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Solido a tech sector star

By Dave Yanko

Ever heard of Pi O'clock?

Once a month on a Friday afternoon at 3:14 p.m. (wink wink), Solido Design Automation Inc. hosts an open and informal gathering of Saskatoon tech company folks at Innovation Place Research Park. Guests share ideas, learn from each other's successes and failures and enjoy an end-of-the-week chill over a beer and snacks.

Ever heard of Solido Design Automation? If you haven't, you may wish to take a minute to learn about one of the leading lights of Saskatoon's emerging tech sector. Solido creates software products used to make electronic chips. The company typically operates under the radar because it's a privately-owned, business-to-business endeavour with no need for a flashy public profile. But that's changing now that Solido is on a hiring binge.

And the attention that company president and CEO Amit Gupta is seeking in order to land new employees is casting light on a dynamic young company with an impressive list of blue-chip clients.

"Some of the customers that we've announced are Qualcomm—they make chips that are in our iPhones and tablets; Nvidia—they have chips for gaming devices and car displays; and companies like Broadcom and IBM," Gupta said in a telephone interview from India. "Our customers are around the world: California, Texas, Taiwan, Japan, Korea, China, India—that's why I'm here—and Europe."

Solido increased its revenues by 50 to 70 per cent in each of the last five years. Gupta says



Amit Gupta of Solido Design

Photo by: Hogarth Photography

plans to double staff to 100 employees over the next two years have been accelerated in order to reach a goal of 110 employees in one year. The company, which early on received about \$10 million in venture capital funding from the labour-sponsored Golden Opportunities

Fund Inc. and the Business Development Bank of Canada, spent more than a million dollars to upgrade its new 13,000-sq.-ft. office in Innovation Place. The new digs replace an office that's less than half that size.

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N.L. Construction expands while

By Pat Rediger

During the holiday season, there were plenty of reasons for the team at N.L. Construction in Yorkton to celebrate and deck the halls.

Guided by owners Taylor Lang of Yorkton and Dustin Nehring of Springside, the company has come a long way from its humble beginnings in April 2009, when Lang and

Nehring—who had just both attended the Saskatchewan Institute of Applied Science and Technology (now Saskatchewan Polytechnic) and achieved Red Seal Certification in carpentry—decided to work together.

“Like any business, Taylor and Dustin got started from square one; their first job was

constructing a deck,” said Wade Barton, a controller/estimator with N.L. Construction.

“They used their two personal vehicles for work and they did a lot of small jobs in the early days, such as interior renovations, to try and build a name and reputation in the community.”



Diversification has sparked continual growth for Yorkton's N.L. Construction

Photo by: Calvin Fehr Photography

staying true to its values



Today, the company employs 25 people during peak season, with multiple trucks, trailers and lifts. The company boasts a 6,300-square-foot office building and a new 3,360-square-foot interior finishing shop. According to Barton, the key to the company's growth has been never forgetting the values that it began with.

"When N.L. Construction was founded, the primary focus of the owners was to provide customers with premium products and quality service," said Barton.

"Our company was built on strong values and is the reason each of us come to work every day. We pride ourselves on being hardworking, honest and trustworthy. We are loyal to the company, to each other, to our customers and to our community. We are committed to the development of strong relationships with our customers and thrive on a job well done."

Barton noted that one of the challenges in running a construction business in Saskatchewan is finding work throughout the 12 months in the year, especially since some sectors come to a virtual halt during the winter. But the company has faced this

challenge, he noted, and turned it into an advantage by developing different divisions.

"Once we started constructing houses, for example, we realized there was a need for overhead doors. There weren't a lot of companies offering this service, so we created an overhead door division and hired full-time technicians," explained Barton. "Another key for us has been creating an internal design department. When a customer wants to get a house built through us, we can sit down with our drafting and design estimator, Kara Fyck, and she can create a preliminary design and make revisions based on the customer's needs."

"Many of our staff members were born and raised in the Yorkton area."

It's often true that a company is only as strong as the people it employs. Barton noted that the owners of N.L. Construction pride themselves on never having to lay off anyone due to a lack of work. Thanks to the company's diversification, it has been able to keep busy and retain employees. It also focuses on employee growth and development.

"We've definitely had a successful employment model," said Barton. "We've brought in

younger guys willing to go to school. That's something we promote to guys. If they're interested in further schooling, we're not going to keep them here as a labourer. We'll help them get signed up and continue to grow."

N.L. Construction has been recognized for its success as a business. In 2014, the company received the Achievement for Business Excellence (ABEX) Award for Growth and Expansion from the Saskatchewan Chamber of Commerce and the Celebrate Success Award for Young Entrepreneurs from the Yorkton Chamber of Commerce. The company was a finalist for Saskatchewan Chamber of Commerce Service (2015) and Young Entrepreneurs (2016) awards, and received the Celebrate Success Award for Education & Training from the Yorkton Chamber of Commerce in 2016.

Barton said the company is very grateful for the recognition and support from the community, which has greatly contributed to the growth of the business. As such, giving back through community involvement is something that's very important for the company.

"Many of our staff members were born and raised in the Yorkton area," Barton said. "We recognize that our community has done so much to raise each of us and we make it our mission to support local initiatives in return. Not only are we involved as a company, but we are also proud to say that many of our employees are also involved in the community in their personal time."

Helium

By Dave Yanko



Jeff Vogt, CEO of Weil Group Resources, at their helium facility near Mankota, Saskatchewan that opened in August 2016

Photo by: Calvin Fehr Photography

fortunes on the rise

A U.S. government decision to get out of the helium business paired with rising prices for the commodity are bringing increased attention to Saskatchewan's helium resource. And that may bode well for economic growth and diversification in the province, as well as foreign investment.

"There were 59 helium leases in Saskatchewan in 2016, none in 2015 and only three in 2014," says Melinda Yurkowski, Assistant Chief Geologist for the Ministry of the Economy's Saskatchewan Geological Survey.

"So interest here has bumped up tremendously."

Yurkowski says a lease allows a company to produce helium, while a permit allows for exploration only—18 helium permits were issued in 2016 and four in 2015. A lease can cover up to 12.25 sections of land and has a term of 21 years. She says the 59 leases recorded in Saskatchewan last year represent about a half dozen companies that are active in Saskatchewan's helium play. Currently, two companies are producing helium in Saskatchewan: Virginia-based Weil Group Resources opened a US\$10-million helium processing plant in the Mankota area of southwestern Saskatchewan in April 2016, while Canadian Helium Inc. started production north of Swift Current in June 2014.

High-grade helium was selling for about US\$200 per thousand cubic feet in 2015, according to information published by the U.S. Geological Survey (USGS). Helium has more than doubled in price over the last five years and its annual global market is estimated to be US\$6 billion.

The U.S. government began stockpiling helium in the 1960s when the lighter-than-air gas was considered a strategic military resource. But that's no longer the case, and the federal government there now says it intends to sell off the country's remaining reserves by 2021, according to the USGS.

Helium is considered a rare element on Earth in spite of the fact it's the second most abundant gas in the universe after hydrogen, which shares its lighter-than-air quality but, unlike helium, can explode. Uses for helium go well beyond party balloons, and demand for the commodity is growing. One of the primary reasons for its increasing value is its very low boiling point—the lowest of any element. That makes it useful as a liquid cooling agent for superconducting magnets like those used in MRIs. In the U.S., which still has the highest production and reserves of helium in the world, 32 per cent of production is used in cryogenic applications such as MRIs, according to the USGS. It's also used to achieve ultra-clean manufacturing and assembly environments, which makes it an essential component in semiconductor and fibre optics manufacturing.

Energy companies drilling for oil and gas in southwestern Saskatchewan discovered helium in 1952 and continued to log such findings through the 1950s and '60s, says Yurkowski. Helium was produced in the area north of Swift Current from 1963 to 1977, she adds.

Trace amounts of helium are often found in natural gas, but it's also mined as a primary product. Yurkowski says some of the current interest and publicity surrounding Saskatchewan helium arises from a report

she published in September that detailed these early findings. "I looked at the gas analyses from over 1,800 wells in south-western Saskatchewan and tabulated the helium shows in them," she says.

"The purpose of the report was to discuss the geological setting for these shows, to try to understand why we have helium in the province and to predict where we can look further to find more." Helium permits and leases have been issued for land east of the study area as well as within it, she says, "so people are exploring on their own as well as using my report."

"Interest here has bumped up tremendously."

Traditionally, the U.S. has been the largest market for helium; however, Yurkowski says that's changing as the gas becomes a global commodity. "The electronic industry is growing exponentially, particularly in countries such as Japan, China and Korea where these products are being made. This is becoming more than a U.S. product."

There's no question helium development in Saskatchewan is a welcome addition to a provincial economy winded by low commodity prices, she says. But she admits she's a little taken aback by all the attention her report is drawing. She expected it would be published and then it would sit in the stacks with no one paying any attention to it.

"But then the phone started ringing. It's been really exciting."

Xtended Hydraulics & Machine firing on all cylinders

By Pat Rediger

There are a growing number of reality television shows that focus on entrepreneurs assuming control over struggling companies and turning them into new successes. And while Rob Tebb hasn't been on television (other than a profile by the Saskatchewaner), he has demonstrated how to successfully turn around a company in this province.

Tebb had been working for an established machining company in Regina since 1989, spending much of his time employed at the company's hydraulic cylinder factory on McAra Street. Then, the company began shifting its focus more toward other areas, which meant a decrease in employees allocated to hydraulics and a subsequent loss of clients.

"They brought me over to try and re-energize the factory. I was successful in this, but it wasn't fast enough. About four years ago, they told me they were closing that location and would like to move me to Saskatoon," Tebb said.

"I said, 'If you're closing down the shop, then I'm interested in buying the shop and recovering it.' They agreed to let me purchase the business."

With no business background, however,

Tebb needed help before going through with the deal. He received business support from the Clarence Campeau Development Fund, which supports Metis businesses. He received some financial assistance from the fund, but more importantly, they did a great job of providing guidance and pointing him in the right direction. Tebb and his wife/co-owner Katherine approached a variety of banks, mortgaged everything they had, and took over the shop in September 2013.

The new owners rebranded with the name Xtended Hydraulics & Machine: "We thought the name 'extended' suited it well, because hydraulic cylinders extend the life of machines," said Tebb.

Asked why he was willing to take such a huge risk, Tebb said he saw "huge potential" for the business. Over three years later, it's clear that he knew what he was talking about. Xtended Hydraulics & Machine has become a trusted full-service machine shop specializing in hydraulic cylinder repair. The company has expanded from six employees to 14.

"Through my years working in the industry, I knew what made the product better and what you had to do to get those customers back," explained Tebb. "The biggest

thing I did was that I found quality employees. I hired the best guys that I knew in the industry. Our ability to meet delivery dates has also been huge, especially when dealing with potash mines or steel mills. If you come back to the table with service, they come back to you very quickly."

Earlier this year, a major potash company in the province purchased some new equipment, but before putting them into service, the company stripped all the hydraulic cylinders off and sent them to Tebb's company to be rebuilt.

"They told us, 'If we put it into service with the cylinder that comes on the machine, we'll get three months out of it. If we put it into service with yours, we get a year,'" said Tebb. "So that was a pretty big compliment."

Tebb is proud that his company hires talented young Saskatchewan employees, focusing on northern communities, and gives them the opportunity to go through the apprenticeship program. And who better to train them than former Saskatchewan Institute of Applied Science and Technology (SIAST—now Sask Polytechnic) instructor Dick Wilson?



Rob and Katherine Tebb, co-owners of Xtended Hydraulics and Machine

Photo by: Calvin Fehr Photography

"I've known Dick my whole life. He and my dad worked together and Dick was the guy who got me into machining," said Tebb. "After retiring from SIAST, he popped into the shop and said, 'Rob, if you'll hire me, I'd love to come work.' I eagerly said yes. Dick is the youngest guy in Saskatchewan to get his journeyman certificate and he has been a great mentor to our employees."

It has been quite the success story so far for Xtended Hydraulics & Machine and the

next chapter looks even more promising. In the coming year or so, Tebb said the company will be constructing a state-of-the-art manufacturing facility in Saskatchewan.

"We're going to be bringing some equipment in that Saskatchewan hasn't seen before, while making the operation as green as we possibly can," Tebb said.

"Right now, I don't think anybody can touch us for custom built cylinders for

mines and steel mills, but we can't always compete with the larger companies who produce small, standard off-the-shelf cylinders. Our new facility will have a custom side, but we're also going to have an automated side that will allow us to build industry-driven tie rod cylinders that fit the masses."

Solido

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Solido's success earned it a place on the 2016 Deloitte Technology Fast 50 program that recognizes superior growth, innovation and leadership in Canada's tech sector over the past four years. "The software that we make is used to produce the chips in literally billions of units of electronic devices that we buy every year," says Gupta. "The companies that we're selling to wouldn't be buying our software if it wasn't for the innovation that we have in the product." Solido has 15 patents protecting its technologies and the company invests a good deal of money in research and development to continue to create new technologies.

Gupta was born and raised in Saskatoon and holds degrees in electrical engineering and computer science from the University of Saskatchewan (U of S). He co-founded Analog Design Automation Inc. in 1999 and sold it in 2004 to Synopsys Inc., a world leader in semiconductor design software that's

based in California. He then canvased former customers to find out which big challenges they expected to face in years ahead. Smart phones were just entering the marketplace at the time and Gupta's former clients told him they saw a need for a lot more functionality in small devices, and that chips would have to operate on low power in order for cell phone batteries to last all day.

"That was the inspiration for Solido," says Gupta, "and since then the whole market has just grown from smart phones to tablets to, basically, mobile everything."

Solido is seeking to expand its ranks with computer scientists, engineers and mathematicians, and Gupta expects many of his new hires will be recent or experienced graduates from the U of S. Having that talent pool nearby is one of the main reasons that high tech companies like Solido are able to thrive in Saskatoon, he says. "Out of all the

things you need to grow successful technology companies, the first is talent. Tech companies are really talent-based companies." The second element is venture capital funding, and the third is good facilities such as Innovation Place that foster networking and the sharing of ideas.

Gupta says there are about a dozen strong players in Saskatoon's emerging technology sector. And while he suspects most people don't know much about these companies, they provide good jobs with multiplicative benefits and diversification for the city's economy.

"Saskatoon is a great place to build products that are really disruptive and are making a difference in our everyday lives."

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