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UPCOMING NETWORKING OPPORTUNITIES IN SOUTHWESTERN ONTARIO

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On the cover: Axonify CEO Carol Leaman, one of Exchange’s 13 people to watch in 2017.

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READ, RECYCLE, Give to a Friend

EXCHANGE magazine is a regional business publication published by Exchange Business Communication Inc., CEO Jon Rohr. Seven issues per year are distributed to each company in Kitchener, Waterloo, Cambridge, Guelph, and area as determined by Canada Post Business Walk Analyst. Subscriptions are available for $85.43. Send cheque or money order to Exchange, PO Box 248, Waterloo ON N2J 4A4. Attn: Circulation Department. Back issues are available for $12.00 per copy. Phone: (519) 886-0298 x 301. ISSN 0824-45. Copyright, 2016. No part of this magazine may be reproduced without written permission from the publisher.
I think this is my favourite edition of Exchange Magazine. Each January, we begin the year by featuring a Baker’s Dozen of people to watch in the coming months. Thirteen community leaders who are making – and will continue to make – a huge impact on our region in 2017.

The choice is never easy. We start with a much longer list, and then hone it down. We try to focus on the most influential, the most innovative, or simply the most interesting. We ask who is making a difference, blazing a unique trail, reshaping the community.

This year, the 13 influencers range from entrepreneurs to educators to economic development leaders to public servants guiding crucial programs. You’ll meet CEOs with unprecedented records of success; leaders who are guiding public programs that are key to the economic and social wellbeing of our community; educators who are setting the stage for a remarkable tomorrow. Our features include men and women, some young and some older. They are a diverse group, with but one thing in common – what they do, this year, will change the community in which we all live, work and play. And we at Exchange Magazine believe their impact will be very much for the better.

I know you will enjoy meeting the 2017 “Baker’s Dozen” of people worth watching.

And speaking of change – I’d be wrong not to point out other features in the magazine, which tell the stories of fantastic projects taking place in Cambridge (Grand Innovations), Kitchener (Catalyst 137, Velocity), and Waterloo (Communitech Data Hub). These amazing projects will also be must-watch developments in 2017. It’s gonna be a very interesting year! 
Waterloo Region is known as a place that embraces innovation. So when a waste disposal technology relatively new to North America began to catch on here, Bernie Melloul was not surprised. But he was also not entirely impressed.

The innovation is called “semi-inground waste containers” – a method of collecting waste that has been common in Europe for three decades. Semi-inground waste containers are waste containers set into the ground, replacing above-ground, metal waste bins. There are plenty of advantages to the idea, including rodent control, optimal use of space, odor and leeching control, aesthetic improvement, fire containment, security against vandals or even terrorists, and more.

And the idea was catching on – especially in Waterloo Region. Melloul’s well-known Waterloo company, Melloul-Blamey Construction, was doing an increasing number of builds where semi-inground waste containers were specified.

The problem was, while the products then available brought some of the solutions, when compared to above-ground waste bins, Melloul concluded they simply weren’t perfect.

He wanted perfect. So Melloul founded Sutera, a wholly-owned subsidiary of Melloul-Blamey, to develop and build the perfect semi-inground waste container.

Today, Melloul – and Sutera’s Vice President Steven Cseresnyesi, and Director of Business Development Bill Higgins – believe Sutera has accomplished just that. And they are convinced that they are not only providing the best semi-inground waste containers, they are also collaborating with stakeholders to develop other innovative solutions – products ranging from normal-sized street-side waste containers that sit atop a much larger, in-ground well, to a uniquely-designed dog waste collection container that solves a problem almost no one knew existed.

In the beginning was... concrete

But back to the beginning. Bernie Melloul knew that semi-inground waste containers solve a lot of problems. They cut down on the space needed for pick-up by front-end loading trucks (the waste container is lifted from the in-ground well by a crane-equipped truck, which increases accessibility and decreases the need for space, often increasing parking lot capacity). They eliminate problems with insects and with rodents. They even save money on construction and taxes, because in many municipalities, above-ground bins have to be housed. Cseresnyesi points out that in some situations, the entire cost of purchase and installation can largely be offset by the savings on unneeded bin enclosure construction and taxes.

However, the available semi-inground waste systems were all constructed of plastic, and that meant trouble. The units were susceptible to fire, usually caused by vandalism. They also were easily damaged by frost or by impact with vehicles. And they are vulnerable to hydrostatic pressure – they are so light that inground water pressure can lift them out of the ground.

Melloul knew “we don’t build buildings out of plastic for a good reason.” So the development and engineering teams at Melloul-Blamey were tasked to “build a better mousetrap.”

They did. Sutera’s 6-yard, semi-inground waste containers are made of con-
crete. They’re a simple, man-hole style design, which can be replicated by any concrete company – which Cseresnyesi and Higgins point out cuts down on transportation costs, and also creates employment in the local area where the installation is happening.

So Sutera’s system has all the advantages of previous semi-inground waste containers, while eliminating any fire hazard and hydrostatic displacement, and being much more durable.

And, surprisingly, Sutera units can easily be moved to another location, while plastic units – which have concrete footings – have to be destroyed if the site is no longer suitable.

Enthusiastic leadership

Higgins and Cseresnyesi are huge fans of their product. Higgins has been with Sutera for two years; Cseresnyesi came to the company just a few weeks ago, bringing with him 10-plus years of experience with a major company in the waste management field.

They see their job as primarily educational. There is no doubt in their minds that when architects, contractors and construction companies see the advantages of the Sutera system, they will come knocking.

In fact, that’s already happening, says Higgins. Sutera, only founded in 2013, with a relatively slow start-up that actually began in the South Carolina market, now sees many repeat clients, as the spec for new projects include the Sutera semi-inground waste system. “People quickly see the advantages and recognize the benefits of a superior product,” says Cseresnyesi.

The name “Sutera”, by the way, was suggested by Melloul’s 11-year-old grandson Luke. “Sutera” is close to the French “sous terre” which means “underground”. In Italian it means “inground”, and a Spanish phrase that translates, “your earth.”

Innovation

Cseresnyesi notes that, while “innovation” may not be the first word that comes to mind when you think “waste disposal”, it is, in fact, a crucial element of any waste and recycle disposal endeavor. These are not the old days of “out of sight, out of mind,” he says. Waste management, recycling, and all things green are now top of mind – and rightly so.

So innovation is key. So too, he says, is collaboration, with customers, with suppliers, and with the entire waste disposal industry.

That kind of attitude has led to some intriguing recent developments at Sutera.

Higgins tells a story of a collaboration that has led to innovation – all sparked by a problem few people know exists. It’s a tale of doggie poo.

Municipal parks and conservation areas are plagued by a specific, unique problem: dog owners who do follow “poop and scoop” protocols, collect the waste, bag it, and then place it in a waste container – often, a recycling container. And therein lies the problem – the minute dog waste is in recycling, nothing can in fact be recycled – it’s all off to the landfill. Many municipalities are removing recycling programs altogether from their parklands, because of this frankly enormous problem.

Higgins learned of this from a parks official, and Sutera went to work. They have adapted their in-ground well system, adding a dog waste disposal unit to the top, this creating a separate unit for this troublesome waste product.

Going high tech with rewards

Cseresnyesi adds that this innovation gets even better – “we’ve developed an app” so the disposal units will have a QR codes. Dog owners who use it can scan the code with their smart phones, and can then get a discount at a participating pet store, as a reward for using the system. The pet stores will pay an advertising fee to the municipality – which will help pay for the installations. “Win, win, win!” says Cseresnyesi.

This is just one of the innovations in development at Sutera. A similar product will combine an attractive, on-street garbage can with a fully in-ground well, to geometrically increase capacity, solving the twin problems of constant collection and often-overflowing garbage cans.

The company is also developing even more secure metal tops for the semi-inground waste containers – initially inspired because private owners discovered many neighbours were filling their containers, but which will also serve purposes ranging from preventing raids by bears in parks with such beasts, to eliminating vandalism and terrorism, to allowing effective tracking of individual use of a community unit.

There’s more to come. Also under development is a semi-inground container specifically designed for the restaurant industry – a unit that would include equipment that reduces the food waste to a slurry, which is vacuumed from the well, and delivered to companies that recycle slurry. It’s another multiple win, says Cseresnyesi: this solution deals with all the issues typical of above-ground food waste containment (rodents, odor, leakage, and general mess), and also diverts the waste from landfill.

To make this work, he said, “We look at existing scenarios from a different perspective – we examine what’s best for the consumer and the environment itself, while working in conjunction with various traditional and non-traditional hauling options.”

With its environment that welcomes innovation and collaboration, Waterloo was the right place to launch the Sutera solutions, which Higgins calls “a home-grown Waterloo Region product,” but for Bernie Melloul and his team, the continent is now the limit, with the company active both in Canada and the United States.

And in Cseresnyesi’s phrase, Sutera is no longer “a one-trick pony”, no matter how good that trick may still be. The Sutera team are firmly convinced that when it comes to all of the challenges of waste containment, they are building an entire suite of “better mousetraps”. Except, of course, that with their particular products, mice can’t actually get in.
When Carlo Chiarello was introduced as the new CEO of the Lazaridis Institute based at Wilfrid Laurier University’s Lazaridis School of Business and Economics, Dean Micheal Kelly used a lot of superlatives to describe his new colleague: “a pre-eminent individual... a strong track record of growing and leading organizations and managing complexity during hyper-growth stages... international experience and deep industry knowledge... uniquely qualified.”

That all may be true, but in the first weeks of his tenure, it may have simply been Chiarello’s stamina that was his key feature – he almost lost his voice from talking about the Lazaridis Institute for the Management of Technology Enterprises to anyone who would listen.

Chiarello’s résumé included a long stint as an executive at BlackBerry; and a term as chief product officer for the Israeli company, Powermat Technologies Ltd.

At the Lazaridis Institute, he hit the ground running, and hasn’t slowed down since. He sees some urgency in his mission: “I’m excited to be leading the Lazaridis Institute at such a pivotal time. Canada has produced world-class startups and start-up environments, but the time has come to shift our focus to helping those companies grow. We have a real opportunity to change the trajectories of some of our most promising early-growth-stage companies and to grow the scale-up capacity of the technology ecosystem in Canada.”

The Institute is relatively new, created in 2015 to support growth-oriented Canadian technology companies. It helps current and emerging technology firms to scale rapidly into globally competitive enterprises.

Chiarello barely had time to move into his office before he was involved in the Lazaridis Institute’s inaugural Canadian Scale-Up Program, a mentoring and peer network program, aimed at addressing the experience gap that small Canadian companies can face as they seek to mature into global enterprises.

The ten successful applicants to the Scale-Up Program include two local start-ups, Oculys and Dozr, both based in Waterloo Region. A panel of experts consisting of venture capitalists and leading Canadian and American technology executives considered over 100 applications and video submissions.

Chiarello described the companies in the first-ever cohort as “extraordinary”. He added, “Our collective challenge is to continue to keep more companies growing in Canada by helping them as they transition into the scale-up phase.”

His Institute is based at Laurier, but Chiarello describes it as a national organization. The Canadian Scale-Up Program will hold sessions in Toronto, Montreal, Vancouver, Ottawa and Silicon Valley. CEOs and founders of the participating firms will engage with experts on topics like talent management, design thinking, global markets, managing risk and funding growth. Throughout the program, companies will be provided with customized support from a mentor. Participants gain access to the expertise they need to scale their businesses while at the same time building international networks that will enable them to take their growth to the global stage.

Chiarello is full of praise for the start-up and accelerator programs in Waterloo Region, but believes his institute is perfectly placed to fill a next-stage gap. “We’re focused on scaling and growing companies that are in that spot of inflection, that really need the help here in Canada.... They’re beyond start-ups. I’m talking about companies that are companies, and they’re really having some challenges – whether it be geographic or scale, or new markets or resourcing on the inside.” He told Exchange, “They all need the help, in spades, in terms of how they find coaches, mentors, that have been there, done that. That is a key element. It’s not about sitting down in a classroom session, it’s how do we get these companies the help.”

DAVID FRANSEN - INNOVATION IS HIS MAINSTAY

INNOVATION SUMMIT CHAIR BRINGS HIS NONLINEAR APPROACH TO EVERYTHING

Dr. David Fransen describes himself as a guy who couldn’t hold down a job. Yet he’s the Chair of University of Waterloo Innovation Summit, in his second – or perhaps eleventh – career. His “first” was as a federal employee, where he spent most of the time migrating from department to department, from National Defense, to Industry Canada, then to Health Canada, and then to back to Industry Canada. He served our
country in the Privy Council office for seven years.

The federal government is the largest employer in Canada, and it has a mandate that covers “literally all of Canada… If you’re someone who doesn’t know what you want to be when they grow up,” says Fransen, “[or] if you never want to grow up, if you’re kind of curious, [the Federal Government] has the potential to accommodate that. I had about 10 different careers during my public service – it was extraordinary.”

Fransen’s skill set focuses on creating relationships with and between people in fledging innovative clusters. Fransen says there is an “ongoing debate, in and around the public service”, concerning whether it’s a good thing to follow the model that he did, moving around from place to place and getting a feel for how things operate overall, versus being a real expert in one particular area of public policy or public programming. “I pushed the one model,” says Fransen, “and the government is full of people who do the other”.

Fransen is a connector, who thinks out of the box of a “particular skill set or preoccupation,” and tries to connect diverse people.

Fransen did a two-year stint in Waterloo, 2006 to 2008. He came from Ottawa to be the first director of the Institute of Quantum Computing at UW, and soon after was asked to go to Los Angeles as Consul General, where he spent his final six years with the federal government. “To represent your country in that way is just a huge honour, and it was a great opportunity to live in LA.”

Prior to Fransen signing on as Innovation Summit Chair, there had been two such summits. He attended the second as a guest, so when UW president Feridun Hamdullahpur called, he knew a little bit about what he wanted to do.

Fransen quickly identified missing elements in the summit program: “We need to make it really obvious that this is about something bigger than the University of Waterloo.”

The second key was to fine-tune the focus. “The summit needs to be about an issue, a theme, that is running across public and private sector leaders’ minds.”

He adds, “It needs to be a policy issue big enough that both public and private sector leaders are thinking and worrying and wondering what we do”. Fransen had one last criteria: “It has to be something where Waterloo has credibility.” Fransen was referring to the Waterloo brand, as a community working together. September’s 2016 theme was “regional innovation ecosystems” – “everybody is talking about developing start-up ecosystems, and Waterloo has one that is internationally recognized. And so it was something that we tapped into.” As a result, the summit moved up the value chain, attracting 300 quality global policy people.

“We were able to attract some really high quality speakers, we got some really good, high quality attendance”.

Fransen will work hard to ensure the annual summit focuses on the top themes of the day – linked with the expertise in the Waterloo ecosystem. It will deal with policy issues that have global impact – from global trade to sustainable economic development to disruptive technologies.

And the Innovation Summit will always bring unique individuals together – something David Fransen has done throughout his amazingly diverse career.

IAIN KLUGMAN - TRUE TECH LEADER
COMMUNITECH EXPANDING ITS VISION… AGAIN

If there is a “best job” in the technology world, Iain Klugman, CEO of Communitech, may have it. Canadian Business Powerful Canadians for 2016 ranked Klugman number 36; Exchange ranks him as one of our top 13, for a second time. Exchange has covered Klugman since he joined the technology association in 2004.

Klugman is a steward of innovation and a key contributor to our community’s ability to position itself for change. With every new horizon, Klugman’s team is there – and now he’s expanding his geography, focusing on Canada’s equivalent to Silicon Valley, the Toronto-Waterloo Corridor.

Klugman is an on-the-street leader, who just doesn’t slow down, whether he’s introducing new workplace policies to adapt to a new workplace culture where no one has a assigned desk, to dealing with a downsizing nightmare (RIM) and guiding the fall-out into a technologically diverse community. His staff continues to stick-handle the redirection of thousands of talented individuals who would have migrated away, if not for local opportunities. Klugman has advocated for a cutting-edge ecosystem from day one, with a focus on product quality, integrity and operational scalability.

Klugman and his team of merry married-to-tech junkies have created an aggregate of community assets, and provided roads that lead to them. Together they provide a unique environment, where founders can build head office at home. The ease with which Communitech can address any reasonable query is breathtaking.

Communitech has served this community since 1997. A
A major transition occurred when Communitech, under Klugman’s leadership, moved from the Accelerator Centre at the University of Waterloo to a restoration project called the Tannery. It was here, with the fundamental goal to “live with our customers”, that Klugman created an environment that focuses on retaining talent, providing opportunity in technology and nurturing entrepreneurial innovation by providing the resources and assets needed by local students and businesses.

The amount people are engaging with technology on a daily level is Orwellian to say the least, and in January 2017, Communitech officially opens the Data Hub. It will focus on vertical market opportunities in data interpretation and reading for commercial or operational means, for entities like those working on autonomous vehicles, smart cities, cyber security, analytics and machine learning. It will expand the parameters currently offered by Communitech, and allow commercial organizations to go deeper in a particular subject.

Klugman adds, “When we think about data, we think about huge opportunities, what could be one of the major platforms for driving the economy, but it also brings with it huge risk, around safety and security, privacy.” Technology can be “disruptive, powerful and dangerous”.

Locating the Data Hub in a former Waterloo Police at Caroline and Erb does not just play off the strengthsof Waterloo, but also of the security required.

Says Klugman, “We, as a technology association have been thinking about IoT and the data being a yin and yang – one powers the other and each makes the other more valuable. The more data cars are producing, and pushing up to the Cloud, the more accurate cars become, the safer and more efficient they become... When we look at the IoT strategies for our city, the autonomous vehicle strategy vs. the data strategy, we can’t look at them separately because they are very much connected to each other.”

He adds, “The evolution of digital infrastructure is upon us. Twenty years ago, there weren’t the ubiquitous high speed networks and sensors were very expensive, but now they’re very cheap and getting cheaper – the capability of actually processing the data and having the computers powerful enough to crunch the data”.

Says Klugman, “Momentum is starting to build again and we’re going to get more and more into the machines and sensors. There has been a lot that has occurred without me pushing it, there is a real appetite – now let’s get out of the way!”

DAVID KROETSCH - WHERE MOMENTUM ENABLES FLIGHT
AERYON LABS HAS A INTERNATIONAL MARKET AND A GROWING INTERNATIONAL CUSTOMER BASE

In all started in high school, when a teacher, instead of teaching, flipped on the Discovery Channel. Says David Kroetsch, CEO of Aeryon Labs in Waterloo, “That got me interested in drones.” So Kroetsch started an academic team focused on Unmanned Aerial Systems.

In university, studying engineering, he formed a UAS club. On graduation, he took a job with PixStream. “I worked for a
few years, and then I asked myself: ‘What do I love doing?’ It was this drone thing.... So a few of us said ‘Let’s start a company’. That was 10 years ago.”

Today, Kroetsch is President and CEO, with co-founder Mike Peasgood, as Principal Systems Designer. Both are key players in the development of a brand new market, the Enterprise-grade sUAS market.

They took a big chance. Both men were gainfully employed, but “we left and went back to school, joining this new program at the Accelerator Centre.... Because of Waterloo’s great IP policy, where you own what you invent, we said ‘Let’s figure out what it is we want to do, under the umbrella of academia; let’s get a degree at the same time, and hopefully develop some IP that will allow us to start a company.”

They did. And the momentum took flight.

Ten years later, Aeryon Labs employs 160 people; they have secured a $60 million investment from Summit Partners and Venture Capitalists; last fall, Aeryon opened a $3 million dollar testing facility. And, Kroetsch was named 2016 EY Entrepreneur of the Year – Technology.

When Aeryon labs started in 2006, nobody knew what a drone was. “We started with the vision of actually bringing drones to the commercial market. It turns out, there was no commercial market.” But interest was growing, the founders built a product that was rugged and reliable, and most importantly, “easy to use, because that is a critical piece for the commercial user. That user is not going to be a drone pilot, they’re going to be an insurance adjuster, a police officer or a land surveyor... they [just] need pictures from up there.”

He adds, “We approach it very differently than those in the hobby world”.

Developing a commercial market takes time. Aeryon, in the early years, got pulled into the international military markets. However, “because we have a product that is not military by nature – it’s a commercial product – we could sell it anywhere in the world.”

In contrast, “if you build a drone in the States, it’s a military goods, period”.

That diversity of application was a market advantage. So was the fact that Aeryon had access to air space. “The FAA says you just can’t fly, Transport Canada said ‘Yeah, we’ll let you fly, we’ll do it on a case by case basis’. We’ve worked with them to get some pretty permissive uses both for ourselves and our customers. The OPP are using SkyRanger multiple times everyday, all around Ontario.”

The drones don’t carry payloads. They are mostly used for “getting eyes on something that is difficult to get eyes on.” It could be a partly collapsed building, where emergency responders can use the drone to find someone in need of rescue.

It’s an enhanced decision making tool; in a military context, it’s used for gathering essential information, such as “if it’s safe to drive around that corner”.

Innovation is being driven by miniaturized hardware. They’ve gone to a GPS single chip, with a drone that flies for 30-40 minutes with a 20 megapixel camera installed. Emerging technology and consumer demand is driving them to make drones smaller, cheaper and faster.

So what’s Kroetsch think of his awards and new found fame? “Honestly, I don’t even have time to think about it. I’m busy trying to grow the company”.

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TONY LAMANTIA - “INVENTING THE FUTURE”

SLOW START MEANT BUILDING A STRONG FOUNDATION

When Tony LaMantia was hired as first-ever President and CEO of the new Waterloo Regional Economic Development Corporation, he got very busy, very quickly – even if it didn’t look like it, at first. Because, he explains, one of his first priorities was to listen. To listen to community leaders, from the business sector, the political arena, and the crucial education sector. His next priority was to assemble the right team, to tackle a challenging assignment.

So it may have seemed a bit of a surprise when, in late 2016, a lot of things seemed to start happening, including the rebranding of the whole enterprise under the caption, “Waterloo EDC – inventing the future.”

That’s no small accomplishment in itself – the multi-faceted region has never been amenable to being marketed as a single brand, but somehow, LaMantia and his team have accomplished it.

LaMantia explains: “Global branding and positioning in the private sector is all about the clarity of your corporate identity, value proposition and competitive advantage. I feel that in many ways the brand chose us, and not the other way around. Our goal... will be to continue to work with our partners and key stakeholders to bring our compelling brand promise to life.”

The research carried out by the WREDC found that, “It was very clear that the name ‘Waterloo’ is how the international business community identifies this Region... By building on the world-renowned strength of the ‘Waterloo’ name, the new brand identity clearly conveys our Canadian identity, key points of positioning of our innovation eco-system, simplifies our message and conveys an ease of doing business in the minds of our target audience.”

The creation of the Economic Development Corporation is a major step for the Region. It replaced the venerable Canada’s Technology Triangle, but the mandate of the EDC is much broader than that of the CTT. It’s also a much leaner organization – it’s run by a 13-person board of directors representing the business and educational sectors – but significantly, there are no politicians or municipal administrators on the board. And now, one year into the existence of the Economic Development Corporation, the organization can boast a growing list of accomplishments.

The leadership team has been assembled, many lured from leadership positions in other organizations. LaMantia himself was recruited from his role as assistant deputy minister of the investment and industry division of the Ontario Ministry of Economic Development.

The EDC has begun to meet the key objectives identified by LaMantia and his team. He points out that they have already had success in attracting Foreign Direct Investment, and facilitating “scale-ups” as companies increase their footprint in the region.

The EDC is also working closely – and in surprising harmony – with the various municipalities, creating a one-stop-shopping experience for companies looking to locate in the region. LaMantia’s motto in this area is, “There can be no ‘wrong door’ to great service.” The corporation is also working with the municipalities to finalize an inventory of investment-ready, shovel-ready sites.

LaMantia is enjoying the challenges of the new job. He may be working to lower expectations when he says, “On a $2 million budget, we’re not going to change the world,” but he cannot hide his enthusiasm for what WREDC has accomplished in its first year – trade missions to California, Germany and; a consensus achieved on the brand name; and an unprecedented level of cooperation between the regional municipalities.

LaMantia says, “We are an Economic Development Corporation... and we have rapidly become a very, very good one.”
Is Carol Leaman one of the people to watch in 2017, in Waterloo Region? Actually, she’s been closely watched right across North America, for the past two years. Investors have been tracking the progress of her company, Axonify – and it led to an unexpected investment.

All because Leaman has one of the most impressive track records of any serial entrepreneur in the region.

Leaman, a Newfoundland native who grew up in Ottawa and graduated with an accounting degree from the University of Waterloo, is a natural-born business leader. She has served as CEO of four companies – all successes. She has a small “CEO share” of the first two, and major ownership positions in Postrank, and now, Axonify. She’s served on innumerable boards. She was a founding member of the Waterloo Regional Economic Development Council.

But right now, Axonify is growing at such a pace that Leaman has resigned from a number of boards (including WREDC) – although she remains a member of seven.

Her personal “reboot” has happened because Axonify is growing, and, with a $27 million shot in the arm, she expects huge growth in 2017, as well.

Leaman describes Axonify as “an employee knowledge platform.” The solution developed by Axonify enables large corporations to tailor individual employee training – literally, something different meeting the needs of each employee.

“It’s knowledge acquisition,” she says, “and doing it in a way that is appealing and highly targetable. It’s not just ‘one size fits all’.” The algorithms of the program track learning progress, so the ongoing learning specifically targets the individual employee’s knowledge gaps.

When Leaman – and business partner Christine Tutssel – bought the company five years ago, Axonify had one client and two staffers. As an experienced corporate mentor, Leaman was originally asked to advise the company. But an opportunity to sell her company, Postrank, came up unexpectedly, and Leaman completed the sale, and then she and Tutssel bought Axonify.

Starting from one client, Axonify now serves about 100 corporations, “most of them global brands… our target customers are Fortune 1000 companies.” Most of Axonify’s clients are in the U.S., but the company remains rooted in Waterloo.

At the beginning of 2016, the company had grown to 38 employees. By the end of the year, that number had topped 105. Leaman expects to add another 50 or 60 in 2017.

She also added a COO – Joe Wagner, who comes from a company posting $100 million in revenue; Leaman says that figure is now “my target,” as well.

She says that this rapid expansion was assisted by the $27 million investment, although “we had lot of money in the bank!”

But investors came calling, and Leaman and her team recognized the opportunity created by the additional resources. “The company was poised to take that kind of giant leap.”

She has a clear view of her own skill set. “I am definitely not the smartest person at Axonify. My job, as a business person, is to run the company. Not sales, not be a developer – I can get the best people to run those things.”
“If I have a skill, it is an understanding of how to pull disparate resources together that create an energy to go forward…. And I think I have really good intuition with the people I hire.”

She has some advice for would-be entrepreneurs: “Work hard, be kind, be fair, be reliable, be honest... and good things happen.”

At five years, Leaman’s term as CEO at Axonify is the longest she has held such a post. She says, “Investors want their return... there is a shelf life, typically seven to 10 years... At some point, in all likelihood, I will sell Axonify. But [now] the opportunity is massive, and I would like to be around to see it realized at maximum potential. There is so much to do that is awesome!”

KURTIS McBRIDE - UNDERSTANDING THE ENTERPRISE ONION RAMPING UP FOR GROWTH IN THEMSELVES AND IN OTHERS

At thirty-something, CEO Kurtis McBride could already be considered one of the grandfathers of the Internet-of-Things. His University of Waterloo start-up Miovision is now 12 years old. Miovision’s Video Collection Units (VCU’s) improve traffic flow in 13,000 municipalities in 60 countries around the globe.

In May, this leader in traffic systems technology launched a new product called Miovision Central, a Cloud-based product that promises to simplify complicated traffic decisions. It’s a free, first-of-its-kind system designed for engineer and planners to coordinate traffic data and help them make decisions using visual data. It’s “targeted directly at a municipality,” says McBride. “We’re forging deep relationships with municipalities”.

But McBride’s interests are diverse. In January 2015 he partnered with Frank Voisin of Voisin Capital on a megaproject known as Catalyst 137. Located on 24 acres of core industrial real estate, it is easily the largest and most organic entrepreneurial community built in Waterloo’s ecosystem to date, an integral part of the successful start-up and scale-up ecosystem.

McBride, as the first graduate of Accelerator Centre, has some insight when it comes to disrupting an established market. “Accelerator Centre and Velocity do a great job at providing low cost space and incubation up to a point ... then you have to leave. Most Waterloo companies, when they leave, have to go up to North Waterloo or South Kitchener where people don’t want to necessarily be.
We’re well situated, we have parking in the core, you can roll a truck up to this thing. As companies grow, we’d love them to grow in place, so we have a lot of space.”

He describes the environment as the concentrate rings of an onion. “At the foundational level,” he says, “you’ll have a really great building with a lot of amenities for people to come, work out, go grab a beer, grab lunch.”

Catalyst 137 is located in what’s been dubbed the Midtown district, between Downtown Kitchener and Uptown Waterloo, at the edge of Belmont Village. “The massive lot provides ample parking, and tenants will have all these basic amenities”.

There are more layers – McBride points out that this a unique facility, designed to accelerate a hardware-focused company's time to market. Clustering resources creates options – companies can source supplies and parts from Catalyst 137 neighbours and colleagues instead of going offshore. As McBride says, “You just go down the hall.”

Miovision will be moving into the facility mid-2017. McBride’s experience with Miovision has provided insight in the evolutionary needs of IoT start-ups – how to scale business and get to market.

He says Catalyst 137 creates its own “branding” as a “concentrator” for government support, industry support, and venture capital. “All these things go into building a ecosystem”.

McBride has seen the future: “I really believe IoT will reinvent all of the physical things that we take for granted, whether it’s city infrastructure, our homes, our drive, or our offices. It has the potential to really change the way we live.”

McBride says that while Waterloo may never quite match the tech volume of Silicon Valley, history has given the region a huge advantage. “We are uniquely positioned – we have RIM here. In the day, RIM brought thousands of people to the area. Most of them had technological expertise with particular skill sets, maybe 10,000 people ... and those people are still here. They may not work for RIM anymore, but they didn’t leave.”

He adds, “And they’ve started companies. The same skills that you need to build cell phones, you need to build internet-of-things devices... This could put us at the forefront of IoT.”

RAJ SIAN - SPOTTING THE NEXT BIG THINGS
RAJ SIAN KNOWS WHAT’S COMING IN WOOLWICH

So what are the next big things in Waterloo Region? According to Raj Sian, two words: “Breslau” and “Agriculture”.

Sian is speaking as the Economic Development and Tourism Officer of Woolwich Township, so she may have a bit of bias. But at a time when much of the region's focus seems to be on the cores of Kitchener and Waterloo, Sian certainly has a point.

Consider Breslau. The community is booming, and there’s more boom to come. Breslau is to get a Go Train station, in 2019. It’s home to the Region of Waterloo International Airport – and Sian is optimistic about airport growth potential, partly because Toronto’s Pearson is reaching capacity.

As well, there has been both retail and residential development in Breslau – and more to come. And Sian expects this kind of growth to impact on Elmira and St. Jacobs, as well.

The fact is, Sian points out, developers are finding little or no room for their projects in Waterloo, and only slightly more in Kitchener. So they are looking to the townships, especially Woolwich.

So, yes, Breslau may well be a community to watch in 2017. But agriculture?

Sian is relatively new in her position in Woolwich; she came to the job in June of 2016, after spending two years with the city of Waterloo. She’s a Toronto native, but has acclimatized to her new environment. Sitting in her Elmira office, she says, “Even though Waterloo is 11 minutes away, it’s a different sort
of world out here."

That doesn’t mean, though, that Woolwich is a backwater: “We have ambition, innovation and a willingness to adapt... but not necessarily in the technology industry.” She points to manufacturing, retail and especially agriculture as growth areas – all using high tech, every day.

And Sian is leading the way to celebrate the new face of agriculture: Woolwich will host an Agriculture Innovation Showcase in 2017, “to showcase our agricultural community and the innovations they use on a day to day basis... To show Waterloo Region and the GTA our agricultural technology.” She’s recruited other neighbouring townships to participate, and has brought Ontario Ministry of Agriculture, Food and Rural Affairs on side.

She’s done her homework, climbing aboard state of the art combines and tractors that are controlled by bluetooth.

In fact, Sian is determined to keep in touch with her community on a very regular basis. She calls it “taking the pulse” – she goes out into the community to ask questions and, more importantly, to listen.

Within a couple of months of moving into the Woolwich municipal office, she had already heard enough about one issue to take action – she learned that many of the retail outlets in Elmira were not using the internet. She organized an internet workshop, twenty people attended, and by the end of the session, there were businesses creating Twitter accounts and taking their first steps into the wide world of the web.

Woolwich people may be reaching out to the world, but the world is also arriving in Woolwich. This is a community already known for two major tourist attractions – St. Jacobs Country, and the Elmira Maple Syrup Festival. But now, says Sian, people are coming to stay, priced out of the GTA housing market and looking to the west.
She also notes that not all of the newcomers will fit the traditional stereotype of a Woolwich resident – and she's delighted with that. She says that Woolwich people have proven themselves eager to welcome newcomers, including people of different cultures and faiths. And she admits she's a living, breathing example – as a woman of colour, she says she has been welcomed warmly both by residents and by the township administration.

MINTO SCHNEIDER - TOURISM WITH A TWIST
REGION’S TOURISM CEO LOOKS TO NON-TRADITIONAL TOURISM

Minto Schneider has lived and worked in almost every part of this country. She has been involved in the travel industry in western Canada, in the Atlantic provinces, and in Ontario. And that makes her uniquely suited to head the organization responsible for promoting and developing tourism in Waterloo Region.

Schneider is CEO of the Waterloo Region Tourism Marketing Corporation. She moved to Waterloo in 2003, and after initially commuting to Toronto, applied for the local position in 2013. Her three-year contract ended in 2016, but she signed up for another five-year stint with the organization that is branded as “Explore Waterloo Region.”

The Winnipeg native brings a ton of expertise to her role, garnered from working with Hilton hotels in Vancouver, St. John New Brunswick, Toronto, and Halifax, as business development manager for Tourism Nova Scotia, and then with the Tauck and then Horizon travel companies.

Her favourite job was when she worked in tourism promotion; when the opportunity arose in Waterloo Region, she jumped at the chance.

Promoting tourism in Waterloo is somewhat different from the same role in other parts of the country. Schneider takes the broad view, pointing out that “tourism” doesn’t have to mean typical holiday-makers – it includes everyone who comes to the area, and even those who live here and are customers of the entertainment and hospitality industry.

So, in her opinion, the community’s best assets aren’t necessarily typical tourist attractions. She lists, first of all, “the branding – Waterloo as a tech hub, as a centre of innovation. Everyone knows where we are.”

In her opinion, the new link with Toronto – the “innovation corridor” – will serve to bring more visitors to the region. She wants to “build on that.”

Schneider also talks about the Region as an ideal host for sporting events. “This is a huge strength. We have some fantastic facilities in the region.” If people come to town to play sports or to spectate – they’re still tourists, and Schneider is ready to lay down a lush welcome mat.

She acknowledges there are challenges. “A large challenge is the distance from Toronto,” especially the unpredictable 401 highway. Most visitors come to town via automobiles; she believes every advancement in public transit has to help her tourism cause.

She sees great potential in other areas that may not initially sound “touristy” – like business events, “an area we particularly want to grow”. She is encouraging local business people to act as ambassadors for the region when event planning takes place. She clarifies the situation: “We’re not looking for a 10,000 person conference,” because there is no facility for that, here. “But we’d love 250 to 600 people.”

Perhaps her biggest challenge is, too many areas to promote, too few resources. Waterloo Region Tourism has five full-time staffer and one part-time employee. Their goal is to promote sports tourism, tech tourism, and business tourism – as well as provide enthusiastic support for existing attractions and festivals. Plus, her organization has assumed responsibility for the Grand Social website, created by the now defunct Creative Enterprise Initiative. “One of our strategic goals is to be recognized as the region’s tourism authority.”

“We do not have enough time to do everything,” Schneider says. “And we have so much opportunity.”

JAY SHAH - DOUBLING DOWN AND COMING UP A WINNER
JAY SHAH BELIEVES VELOCITY IS WORTH BETTING ON

There’s an iconic old commercial that has the tag line, “I liked it so much, I bought the company.” Jay Shah gets that concept – as a one-time participant in the University of Waterloo’s Velocity start-up program, he liked it so much he jumped at the chance to return to Velocity as Director of the innovative, visionary program.

He assumed the role in mid-2016, and was on hand later in the year to celebrate Velocity’s latest growth spurt, as it expanded into space at vacated by Google when that company moved from The Tannery to new, nearby quarters.

Velcity is now home to more than 100 start-ups.

As Velocity officially marked its expansion, Shah took the opportunity to praise the visionaries that founded and grew the incubator. He said, “Today, it doesn’t seem like such a wild idea – to bring together entrepreneurial students of various disciplines to live under the same roof.”

But, he added, when first proposed, it seemed like a significant risk. He pointed out that “Bud Walker instinctively took that risk, saying, ‘Yeah, let’s place that bet on the entrepreneurial students and see what happens.’ That was the beginning; that was the seed that was planted. And ever since then, it’s doubled down on the principal of that bet. To keep placing bets on the entrepreneurial students, on alumni, on the entrepreneurial experience, on vision and of innovation.”

The bet, says Shah, has paid off beyond all expectations.

Shah also praised his immediate predecessor: “Mike Kirkup’s vision really got us to this point.”
Shah first came to Waterloo Region in 2006, to attend UW. As one of UW’s impressive roster of young start-up entrepreneurs, he and two partners launched a start-up called Bufferbox. That involvement took him to California’s Silicon Valley, and then back to Waterloo. Eventually, they sold Bufferbox to Google, went to work for Google… and watched Bufferbox be discontinued by Google.

And now, he’s director of Velocity. Velocity is the largest free start-up incubator in the world. Shah believes he is in the right place at the right time. “This is really close to the battle…. Velocity is the vehicle where I can have the most impact,” he told Exchange. “Moving the needle on the pace of change is what I’m passionate about. I want the adoption of technology into the world just to accelerate.”

And he added that he will be at Velocity “as long as I can have an impact.”

Like almost all of the tech industry leaders in the region, Shah sees success as the product of, not only innovation, but also, collaboration. Shah says, “Really, Velocity is a community. We have infrastructure, we have people, we have mentors and advisors, but entrepreneurs learn from each other, and that’s what we want to instill. And that’s not just in this facility – all the entrepreneurs that came before we had our supports in place, holding that knowledge so we can learn from each other. “And that’s how we as entrepreneurs have learned from each other. Everything we do is the direct result of the needs and desires to start companies.”

Shah clearly believes in the future of the Kitchener downtown core – and not only because he’s the new spokesperson for Velocity. He’s put his money where his message is, joining with family members to invest in a Kitchener core property, the 28,000 square foot former Budd’s store, at 165 King Street West.

He says, because “I’m bullish on this region. I’ve been here nine years. This is one way to be involved.”

Clearly, Jay Shah has found at least two important ways to be involved in the community where it all started for him – and where he’s a key player, enabling dozens of start-ups, with many more to come.

JOHN STIX - REMOVING THE BEAST FROM THE ROOM

KIDS WIFI REMOVE THREATS PARENTS ARE NOT EVEN AWARE OF

“It all kind of culminated with what we’ve already known,” states John Stix, President of KidsWiFi, referring to the seriously dark elements kids can find on the internet. Stix is a serial entrepreneur who, with long time best friend Jody Schnarr, has built some incredible infrastructures around communications networks.

And he knows a thing or two about the dark side of the internet. “We’ve been a part of helping police with their investigations; we’ve been aware that it’s getting worse.”

Stix is concerned about the internet’s impact on young children. He says it hit him hard when he heard a true story from a friend, about a boy with a learning disability. Left alone with his mother’s iPad for only a few minutes, “He went in to search for Hallowe’en costumes, and a spiralling effect of darkness took over, really hitting some dark stuff”. As a result of his search, “the boy is suffering extreme guilt, he can’t get it out of his mind. The outcome has impacted the whole family”.

Says Stix, “I became very, very passionate about it. I stepped down as president of Fibermetics to run this.”

Stix says there is a new, growing problem “that parents are not aware of.” It’s well known that children are exposed to pornography; what we’re not aware of is that children are becoming addicted to it. A generation is coming up addicted to pornography, and psychologists are saying it’s going to rewire their development. What are the expectations of their partner going to be? There are just a lot of elements that are not good.

Stix notes, as well, that predators have moved from the streets to the computers in their basements, luring children into chat rooms. “They’re calling it ‘bunny hunting,’ online.”

Police forces “can’t keep up with the pace of growth. It’s not getting better, it’s getting worse.”

The internet has evolved so fast. There is a false sense that
because my children are in my home, they are safe. Says Stix, “The keyboard does not know how old those fingers are. And the world is at their fingertips.”

So the key question: “How do we make a solution that is convenient and easy?”

In fact, parental controls have existed almost as long as the internet. Each router has an embedded parental control, but “no one is going to go into their router to try to figure it out,” says Stix. “It’s confusing... There are solutions out there, but how do we make it super easy and effective.”

Stix doesn’t look at it from the perspective of control, he likes to call it “freedom”. He says, “if you create a safe environment, you’re filtering, but you’re allowing them freedom to really explore. It’s parental management, it’s allowing them to customize it per age, per kid.”

So they created a new, easy to use parental control called KidsWiFi. “You go to any outlet at home, it auto powers up, creates a separate WiFi network in your home. You as a parent just change your existing password on your existing network. The kids have friends that come over, and everyone logs under KidsWiFi. The filtering is all done at the edge of the network, in our device, so it never reaches any of the kids’ devices. And it’s never obsolete because we’re doing the updates.”

“You get full analytics. You get to see what is happening – all the sites your children went to and all the sites and ads that were blocked.”

Stix adds, “There is a tonne of content that needs to be blocked, that parents just aren’t aware of. Kids don’t gener-
The moment Sullivan took on the role as UW’s eight dean of engineering, in July, 2012, she was already breaking new ground, as the first woman to hold the post at Waterloo, and only the fourth woman to head a Canadian engineering faculty.

But that was just a hint of what was to come, as UW’s engineering department has explored new worlds of innovation, especially concerning cars that are more environmentally friendly, and now, self-driven.

UW Vice President Ian Orchard said, “I would like to thank Pearl for her outstanding service to her Faculty and to this University.... She has consistently brought her tremendous energy, passion and insight to the issues at hand, and in her role has been a champion for bringing the full range of educational, research and entrepreneurial opportunities to all members of the University community and especially within the Faculty of Engineering.”

Almost simultaneously with the announcement of her upcoming departure, Ontario’s Minister of of Transportation, Steven Del Duca, announced approval of UW’s three-year autonomous vehicle research program. Sullivan was delighted: “This is a direction in automotive engineering innovation that we are proud to lead in Canada... As Canada’s strongest research team in connected and autonomous vehicles, with engineering and computer science professors working in areas from embedded sensors, to advanced controls to artificial intelligence, we are very excited about this new frontier.”

Del Duca said UW will continue to lead the field of autonomous vehicles: “Waterloo will be among the first eligible to operate an autonomous vehicle on a public roadway in Canada.”

The UW project includes nine professors working under the umbrella of the Waterloo Centre for Automotive Research (Watcar).

Earlier in the fall of 2016, GAIA (the “Green and Intelligent Automotive” Research Facility) was officially opened as part of Watcar. GAIA is a $10 million partnership between UW, industry (led by Toyota), and the federal and provincial governments. It is home to professors from a number of disciplines, collaborating on innovative research, and it includes three labs covering 4,000 square feet in the UW Engineering 3 building. It’s the largest university-based automotive research centre in Canada.

Sullivan told Exchange that the goal of GAIA is to place Canada at the forefront of automotive innovation. “We have professors in electrical engineering designing electric cars; professors in systems design doing integration of entire systems. We finally have them all in the room, so we can say, ‘What do we need, to take Canada to world class?’

“We all want the same goal – to develop a facility that car companies in this country can have access to, so we can be competitive in designing and developing cars.”

GAIA’s primary industry sponsor is Toyota, through an initial grant of $1 million, but Sullivan told Exchange, “The beautiful part of this collaboration is, Toyota has supported this, but the other companies – GM Canada, Ford, Honda – can come in to work – it’s a facility for all companies.”

Projects such as GAIA and the autonomous auto research mean that while Pearl Sullivan may step down from her role as Dean, the vision and the projects that she has facilitated will continue.

She says, “Waterloo Engineering wants to be the destination of choice for talent. We will create more opportunities for our students to reach their career aspirations in practice, research or entrepreneurship. The role of staff in supporting our students is critical, as our faculty members continue to shape education and technological innovations in Canada and around the world.”

DEREK TING - YOUNG ENTREPRENEUR IS HAVING FUN
TEXTNOW SERVING ABOUT A MILLION CUSTOMERS

When Derek Ting describes the evolution of his award-winning company, TextNow, he opts for an entirely Canadian analogy. “We’re like Canadian Tire,” he explains. “They don’t just sell tires.”

And TextNow doesn’t just provide texting services. That’s where it started – not very many years ago – but the company has “added all the pieces – functionality and quality” to evolve into a full-service telephone communications provider.

The swift success of Ting and his cohorts has not gone unnoticed. Ting is the recipient of the 2016 Startup Canada High-Growth Entrepreneurship Award, and TextNow was named to The Deloitte Fast 500.

The Waterloo-based company (there are also offices in California) now has about 10 million daily users, according to Ting, and has recorded revenue growth of 137%. TextNow has 84 employees, with eight or nine based in the United States. And Ting has reached these milestones before turning 30.

Ting was born in Hong Kong; his family moved to Canada when he was six years old. He spent high school years in Frankfurt, Germany, before returning to Canada to complete a degree in computer engineering at the University of Waterloo.

Ting and his colleagues – including John Lerner, now a
silent partner – started to play with technology. They created software and apps that worked, but were not marketable; “some of them were for fun, some were actually useful.”

But he admits that, as students, “Basically, we didn’t know what we were going to do” – but they did want to achieve “some kind of self-employment.”

Then came their development of an app that allowed free texting; and they knew they had found their future.

Ting says his final year at UW – 2009/2010 – was challenging, because not only was he completing his degree, he was also building TextNow, the company that would provide the texting app. Ting smiles when he says that the app originally exploited “a loophole” – all carriers had a back door that allowed them to provide free text messaging. “That’s how it started,” he says, and he quickly clarifies that, today, TextNow partners with carriers; in the U.S., they have teamed with Sprint. No more “loopholes.”

They provided the text service for free, depending on advertising for their revenue, and soon realized that “a lot of people started using our service as a replacement for their phone service.”

And that led to the “Canadian Tire” style expansion – the company is still branded as “TextNow”, but the service offered covers the gamut of telephone communications, including phone service and even providing smart phones to their users.

The full service package costs, on average, $13.99 a month. TextNow provides full service both in the U.S. and in Canada.

The key, says Ting, is that the phones use available wifi whenever possible, and only switch (seamlessly) to your digital plan when necessary.

TextNow has found a booming market – and it’s mostly in the U.S., home to 95% of the company’s customers. Ting and his colleagues plan to grow the user base both in the U.S. and in Canada.

TextNow remains a Canadian-based company, even though its customer base, and its primary investors, are American. Ting explains that, when TextNow needed to raise “C Round” funding in 2011, he spent four months knocking on Canadian doors – with no positive results. So he went to California, and raised $1.5 million in a matter of weeks. He’s quick to add that, “the ecosystem here has changed a lot since 2011.”

Although Ting was in the midst of the tech experimentation in the earliest days of TextNow, he freely admits that this is not his role with the burgeoning company. “Technically, I’m not the best guy here. Everyone here should be better than I am. It’s the street smarts – understanding our customers, knowing where we should take our product, those are my core strengths.”

Unlike many successful start-ups, TextNow is not looking for a take-over. Ting says their goal is “growth”, and they’re not on the market, because “the whole point of us doing this is, we love doing this.”
Cambridge Mayor Doug Craig has called it “the biggest announcement since Toyota came to Cambridge.” He was celebrating the announcement of the new Gaslight District in Downtown Galt, a $100+ million investment in the city’s downtown core, anchored in part by the visionary innovation facility, “Grand Innovations”.

The Gaslight District project, undertaken by HIP Developments, will see the redevelopment and adaptive reuse of the historic Southworks property at 64 Grand Avenue South and the creation of a European inspired Centre Square courtyard. In addition the former Tiger Brand property at 96 Grand Avenue S. will house Grand Innovations, an innovation centre supporting the development of advanced manufacturing enterprises. Over 50,000 square feet will be occupied by the Grand Innovations not-for-profit entity innovation cluster, Conestoga College, and a community of professional services along with restaurants, food services and shops.

Grand Innovations is giving rebirth to a century old manufacturing facility. Its goal is to combine private, public and institutional sectors in an environment conducive to fostering applied research and innovation through education, collaboration, mentorship and investment – for the development of solutions for industry and creation of new enterprises and employment opportunities.

Scott Higgins, President of HIP Developments, says, “With deep roots here, having been born and raised in Cambridge, I've always believed we have a truly unique Galt core that has tremendous potential to foster a work, live and play lifestyle. We see The Gaslight District as the catalyst of a revived innovation and creative spirit fostering economic and social activity in Cambridge for years to come.”

Conestoga College is a primary partner. The partnership will provide new opportunities for the college to expand applied research, serving as a hub for innovation and commercialization activities. Grand Innovations will be home to 100+ future high-tech jobs in a collaborative environment with a myriad of support businesses.

Dr. John Tibbits, President of Conestoga College, says: “The collaboration between the City of Cambridge, HIP Developments, Grand Innovations and Conestoga College will provide a continuum of business development, support services and applied research that will result in the establishment of new manufacturing enterprises, the development of new and improved technologies, the growth and success of local Small and Medium-sized Enterprises, and new opportunities for leadership to address issues related to cyber security. This new innovation hub will serve as a catalyst for economic development for the city and the broader community.”

Greg Dalton, Managing Partner of Grand Innovations, stresses the practical outcomes expected from the new innovation centre: “Applied research is the key driver for what we will be doing. It’s not theory, it’s applied research. We’re going to be building actual solutions for industry, we’re partnering with industry, we’re inviting industry to bring us their challenges, and coming up with solutions.

Dalton sees the new centre as “a radical stimulus for entrepreneurship and economic development for the City of Cambridge, and a petri dish for businesses, providing the space and support programs required to culture new ideas and products into thriving enterprises.”

Conestoga’s Applied Research and Technology Hub at Grand Innovations will expand applied research activities undertaken through the college’s Centre for Smart Manufacturing, and build on current research on the development of new technologies to improve e-waste recycling.

The new centre will also serve as the base for Conestoga College’s emerging focus on innovation and applied research to support industry needs related to cyber security. Still in development, the Cybersecurity Zone will develop new solutions to help businesses adapt to the changes and respond effectively to the risks associated with our increasing reliance on cyber technology.

At over 50,000 square feet, Grand Innovations will provide a diverse environment with turnkey office and workspace, specialized private and public support programs and workplace services, along with food services, presentation and recreation facilities.

“Grand Innovations creates an exclusive environment for applied research, innovation and enterprise creation, leveraging the assets of private, public and institutional partners to deliver solutions tailored to the needs of industry,” adds Dalton “The origin and history of this icon of industrial commerce in Galt will resonate through the leading technological products, processes and services being created by resident innovators.”

Dalton will be responsible for Operations, while Tim Ellis, former CEO of the Waterloo Accelerator Centre, will lead the newly formed not-for-profit operator that will organize and run the programs at Grand Innovations, serving also as the liaison between the private sector and public and institutional sectors. He says, “We’re turning the historical model upside down. We’re going to bring together the researchers, the technologists, people in industry, investors, the environment... we’re going to bring all of that, while commercial interests will bring us the problems, and we’re going to put the teams together to solve them.”

Ellis adds, “We are developing a totally unique and sustainable model for creating and supporting new high-growth enterprises that are formed as the result of addressing and solving industry challenges.”

HIP Developments is a local real estate development company based out of Waterloo. Working together with general contractor, Melloul Blamley, HIP anticipates Grand Innovations to begin occupancy in 2017 and construction at Southworks to be completed in phases from 2018 to 2020.
DETAILS HAVE BEEN ANNOUNCED CONCERNING THE NEW GASLIGHT DISTRICT IN DOWNTOWN GALT, a $100+ million investment in Cambridge’s downtown core that is a significant piece of achieving the ‘Back to the River’ vision for the city. The project will see the redevelopment and adaptive reuse of the historic Southworks and Tiger Brand properties at 64 and 96 Grand Avenue South. The Gaslight District will be a complete community including new high tech office jobs, retail and restaurant space, a public square and approximately 400 new residential units.

Scott Higgins, President of local developer HIP Developments, said, “We see The Gaslight District as the catalyst of a revived innovation and creative spirit fostering economic and social activity in Cambridge for years to come.”

The Gaslight District is set in West Galt in the heart of Cambridge. It will complement the adjacent and highly successful Dunfield Theatre, and builds on the momentum of other initiatives in the Core that include the new pedestrian bridge and Idea Exchange restoration of the Old Post office. Cambridge Mayor Doug Craig was enthusiastic in his support. “The Gaslight project is a significant step forward in achieving our vision to build an innovative and dynamic city,” he said. “It will transform the downtown core into a place where people can live, work, collaborate, and contribute to our strong local economy.”

The residential and entertainment portion of The Gaslight District will be built on the existing Southworks property. It will see the adaptive re-use of the 1800’s foundry buildings to become Cambridge’s premier restaurant, entertainment and artisan destination centred around a new large European-inspired public square, the focal point of activity, with restaurant patios, cafes, artisan displays and entertainment. Two new high-end residential buildings will be developed, adding over 600 new residents to Downtown Galt.

The former Tiger Brand property will house Grand Innovations, an innovation centre supporting the development of advanced manufacturing enterprises (see Corporate Profile, adjacent page).
CATALYST 137 IS A REALITY. The first companies to occupy the huge, 475,000 square foot facility at 137 Glasgow in Kitchener are moving in in January, 2017. Partners Kurtis McBride (see feature in the Baker’s Dozen section of Exchange) and Frank Voisin expect the “Internet of Things “ innovation centre to be close to fully leased early in the year.

Voisin, President of Voisin Capital, says “There probably isn’t another development anywhere in the history of this Region, that has been this far leased when the building is this early in construction. We’ve got 12 acres under one roof, which leaves a lot of darkness in the middle and that’s sort of the number one concern for potential tenants. As a result we’re putting in a ton of skylights.”

He adds that while “the building, from the road, doesn’t look like much, but we’re re-doing the whole thing, it is a huge transformation.”

The partners first saw the building two years ago, and purchased it in June, 2016, in partnership with Osmington Inc. McBride (whose company, Movision, will move to Catalyst 137 later this year) and Voisin are the “local boots on the ground” for the project.

Adds Voisin, “It’s a hugely complex project with a lot of moving parts. Because it’s such a big site, the city obviously takes that seriously... If you look back retrospectively, I don’t think the city, historically, said, ‘Let’s have a giant manufacturing plant in the middle of mid-town’. But through historical circumstances, this is where we are. And we want to make sure it’s done in a thoughtful way.”
SIX YEARS AFTER THE COMMUNITECH HUB gave
downtown Kitchener a jolt of startup
energy, the COMMUNITECH DATA HUB is set to do the same for uptown
Waterloo.

Soon to open in a former police sta-
tion at Erb and Albert streets, the Communit tech Data Hub will help start-
ups, medium-sized companies and
large enterprises to capitalize on and
collaborate around big data and the
Internet of Things. The 19,000-square-
foot Data Hub will have room for
about 14 data-intensive companies
and 125 people. The facility could also
be designated as a development site
for two provincially funded program
s dealing with connected-car technology
and cyber security and fraud preven-
tion.

KEVIN TUE R is Communit tech Vice
President, Strategic Initiatives, and
leader at the Data Hub. He told
Exchange that the new Communit tech
facility “is a huge opportunity. We’ve
got all the players, we’ve got an impact
study” that demonstrations there is a
definite market for “building a proper
ecosystem around here”.

He added, “We have a number of
assets that we’re setting out to create
or that have been organically created
and are coming to the forefront.”

Communittech, he says, is the ideal
organization to kickstart a facility like
the Data Hub. “To address the opportu-
nity, it all starts with Communit tech,
which been working with companies
and providing value for a period of
time.” He says that Communit tech cus-
tomers have identified their needs, and
are looking to Communit tech for the
solutions. And that’s behind the cre-
ation of Data Hub.

WILFRID LAURIER UNIVERSITY and the city of
Waterloo are partnering to launch
CityStudio, an innovation hub where
students, city staff and community
stakeholders co-create solutions that
support the city’s strategic priorities.

Inspired by CityStudio—Vancouver,
the CityStudio project in Waterloo will
be an innovation hub where students,
city staff and community stakeholders
create new ideas and solutions to
challenges confronting the city. The
one-year pilot program will offer city

staff and students the opportunity to
engage, support and advance the goals
and objectives of the City of Waterloo
Corporate Strategic Plan. CityStudio
will be based in the basement level of
the Carnegie Library. The inaugural
Laurier-led class will begin in January
2017. Faculty and staff from Laurier’s
SCHLEGEL CENTRE FOR ENTREPRENEUR-
SHIP AND SOCIAL INNOVATION will be
closely involved in CityStudio. The
Schlegel Centre provides training,
opportunities, supports and funding to students, staff and faculty in the Laurier community for initiatives that apply entrepreneurial thinking in the social sphere. Laurier was recently named an AshokaU Changemaker Campus, recognizing Laurier as a global leader in social innovation and social entrepreneurship education.

VELOCITY CELEBRATED A SIGNIFICANT EXPANSION in October, after completing extensive renovations in the Tannery building in downtown Kitchener. At 37,000 square feet, the facility offers workspace for up to 120 companies to work, as well as business mentorship, equipment, and a vibrant startup community. In addition to workspace, the facility includes a new science lab, assembly space, workshop, and prototyping lab for companies developing hardware and science innovations.

Velocity has facilitated the growth of 175 companies since the program started in 2008 as a dorm for student entrepreneurs. Its companies have raised $425 million in funding and created more than 1,200 jobs. Velocity is now the largest free startup incubator in the world.

“What is happening here is impor-
important, not just to our community, but also the world,” said Feridun Hamdullahpur, president and vice-chancellor of Waterloo. The project came together through a trio of partnerships, including the City of Kitchener, which provided $500,000 in funding to build the new science lab at the Garage.

ONTARIO IS SUPPORTING INNOVATION in the transportation sector by launching the first automated vehicle (AV) pilot program in Canada, led by The University of Waterloo, the Erwin Hymer Group and BlackBerry QNX.

Automated vehicles are driverless or self-driving vehicles capable of detecting and navigating the surrounding environment, and have the potential to help improve road safety and fuel efficiency, as well as reduce traffic congestion and greenhouse gas emissions. The pilot brings together a range of expertise from the research, manufacturing and technology sectors to advance innovation and capability in Ontario’s AV sector. The participants include:

- The WATCar Project at UW’s Centre for Automotive Research, which will monitor a Lincoln MKZ for performance and test it on-road at different levels of automation.
- The Erwin Hymer Group, an international auto manufacturer, which will test and monitor a Mercedes-Benz Sprinter Van at different levels of automation.
- BlackBerry QNX, which will test a 2017 Lincoln with automated features.

MAPLESOFT PRESIDENT AND CEO JIM COOPER has received an honorary doctorate from the University of Waterloo. Cooper, a UW alumnus, was recognized for his business and engineering leadership and for his contributions as an engineer during his tenure as CEO of industry-leading Maplesoft.

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service on campus – as unlikely as it sounds, the university had many “dead zones”.

Walker says the university had not seen this as an issue – but students, and perhaps more importantly, prospective students, certainly did. Officialdom changed its mind, realizing that “some of the things we wanted to do depended on having access to good solid mobility connections... the tech department became a big player in that.”

Van Koughnett’s project also discovered that there was a problem in communicating with students – they were ignoring emails. Walker recalls, “It was obvious we needed a different way for us to communicate with students, so I set up this committee to get feedback from students. What we needed to do was a portal for students to communicate with us – a customized portal... That led to a pretty sophisticated customizable portal... which is in existence now.”

This project, initiated by Walker and led by Van Koughnett, had an incredible impact on the university.

As an aside, Walker points to Ken Coates, at the time Dean of Arts. Walker says, “Ken has my kind of mind, always looking for the next thing. When Ken was on the committee, the idea of the Stratford Campus came forward; it was going to be a liberal arts campus. [But] Ken was on this project that started with the whole change in students’ technology use; what happened was, the Stratford Campus no longer became a liberal arts, it became digital media. I expect it was the input from the students that confirmed in his mind that was the way to go.”

Walker and his colleagues began to realize how important technology was to UW students, at least partially because of the practical mindset engendered by the university’s world-leading co-op program. He describes it this way: “At Waterloo, technology is to Waterloo Students is like Football is to Western Students. It’s something that they do in their spare time. It’s their recreation.”

Of course, with the help of programs like Velocity, for many it’s also their ticket to a successful start-up business. But that was still to come.

But it came, soon. Van Koughnett became convinced that UW needed to create an environment to support its tech students who have what Walker calls “their career-oriented drive.”

He adds, “If they want to have that killer career, or start their own company, or be innovative, a lot of it surrounds technology.”

Van Koughnett believed on answer might be found in an experiment already going in other university departments, including Political Science, in which residences were being “themed” for the interests of their students – “living, learning communities around the interest of students.” If it were possible for political science, why wouldn’t it work for tech?

As we now know, it would work better in tech! Walker says, “Sean suggested, ‘Why don’t we take the Minota Hagey Residence and make it a place to do that, where students with an idea can go, develop the idea – maybe into a start-up – and we can support them.’

Walker is quick to credit his team members at the time – both Van Koughnett and housing officer Chris Reid: “He said ‘Sure’, [although] he knew what he was up against, that there was going to be push-back.”

And that was how Velocity started, as a residential program to provide a supportive environment for tech innovation.

Says Walker, “We opened it up and we twice as many applications as we had spots for – which was a pleasant surprise.”

Equally good news was that two members of the first group have created start-ups that went on to huge success – Ted Livingston of KIK, and Eric Migicovsky of Pebble Watch. “We were really fortunate.”

Walker believes it is crucially important to create an environment where collaboration can take place, with as few limits as possible. He recalls a tour of Dupont – where he worked in the 1960s – where his manager pointed to a room full of filing cabinets, and said, “These are full of good ideas. I don’t need any more good ideas, I need guys who can make them work.”

He adds, “I always remembered that,” and he believes that the Velocity environment went a long way toward producing “guys who can make them work.”

He also tells a self-deprecating story about not recognizing a good idea. His boss “said that they were experimenting with putting milk in plastic bags. I thought, what a stupid idea that is; who’s going to buy milk in a plastic bag? And, six months later, there is milk in plastic bags. Well, that opened my mind to the fact that just because I don’t see
that I would like it, doesn't mean that there is not a big market.” That kind of non-judgmental attitude is fundamental at Velocity.

The residential program’s success produced its own challenges – the budding entrepreneurs wanted more! “Van Koughnett said, ‘We have a bit of a challenge because these guys want to carry on… We can’t keep them in residence because some of them have graduated.’ He asked, ‘Is it possible we can rent some space downtown? And I said ‘We’ve been paying for this out of residence money… I’ll have to go to the boss.’”

Again, Walker shares the credit. Geoff McBoyle was Acting Provost; Walker approached him with immediate results: “He just said, ‘Tell me what you need and we’ll make it work.’ It was literally a 10-minute meeting.” Walker adds, “There were no other institutions doing this, not in Canada.” And today, as it continues to expand both in size and in impact, Velocity still leads the way, continually building on the foundation laid by Bud Walker and his visionary colleagues.
Bud Walker has never held an official position with Velocity, the University of Waterloo's start-up incubator. Before his retirement in 2015, he was Associate Provost, Students; prior to that, he was director of business operations.

But at the ceremony that marked the expansion of Velocity, late in 2016, Velocity Director Jay Shah credited Walker as the key player in the creation of the place. He said, “Bud Walker instinctively took that risk, saying, ‘Yeah let’s place that bet on the entrepreneurial students and see what happens.’ That was the beginning, that was the seed that was planted. And ever since then, it’s doubled down on the principal of that bet. To keep placing bets on the entrepreneurial students, on alumnae, on the entrepreneurial experience, on vision and of innovation.”

So Exchange asked Bud Walker to talk about his involvement in the creation of Velocity.

His response was simple: “Do you want to know the whole story?”

Yes, we do.

Walker’s roots run deep at UW. He has been involved in housing, food operations, and information systems. His background is in computers and technology. He was already a long-time employee in 1996, when he took over the business operations of UW. In 2011, he became Associate Provost of Students, with responsibilities in most of the areas he already knew, plus health services, counselling and athletics.

He retired in March, 2015.

Walker told Exchange that “through housing and a few other things I was involved in, I was starting to come to the realization that the students were not happy with the technological environment at Waterloo; they expected more of it.”

Today, as Waterloo is a leading light in all things tech, that seems almost unbelievable – but things have changed. Walker says the complaints included “social media, digital media, mobility, cellular use and that kind of thing.”

One of the people reporting to Walker was Sean Van Koughnett – who was to become the director of Velocity, following an initial stint in that role by Jesse Rogers. Recalls Walker, “I said to Sean, ‘I think we’ve got to step up our game in supporting students in the kind of technology they’re interested in.... That was 10 years ago, before Velocity.”

Sean took on the project, involving senior managers from the university. But like a lot of innovation paths, this one was not entirely straightforward. Walker says, “I think most people have kind of forgotten about the project, because we never actually wrapped it up, because we got involved in a number of things that it spawned.”

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