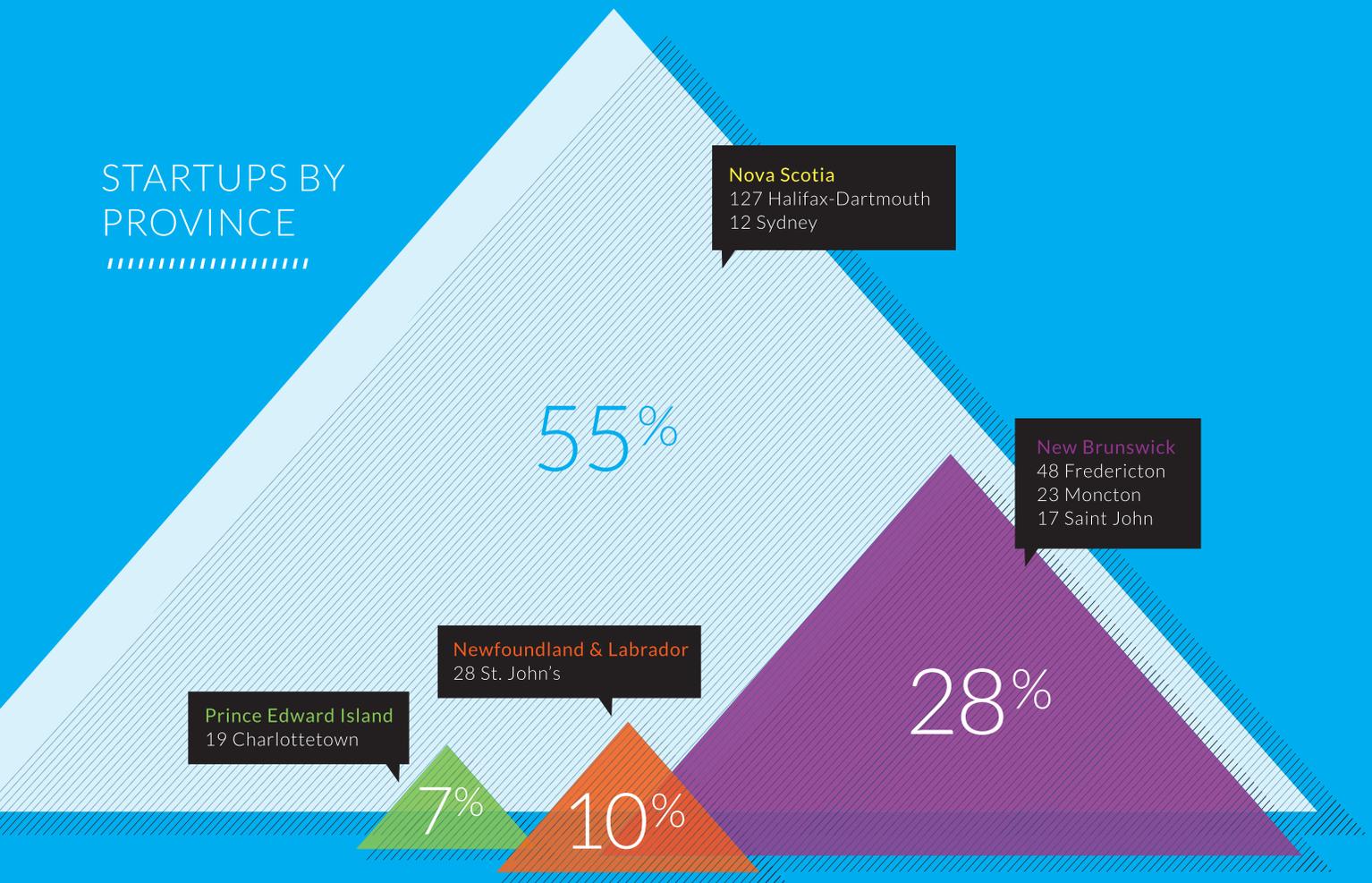
Another institution that joined the Analyze Re fundraising, for example, was BDC Venture, the direct investment arm of the Business Development Bank of Canada, which was an active investor in the region for the first time in five years. The federal financial institution announced last summer that Launch36, the regional accelerator in Atlantic Canada, would join its convertible debenture program. That means any Launch36 graduate judged to be "investment ready" would receive a \$150,000 convertible debenture, which converts to equity when the target company raises its next round.

As well as Analyze Re, BDC issued the debentures to R17, FoodTender and Eigan Innovations of New Brunswick and topLog of Halifax. ★

# DISSECTING THE STARTUP SCENE IN ATLANTIC CANADA

Startups have been shaking up what we traditionally think of as Atlantic Canada's industry norms. With new companies emerging every day and an eager private sector leading the charge, we thought we'd dig a little deeper and take a closer look behind the scenes. We surveyed 162 startups in Atlantic Canada and here's what we found:

## STARTUPS BY PROVINCE



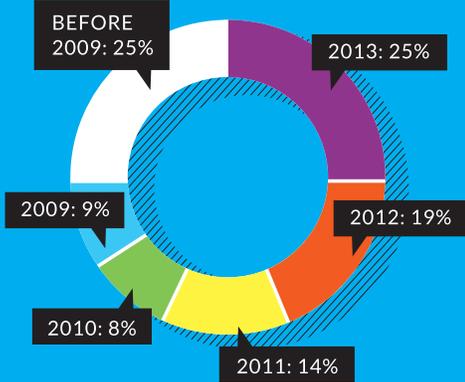
## EMPLOYMENT

OF THE 162 COMPANIES SURVEYED, THEIR HIRES INCREASED 43% FROM THE PREVIOUS YEAR. THEY PLAN TO KEEP HIRING. AND IN 2014, AN INCREASE OF 52% OVER 2013 IS EXPECTED.



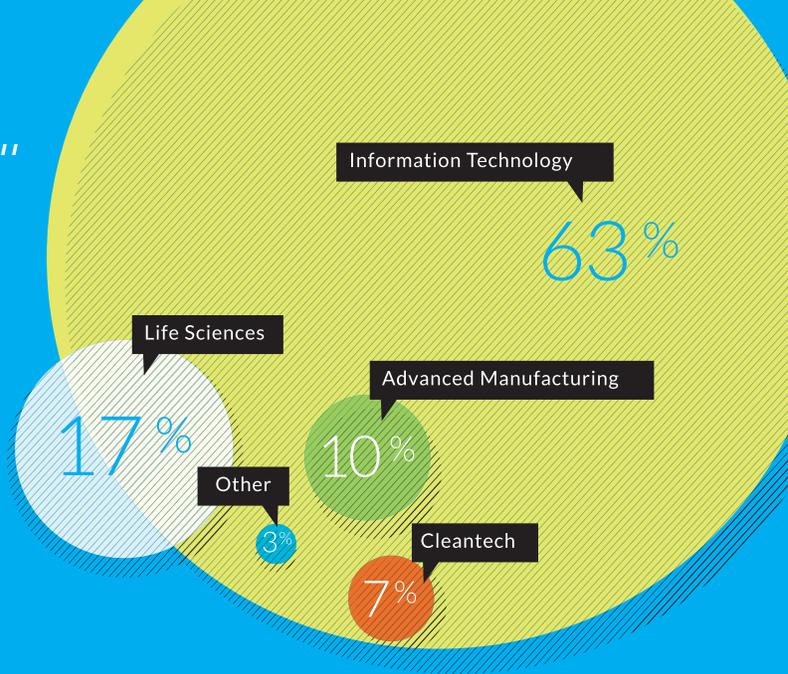
## YEAR LAUNCHED

PERCENT OF STARTUPS IN ATLANTIC CANADA LAUNCHED BY YEAR.



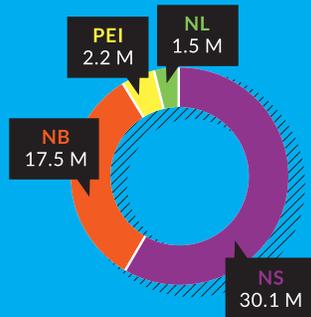
## SECTOR

PERCENT OF STARTUPS IN ATLANTIC CANADA BY SECTOR.



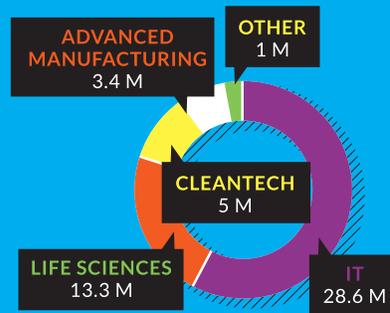
## EQUITY RAISES BY PROVINCE

TOTAL 2013 EQUITY RAISES BY NS, NB, NL AND PEI.



## EQUITY RAISES BY SECTOR

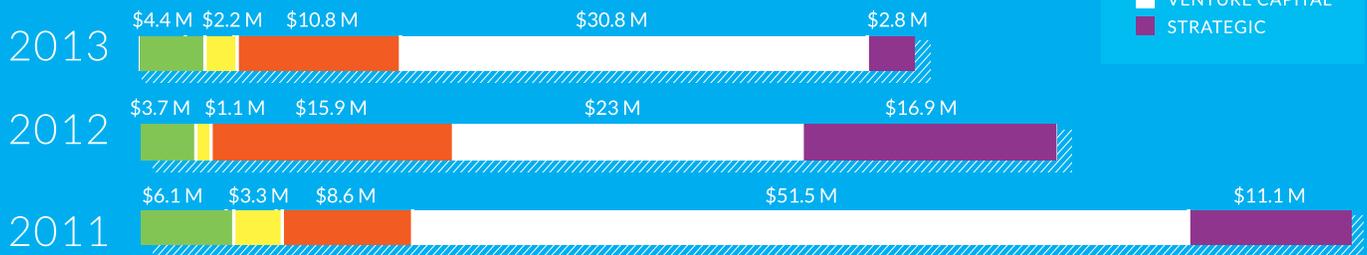
TOTAL EQUITY RAISES BY SECTOR.



## CAPITAL RAISED

TOTAL CAPITAL RAISED PER CONTRIBUTOR.

PERCENT OF CAPITAL RAISED BY CONTRIBUTOR TYPE.



## REVENUES

PERCENT OF REVENUE INCREASE FROM 2012 TO 2013.



OF THE 162 COMPANIES SURVEYED, REVENUES INCREASED BY 30% IN 2013 FROM 2012.

## PAYROLL

PERCENT OF PAYROLL INCREASE FROM 2012 TO 2013.



OF THE 162 COMPANIES SURVEYED, PAYROLL INCREASED BY 44% IN 2013 FROM 2012.

INFOGRAPHIC DESIGN BY

# THE CLASS OF 13

Atlantic Canada launched 67 startups in 2013, marking a high point in the development of new knowledge-based companies in the region.

When former Olympian Julia Rivard, the CEO of Halifax web design company Norex, wanted to help elite athletes raise money, she and her business partner Leah Skerry developed and launched Pursu.it, a crowdfunding site for athletes.

That was the autumn of 2012. Less than a year later, Norex incubated a second product, Hashpi.pe, which allows a unified display of hashtags across a range of social media channels. By this time, Pursu.it had become a not-for-profit, but there was a business opportunity to launch the crowdfunding engine as a separate business, which they did, calling it Swell.

Now it's working with Dalhousie University on the development of Eyenovation, an eye-tracking software that assesses and aids children's reading. It's an incredible output of products for a company whose main business is web design.

"For years we wanted this to happen, but it didn't happen until we put a structure around it," said Rivard in an interview, referring to the development of new products. "So we started to structure in innovation time . . . to make sure that 20 percent of our staff was working on innovation."

Norex has been a new product factory in the past two years, with some of these products spinning out into new companies. It is really part of a trend taking place in Atlantic Canada – the trend of launching new startups.

Of the 260 or so startups now active in Atlantic Canada, 67 have been founded since Jan. 1 2013, and a further 48 were formed in 2012. One of the most striking features of the startup community today is the rapid pace at which companies are forming.

As you might expect, some of these companies are still at the two-dreamers-in-a-garage stage – teams with an idea, a bit of development work, and a lot of mentorship. But the data produced by Entrevestor's recent survey of startups across Atlantic Canada shows that some of these rookies are making tremendous progress in their first year.

First of all, they are employing people. The 67 companies formed in 2013 reported that they now have 104 paid positions. The companies that

responded to the survey indicated they intend to hire 164 people in 2014.

Not all companies were willing to share sensitive material such as payroll data. However, of the companies formed last year, 17 shared their total payroll and eight of these had a total payroll of more than \$100,000. The average payroll of those companies was \$128,000.

Second, many of the companies that are just starting off already have revenue. Not everyone wanted to reveal revenue, and many of the new companies admitted – as you'd expect – that they didn't bring in a dime in revenue last year. But 17 companies did indeed report some revenue, ranging from a few thousand dollars to \$200,000. And a total of 17 companies said they either expect their first revenue in 2014 or that their sales will rise this year. For example, one company with no revenues in 2013 is forecasting sales of \$3 million this year.

Third, many of the new companies have raised equity financing. They have raised at least \$7.2 million in capital, of which \$3.4 million was venture capital. Most of them are leveraging the investment through programs like the Atlantic Canada Opportunities Agency's Business Development Program.

Here's one final interesting tidbit about the Class of 2013. Of the companies formed last year that responded to the survey, 55 percent were founded by people who had been involved previously with other startups. And most of those previous startups had raised funds. What that means is that the community is establishing a critical mass of personnel with experience in launching companies, which certainly bodes well for future growth.

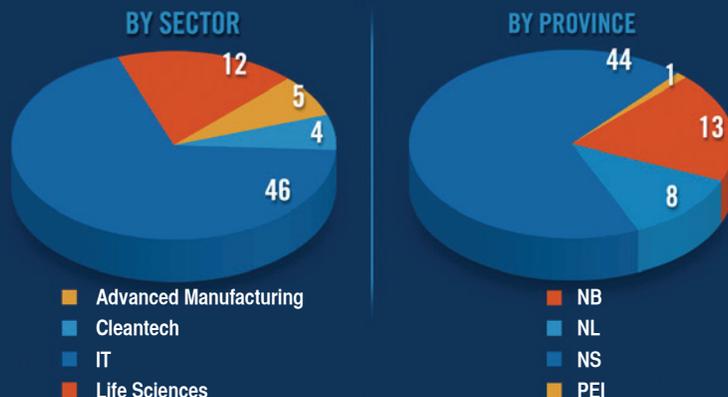
For Rivard, the creation of new companies goes beyond stats about fundraising and revenue and strikes to the heart of keeping the development community in the region and involved in stellar products.

"For our team, it's really about keeping them inspired," said Rivard. "For young developers, if you give them a project that can shoot to the moon, they get really excited. We all do." \*

## 2013 FACTS

- Only nine new startups are in rural areas.
- Forty percent had some affiliation with an Atlantic Canadian post-secondary institution.
- Five have patents, and 18 have filed patent applications (including nine by one company).
- Fifty-three percent plan to file for patents in the future, or are at least considering doing so.

## Number of New Companies Formed in 2013



# The thrill isn't gone with Paul and Jay's technology

Karma Gaming's co-founders Paul Leblanc and Jay Aird are developing next-generation lottery games for consumers who have grown up online.

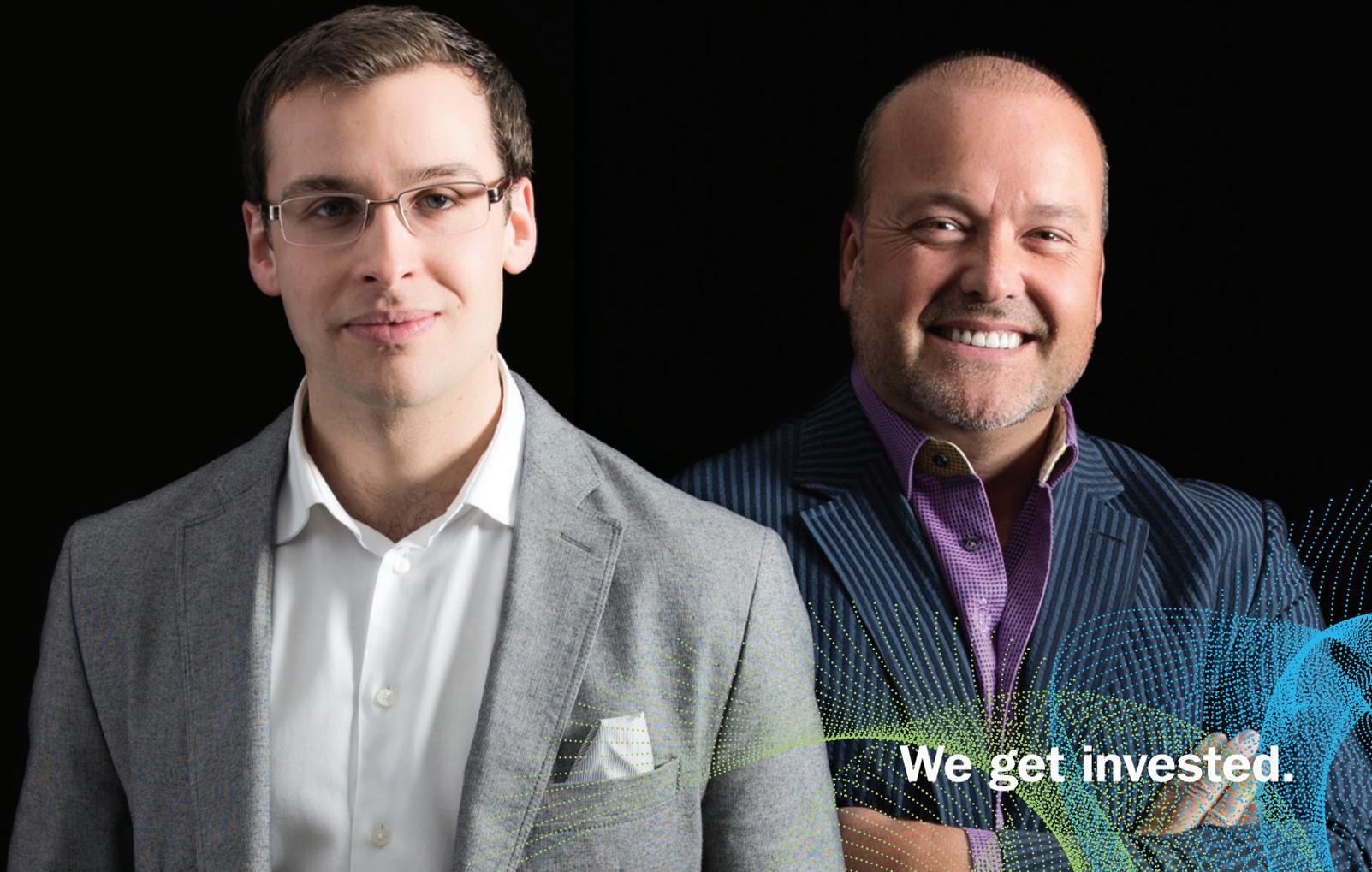
And the duo is selling their technology around the world to regulated lotteries. These organizations are eager to revitalize their product lines and appeal to the younger generation.

Today's consumers want to buy online and have exciting gaming experiences. Karma Gaming lets the digital crowd experience the age-old and universal thrill of winning while leveraging the fun of casual gaming.

Equity investment from Innovacorp is helping Paul and Jay take their made-in-Nova Scotia technology to the global regulated lottery market. Having signed up almost every lottery that's online in North America and now inking its first deals in Europe, Karma Gaming's odds of success are pretty good. At least, that's what we're betting on.

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# Industrial Internet Blooms in NB

The province is the heartland of growing Atlantic Canadian expertise in machines communicating with one another.

When McRock Capital hosts its annual Industrial Internet of Things symposium in Montreal in June, three of the presenting startups will be from Atlantic Canada.

As of March, the Toronto-based venture capital group had selected 10 startups to appear at its event – one of the world's leading conferences for this new technological sector. And they included Eigen Innovations of Fredericton, RtTech Software of Moncton, and Streamlyne Technologies of Dartmouth.

The fact that 30 percent of the companies (as of press time) presenting at the event hail from this region demonstrates quite clearly that something is happening in Eastern Canada in this explosive economic sector. It's a fact that's not lost on the McRock founders.

"We are seeing a number of innovative Industrial Internet companies based in New Brunswick," said Co-Founder Scott MacDonald. "They all have slightly different markets so I'm cautious to declare the region as developing a particular focus. The reality is that these companies are building off local expertise in areas like advanced manufacturing."

He said, for example, that RtTech is leveraging local manufacturing businesses into paying customers. "As a venture capitalist, that is the only validation a business has a desirable product or service offered at the right price," said MacDonald.

In the broadest sense of the term, the Industrial Internet allows machines to communicate with one another and receive readings from sensors so that they can detect, analyze and respond to data. By receiving more data from more points than humans can process and reacting to it instantly, Industrial Internet applications can improve industrial efficiencies to an unimaginable degree. What's also beyond comprehension is just how big this segment will grow in the next few years.

"It took the internet 8,000 days to connect 2.5 billion people," said Cisco in a December 2012 report cited on the McRock website. "In the next 2,900 days, 37 billion things will join the internet."

Atlantic Canada -- and New Brunswick in particular -- is already active in this space, and several startups have launched in the past few years that are pioneers in this field. What they have in common is that they have done an excellent job early in their development of securing major corporate partners, which is helping them to develop quickly.

"We are just starting at the whole industrial internet of things," said Scott

Everett, CTO and Co-Founder at Eigen Innovations, which is developing industrial internet applications for food and other industries. "There is a tremendous amount of work in this space and in Atlantic Canada there is a lot of good research being done. And in the next few years, we will see more in this field."

The Eigen team has developed software and algorithms that take machine data and readings from sensors in real-time and automatically ensures that all the machines are continuously adjusted to a setting that optimizes the overall manufacturing process. The company last year began to work with Portland, Ore.-based Flir Systems, the largest global provider of thermal cameras, on a system that will use thermal images as a smart sensor to detect quality defects and take action in real-time to adjust the production process. Since then, Eigen has linked up with two other industrial partners in other sectors. Down the road in Moncton, RtTech teamed up in early 2012 with Emerson Process Management,

whose St. Louis-based parent has annual sales of \$25 billion. They have developed an information system to monitor and manage plants' energy consumption in real time. Whereas many energy management systems allocate energy costs monthly, this system instantly compares usage against a theoretical benchmark, and analyzes system performance by unit, area, and across an entire plant. What's more, the product is sold through the massive Emerson salesforce

"We've gone from having three sales people in the company to having hundreds of sales people all over the world," said CEO Pablo Asiron. "It increases our reach by 100-fold and hopefully in a few months we'll start seeing the revenue that they [Emerson] are expecting."

Two other Fredericton companies, Smart Skin Technologies and Xiplinx, are developing processes to help beverage producers improve the efficiency of their plants. Both are now working with leading international customers.

The sector in Nova Scotia is not as advanced as in New Brunswick but a few companies are moving into the space. Streamlyne is developing a "dashboard for real-time business insights and analytics of your manufacturing operations." And Stromline of Halifax, which has developed a tool to remotely monitor fuel levels in oil tanks, plans to work on Internet of Things applications.

The companies involved in the space all agree that there are advantages to having neighbours working on complementary technologies as this allows them to share experiences and networks. \*

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"We are seeing a number of innovative Industrial Internet companies based in New Brunswick.... The reality is that these companies are building off local expertise in areas like advanced manufacturing."

– Scott MacDonald,  
Co-Founder, McRock Capital.

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# A HARDY GROUP OF VETERANS

Atlantic Canadian startups that have been around for more than three years are still in growth mode.

Though this supplement has focused to a great extent on the companies created in the last three years, it also helps to remember the strength of the companies that have been around for a while.

And the results of our recent survey show that these companies are still growing strongly. They provide not just well-paid jobs but steady jobs, as many have employed the same people for a number of years. And many are still increasing employment and revenues.

It's impossible to say what constitutes an established company. For the sake of argument, let's take a look at the companies around today that were up and running when Radian6 announced its exit in March 2011.

The companies established in 2010 or earlier have all passed through that legendary three-year barrier at which a lot of early-stage companies get into trouble. And they are evidence of how powerful the economic metrics are when these companies hit their growth stages.

"Anything sustainable requires a very strong foundation," said Rob Barbara, partner at Build Ventures in Halifax. "The foundation in our case is the companies that have been through thick and thin and come through it all."

These companies, he said, provide employment, help to train and mentor the next generation of entrepreneurs and can help to diversify the economy.

Entrevestor has recorded 108 companies in the startup community that were founded before 2011 and they reveal dynamic growth prospects and the ability to grow substantial work forces. Sixty-eight of these companies responded to the survey, but we were able to interview several others. What we found was that 86 of these companies employed a total of 1,527 people in 2013.

It should be added that these are generally lean companies. Even though four of them have staffs of more than 100 people, most of the jobs go to highly skilled, well paid technical or business professionals.

The 54 companies that reported payroll data told us that they had a total payroll of \$62.2 million, up 34 percent from \$46.5 million a year earlier.

And there is strong evidence that employment is growing strongly within these established companies. The 68 companies that gave employment numbers in the survey revealed a total workforce that increased by 28 percent in 2013. And they added that they intend to hire as many as 373 people in 2014. If they succeed, it will be an increase of 35 percent.

Let's provide a bit of context for those numbers. First, the absolute number of 1,500 Atlantic Canadians is in itself substantial. But it should also be remembered that this total does not include companies that exited in the past few years, like Radian6, Golnstant, Ocean Nutrition Canada, and BioVectra. If those companies are added in, the absolute number rises to over 2,000 employees.

The other thing to consider is the dynamic growth these companies still represent. Their workforce increased 28 percent last year, while the

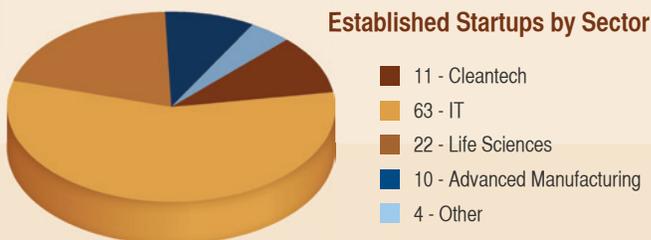


Photo:

Forty-four Atlantic Canadian startups established before 2011 shared their revenue data with Entrevestor. Here are the aggregate numbers:

Total revenue in 2013:	\$92.2 million
Total revenue in 2012:	\$72.2 million
Year-on-year growth:	27.7 percent

- ▶ Sixteen reported more than \$1 million in annual revenue
- ▶ Three reported revenue of more than \$10 million.
- ▶ Twenty-four are expecting profit growth of 100 percent or more this year.
- ▶ One company that has had no sales yet is forecasting \$3.5 million in sales this year.



The established companies raised \$30.0 million last year in equity funding, of which \$22.0 million was venture capital. Their total funding a year earlier was \$21.4 million.

number of employed Atlantic Canadians, according to Statistics Canada, shrank by 0.2 percent.

One final benefit provided by these established startups is that they bring world-class mentoring to the new crop of companies.

A case in point: When Startup Newfoundland and Labrador recently wanted to mentor a few younger startups, it put out a request for established entrepreneurs to step up and coach the rookies. They heard back immediately, and the veterans who come forward included revered CEOs Mark Kennedy of Celtx, Kris McNeil of Solace Energy and Dan Brake of EMSAT – companies that survived the three-year threshold.

"Having the support of these veteran founders is invaluable to making this community a success," said Jason Janes, Co-founder of StartupNL. \*

# Soaring Employment in Startups

The data indicates employment at startups increased 43 percent in 2013 and will grow similarly in 2014.

As her business grows, Gillian McCrae is rewarding more than just merchants and their customers.

She's also rewarding a lot of workers.

McCrae is the Founder and CEO of GetGifted, a year-and-a-half-old Charlottetown startup that allows local merchants to give customers vouchers for gifts that can only be redeemed in person. The idea is to draw people to the outlets where they'll spend money. As it grows, it needs more employees.

"Right now, we are at five employees based out of P.E.I.," said McCrae. "I'm working on three employees in Halifax. In 2014, we're probably going to be up to 12 to 16 employees, based in P.E.I., Halifax and Toronto."

McCrae's experience exemplifies the power of startups in creating employment. Though the sector is young in Atlantic Canada, it's already created about 3,000 direct jobs. If you include indirect jobs, the startup boom could account for about 15,000 Atlantic Canadian jobs.

Determining firm statistics on the jobs created by startups in Atlantic Canada is difficult on several levels. First, these are small diversified companies, all privately owned and not compelled to reveal their employment numbers. Second, startups in their purest form are developing scalable products from proprietary technology. There are dozens of companies in the region that don't quite meet that definition. And some of the jobs created are located outside the region, especially by companies with foreign sales teams.

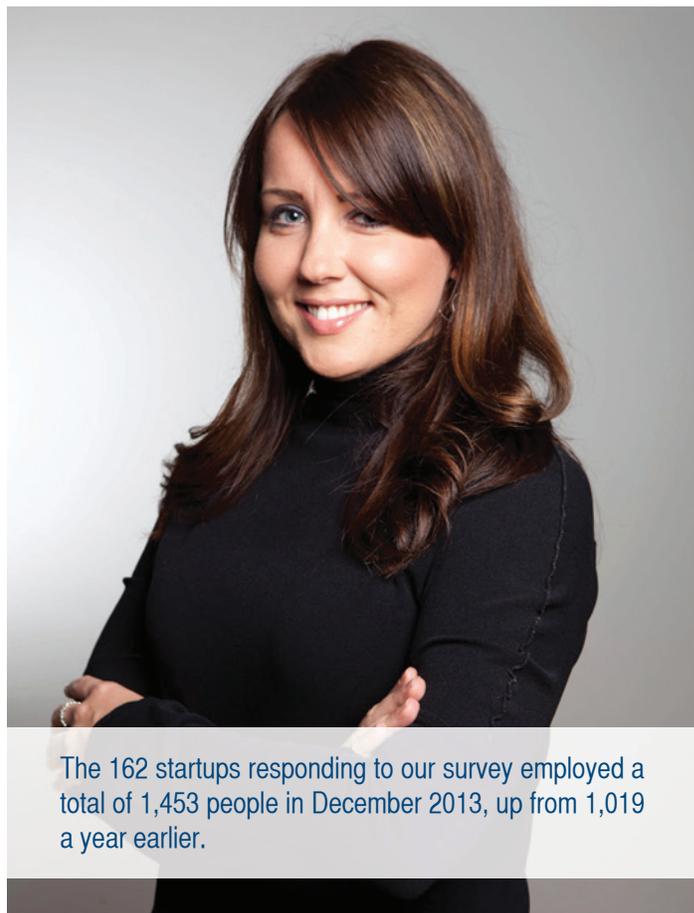
But the results of our survey, coupled with interviews with dozens of companies, show that startups are creating a substantial number of jobs in Atlantic Canada. There were at least 2,400 people working for 290 Atlantic Canadian startups at the end of 2013. If you include companies that have exited, such as Radian6 and Ocean Nutrition Canada, direct employment rises to about 3,000.

Those are, of course, just the direct positions. Research by Enrico Moretti of the University of California at Berkeley shows that each high tech job creates 4.3 indirect jobs due to professional services, taxes and individual spending. Applying multiplier to the Atlantic Canadian startups (which is dominated by tech), it's easy to estimate the 15,000 jobs have been created because of this movement.

The truly jaw-dropping aspect is the speed with which startups are ramping up their staff levels.

Let's focus just on the 162 companies that responded to the *Entrevestor* survey. They told us that they employed a total of 1,453 people as of Dec. 31, 2013, up 43 percent from 1,019 a year earlier. This is actual evidence of job growth within the startup community.

The total payroll reported by the surveyed companies in 2013 was \$75.8 million, up 44 percent over the previous year.



The 162 startups responding to our survey employed a total of 1,453 people in December 2013, up from 1,019 a year earlier.

Gillian McCrae

Another interesting factor is that these 162 companies taken as a whole don't show any signs of slowing down their hiring. These companies plan to hire a total of 759 new employees in 2014, which would represent a 52 percent increase over the end of 2013.

"The reason that Startup initiatives (Startup America, StartUp Canada, Startup Spain, Startup Malaysia etc.) took root and spread so quickly internationally was because leaders bet that their innovation-based startup sectors would drive much needed employment gains to help economies recover," said Dawn Jutla, a professor of entrepreneurship at the Sobey School of Business. "This economic insight is playing out right here at home in Atlantic Canada with our higher startup employment figures."

For Gillian McCrae, who hopes to triple her staffing this year, the jump in employment was part of the vision when she began the company in late 2012. "I guess that's been the intention all along – to give people jobs, really great jobs." \*



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# Three in Four Startups Less than Five Years Old

*Continued from page 1*

important new assets that helped to flesh out the startup ecosystem in Atlantic Canada last year.

In fact, the only trend in the Atlantic Canadian startup community that doesn't relate to Smart Skin is the blossoming of new companies in the past two years. There have been 115 startups launched since January 2012, but Smart Skin dates back to 2009.

The trends – more external funding, the launch of new companies, expanding ecosystem – were revealed by the data recently collected by Entrevestor. In the first quarter of this year, we sent surveys to about 290 startups across the region, defining “startup” as a locally owned business with proprietary technology developing a scalable product. We received 163 responses.

It's impossible to be precise on the number of startups in the region because there are so many grey areas – service companies that have a concept of a product; people with ideas that haven't yet formed a company; companies that are almost dead. But we're thrilled to receive a 56 percent response rate to the survey. Of the companies that did not respond, Entrevestor has interviewed more than 50, meaning that we have drawn information from more than 80 percent of the startups in the region. That means that this is without a doubt the most complete assessment yet of the Atlantic Canadian startup community.

The results of the survey will be revealed in four Entrevestor Intelligence reports this year. This is the first, and it will present an overview of the startup community. It will be followed through the year with reports focusing on Finance, Post-Secondary Institutions and the Global Marketplace.

The picture we've gathered on #startupeast – the preferred hashtag for Atlantic Canadian startups – is two-fold. The story is one of business generation, and the second is of growth-stage companies moving forward. We have plenty of the first, and select examples of the second.

Some 67 startups in the region have formed since Jan. 1, 2013 – or almost one-quarter of the total community. Though this number includes embryonic teams that are just developing a concept, it also includes incorporated companies that have customers and funding. We have stripped out entrepreneurs that worked on a project only to abandon it. (For a more complete look at The Class of 2013, please see our story on Page 6.)

The huge rookie class exemplifies just how young the Atlantic Canadian startup community is. Of the total, 196 or about three-quarters of the total are no more than five years old. In fact, one of the undeniable successes of the community is its proficiency at generating new

businesses. This is especially true in information technology, as two-thirds of the startups formed since Jan. 1 2009 are IT companies.

“The ability to successfully grow a company is very difficult,” said Ellen Farrell, a professor of management at the Sobey School of Business at St. Mary's University. “So you need to seed a lot of companies to get that dozen or so that will begin to grow, and the one or two that will be exceptional.”

This key facet of the ecosystem revealed itself about five years ago. Of the startups now alive and kicking, fewer than 10 were founded in any given year before 2009. But suddenly in 2009, 23 startups were established that are still with us today.

It's difficult to pinpoint a precise event that took place in 2009 that led to this surge in startup launches. But late in the first decade of the century, a few critical components of the ecosystem were falling into place. Startup competitions – most notably Innovacorp's I-3 and New Brunswick Innovation Foundation's Breakthru – were reaching maturity. The Atlantic Canada Opportunities Agency had begun to apply its Business Development Program to startups that had raised capital. Springboard Atlantic had established in 2007 and the First Angel

Network a few years earlier, and their regional perspective was developing an understanding of the links between innovation and entrepreneurship.

One company that formed in 2009 was Smart Skin Technologies, which could be a poster child for the growth-stage companies that are now gaining traction. The Smart Skin technology is called Quantifeel and it can detect pressure on a surface and chart the pressure in real time on a computer or device. The technology was first developed in 2009 at the University of New Brunswick laboratory headed by Felipe Chibante and Thillainadarajah has devoted the last half-decade

to commercializing it. Its killer application helps food and beverage companies ensure there are no log-jams on their production lines, solving a problem that can cost them millions of dollars annually.

It's the sort of scalable technology that attracts investors like Rho. At least 11 Atlantic Canadian companies received investment from institutions outside the region in 2013, up from a minimum of four in 2012. These 2013 investments ranged from \$30,000 to several million dollars, but the size of the investment is only part of the story. It's essential that Atlantic Canadian startups develop global networks. These 11 companies have now brought the networks of their investors into the company fold.

And that complements the company's sales efforts in Europe, where Smart Skin hopes to add a sales representative soon. \*

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– Ellen Farrell, Professor of Management, Sobey School of Business, St. Mary's University.

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# DOCUMENTING THE Teaching of Tech

**Code Kids, a documentary on cutting-edge tech ed programs in Estonia, Finland and the Maritimes, is due to screen on CBC this spring. The production of Hemmings House in Saint John is part of a larger movement to teach coding to children.**

When David Alston accepted a Knowledge Industry Recognition and Achievement Award last spring, he made a rash commitment. It turns out that his off-the-cuff promise has changed his life and benefited young students in New Brunswick and across the region.

Alston is the Chief Innovation Officer at Introhive, the Fredericton- and Washington-based relationship analytics company that received the 2013 KIRA award as best startup. When he took the stage to accept the award, Alston began a passionate impromptu speech about computer education in public schools. Swept up by his own rhetoric, he vowed to work with anyone interested in increasing and enhancing tech education in New Brunswick schools.

One person who was interested was Premier David Alward, who was sitting in the audience that night. Alward has since announced that his government will turn Alston's vision into action, and that Alston will work with a new educational initiative called Brilliant Labs.

Brilliant Labs will award grants to the most passionate and innovative schools, teachers and students for projects such as coding, robotics and arts, Alward said. The idea is to reward the teachers most passionate about teaching technology with the hopes that other teachers will be drawn to their success. The program meshes with the emphasis Alward has placed on innovation, as he previously announced an \$80 million, five-year package of funding for innovative industries.

"It's a grassroots movement," said Alston in a recent interview during the Big Data Congress in Saint John. "We have found people who are passionate about this and they're getting behind it. We're treating it as a startup."

Though the program has begun in New Brunswick, Alston stressed that the plan is to grow the movement throughout Atlantic Canada so it becomes a truly regional project. He said it is working with a network of existing organizations and individuals – such as Jevon MacDonald and Gavin Uhma, Co-Founders of the Halifax startup GoInstant -- who are passionate about tech education. "We don't want to recreate the wheel but to align and accelerate," said Alston.

Alston is also collaborating with Greg Hemmings, the founder of Hemmings House film studio in Saint John, on a documentary called

Code Kids, which details international efforts to teach coding to school children. It is due to debut on the Canadian Broadcasting Corporation this spring.

Code Kids will tell great stories about the revolution in teaching computers to school children by detailing the pioneering work being done in Estonia and Finland. The documentary will also show how that work



*With her teddy and her tablet, this young girl learns the marvels of technology in a grade school in Helsinki.*

Photo: Hemmings House

is being translated into pilot projects in the Maritimes. What's important to remember is that the documentary is only part of a broader movement spanning the entire region. Right across the Atlantic Canadian startup community, founders, and staff are initiating projects to teach school-age children to write code.

"One of the major thrusts in this documentary is that we've identified that the opportunities are limited for our kids in Atlantic Canada," said Hemmings. "So we're losing our kids. If you have the tool sets to do this, you can actually build something that will build a career for yourself right here in Atlantic Canada."

The movement to teach coding to children is important because it can change the lives of individual school children by increasing their earning potential and opening up whole new avenues of exploration, creativity and discovery. But there is a broader social and economic end to this mission. There is already a shortage of programmers in the region, even though hundreds of young Atlantic Canadians leave the region each year because they can't find jobs. Teaching children to write code across the school system would help, over time, to produce a 21st century work force.

"We can retrain people in the mid-and late stages of their career," said Golnstant CEO Jevon MacDonald, who has been working with Alston on their shared passion. "But if the economy is going to grow as quickly as it could, we have to change the way we teach our children."

MacDonald has been as vocal and visible in his campaign for coding education as Alston, and has also used a public forum to call for a greater emphasis on technology in education. His address to the Halifax Chamber of Commerce annual dinner in 2012 stressed that it would be useful just to have desk-tops made available to students so they could teach themselves to code.

It's a movement that has gathered steam in the startup community, as people who understand the value of coding devote their considerable energies to teaching the next generation to code. Whether it is Ladies Learning Code or other not-for-profit groups, there are a number of different efforts whose singular goal is to teach coding to young children.

Hemmings said that one challenge with communicating this effort is that it's often difficult to get parents and the public at large to understand the importance of the movement. His earlier Sistema documentary about the benefits of teaching children music was easier for people to grasp.

"Coding is a word that the average person doesn't understand and that's a problem right now," he said. "So how does the mom and dad jump on board when they don't understand what that is? It's not something that you necessarily see or touch or hear. So that's what this documentary does; it shows people what the benefits will be."

Though Hemmings is the artist in the pairing, it is Alston who can wax absolutely poetic on their undertaking. He gets especially animated when talking about Estonia.

The tiny Baltic country was facing ruin following the breakup of the Soviet Union in 1989. It had little capital and few resources. So it decided to reinvent its economy, installing a flat tax rate and emphasizing technology in its economic development. The result has been one of the most tech-literate economies in the world and a society with notable tech triumphs, including the invention of Skype.

"If you have the tool sets to do this, you can actually build something that will build a career for yourself right here in Atlantic Canada."

– Greg Hemmings, founder of Hemmings House film studio in Saint John

#### OTHER TECH INITIATIVES FOR CHILDREN:

- **Digital Discovery Camp.** Digital Nova Scotia and the Discovery Centre in Halifax teamed up to launch this camp, which lets 10- to 15-year-olds explore coding, robotics and other forms of technology. It grew out of CompCamp, a private initiative that taught coding to children.
- **Ladies Learning Code.** Despite the name, this national not-for-profit offers coding programs for people of all ages and genders. The organization has held several one-day programs in several Atlantic Canadian cities.
- **Craig Brown, founder of Halifax startup Interview Rocket, is organizing volunteer programs in Halifax elementary schools to encourage coding and digital citizenship.**

Alston believes that type of transformation could take place in Atlantic Canada by embracing the opportunities offered by technology. Educating the young in technology could even have a beneficial effect on several other initiatives in the region, he said; immigration, for example. Would immigrants be more likely to settle in a region that offered cutting-edge technical education to their kids? Alston believes they would.

"If we start to focus on an economic strategy that involves technology as its base, we will soon develop something attractive at the primary-to-Grade 12 level," he said. "But on top of that we're also going to attract people on an immediate basis."

In the shorter term, viewers across the country will soon be able to view the Code Kids documentary and hopefully witness the possibilities of technology education.

"Code Kids is just a portal of resources," said Hemmings. "We hope it will be a resource for teachers and that policy makers and the general public will be inspired by all this." \*

# Accelerating Innovations



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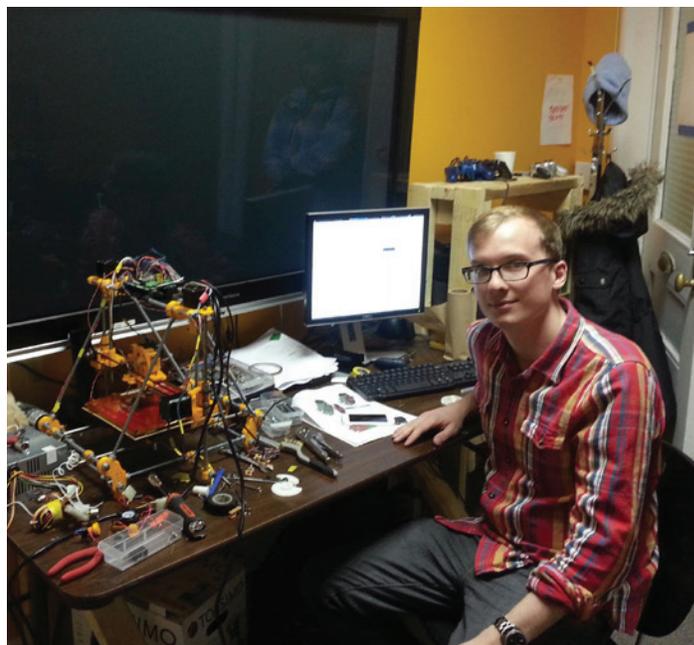


*At East Valley we are operators at heart with a diverse background in building global ICT companies from Atlantic Canada.*

# Evolution of an Ecosystem

The startup ecosystem advanced in so many ways in 2013 that it's easy to forget how many "firsts" there were. Here's a quick rundown of the new components to the ecosystem:

- |                    |  |                 |  |
|--------------------|--|-----------------|--|
| <b>JAN 24</b>      | <b>Big Data Congress.</b> More than 600 people braved the frightening cold to attend the first version of a conference that instantly became a permanent feature on the calendar.                | <b>SEPT 1</b>   | <b>Masters of Technology, Entrepreneurship and Innovation.</b> The Sobey School of Business at St. Mary's University launched the region's first one-year post-graduate program in entrepreneurship. |
| <b>MARCH 1</b>     | <b>Makerspace</b> opened an office in the Roy Building in Halifax, marking the first lab for makers in Atlantic Canada.  | <b>SEPT 12</b>  | <b>Planet Hatch.</b> The incubator opened in Fredericton's Knowledge Park and soon welcomed the first cohort of its Accelr8 program.   |
| <b>MARCH 9</b>     | <b>Canada's Business Model Competition.</b> The Starting Lean program initiated this modest event, which ballooned into a truly national competition a year later.                               | <b>OCT 21</b>   | <b>Pond-Deshpande Centre's Failure Fund.</b> The entrepreneurship centre at the University of New Brunswick launched a fund for entrepreneurs who had a rocky first try.                             |
| <b>MARCH 18-22</b> | <b>East Coast Startup Week.</b> Fredericton was the scene of this combination of the Launch36 DemoDay, the Breakthru banquet, a Startup Weekend and a ton of mentoring events.                   | <b>OCT 22</b>   | <b>Atlantic Angels.</b> The newest angel group held its first meeting at the Volta startup house.  |
| <b>MAY 1</b>       | <b>Volta Labs.</b> The dream of Golnstant Co-Founder Jevon MacDonald opened in Halifax. Headed by Milan Vrekic, the startup house became the centre of tech startup activity in the city.        | <b>NOV 9-10</b> | <b>First Startup Weekend in Newfoundland.</b> The energetic startup community in St. John's came together for 54 hours, with Sentinel Alert capturing top prize. ★                                   |
| <b>MAY 15</b>      | <b>Build Ventures.</b> The new regional VC fund set up shop in Halifax, headed by VC veterans Rob Barbara and Patrick Keefe.   |                 |  |
| <b>JUNE 21-22</b>  | <b>Atlantic Venture Forum.</b> The first version of the startup forum featured 22 Atlantic Canadian startups pitching to a range of national and international investors.                        |                 |  |
| <b>JUNE 22</b>     | <b>Canadian Entrepreneurs in New England.</b> The East Coast equivalent of C100 launched at the Atlantic Venture Forum. Months later, it began a regular rotation of 48 Hours in the Hub events. |                 |  |
| <b>JULY 15</b>     | <b>BDC Accelerator Program.</b> BDC Venture extended \$150,000 convertible debentures to Analyze Re and R17, initiating its partnership with the Launch36 accelerator.                           |                 |  |
| <b>JULY 18</b>     | <b>Institute for Big Data Analytics.</b> Dalhousie University launched a program and institute to generate more research into data analytics.  |                 |  |



Communications Director Daniel Oulton of the Halifax Makerspace Society shown in the group's first headquarters in the city's Roy Building.



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# LeBrun: ‘We’re Just Beginning’

The Co-Founder of Radian6 still sees massive growth in the market for engaging connected customers.

Three years ago, when Salesforce.com Inc. of San Francisco bought Fredericton-based Radian6, there were worries that the high-growth social media analytics company would leave the region. Founder and CEO Marcel LeBrun grins in disbelief that there was ever such a notion.

In a recent interview in his spacious office in Fredericton’s Knowledge Park, LeBrun indicated that Salesforce and its Atlantic Canadian business are just getting started.

“When we were acquired, Radian6 was probably about half the size of what we are today,” said LeBrun. “The team has doubled in size, but customers and revenues have more than doubled.” He took a pause, and added, “Many more times.”

The news in March 2011 that Salesforce would pay \$326 million in cash and stock for Radian6 had a galvanizing effect on the region, essentially igniting the startup craze in Atlantic Canada. The news was followed by two rounds of layoffs in specific Radian6 departments, which created the impression that the operation was downsizing.

LeBrun now says the layoffs, regrettable as they were, were a natural part of the takeover process to avoid duplications with other Salesforce operations. Radian6 is now the social media arm of Salesforce’s marketing division, and its offices in Fredericton, Saint John and Halifax have all grown substantially.

In fact, Salesforce overall is now growing faster than any other major software company in the world. Founded in 1999, Salesforce pioneered enterprise cloud computing, building up its presence first in sales and services. When Founder and CEO Marc Benioff turned his attention to building up a presence in marketing, he identified Radian6 as a global leader in cloud-based marketing and social media analytics and purchased the company.

Since that time, social media has become a key ingredient in the marketing of just about every company in the world. But LeBrun and Salesforce believe the market is far, far from being saturated.

“There is still \$180 billion spent annually on interruption-based marketing,”

LeBrun said, referring to advertising on television and other conventional media. “We are just beginning to see the Era of the Connected Customer. Brands are looking for even more meaningful connections with those customers.”

While some tech visionaries are talking about the prevalence of machine-based internet – or connected machines -- changing manufacturing, LeBrun believes the next big wave may be connected customers. In fact, he foresees smart products meshing with social media.

As an example, he said a household espresso machine can gather information as it’s being used, and that information can help to connect the user with the product’s maker or other users. LeBrun sees huge opportunities in developing new methods for corporations to link up with their customers through social media.

And he added that Atlantic Canada has benefited from its association with Salesforce and will continue to do so. The California company has also bought out Golnstant of Halifax and invested in Introhive of Washington, D.C., and Fredericton. Its marketing platforms are helping to distribute products produced by other startups, such as the Halifax companies Oris4, Novawise and Leadsift.

The growing numbers of staff provide mentorship to startups in the region, said LeBrun, and the broader community benefits from Salesforce’s “one-one-one” program, in which the company and its employees devote 1 percent of their time, profit and products to charities.

“Just think about it – the fastest-growing software company in the world has a presence here,” LeBrun said. “That’s amazing.”

He also finds it amazing just how far the startup community in the region has come in

a few years. He’s delighted with the dozens of companies now finding investors, and adds there was only a handful doing so when he was building up Radian6.

“The startup bug has now infected the region,” he said. “And that’s half the battle.” ★



“We are just beginning to see the Era of the Connected Customer. Brands are looking for even more meaningful connections with those customers.”

– Marcel LeBrun, Senior Vice-President and Chief Product Officer, Salesforce.com Marketing Cloud.



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