

# Nortel Networks Series: It will take dozens of successes to make up for Nortel's demise

By James Bagnall, Canwest News Service, November 8, 2009

In the summer of 2001, Pat DiPietro had an epiphany: if he wanted to be part of a growth industry, he'd have to leave Nortel Networks Corp.

A 21-year veteran at the telecommunications-equipment maker, he was one of several managers responsible for a portfolio of products then under development. The team held weekly conference calls with CEO John Roth, who told them the company would only finance R&D projects that produced revenues in the short-term.

DiPietro and his colleagues reluctantly killed a number of very promising products, including the terabit router - a complicated piece of technology that would process Internet traffic at fantastic speeds.

The terabit project employed 425 and was a key part of Nortel's effort to break into the market for Internet gear. Half the team was sacked, the rest found jobs, temporarily, in other parts of Nortel.

"I could see I would be cost-cutting for years," DiPietro said.

So he switched careers. In the fall of 2001, he joined Vengrowth, a venture capital firm that invests in high-tech startups.

DiPietro, 54, now has spent eight years trying to create a network of successful firms using talent from Nortel. He convinced former colleagues to become entrepreneurs at firms such as Liquid Computing, BelAir Networks and BTI Systems.

This makes him a good candidate to ask if there is life for Ottawa's technology sector after Nortel, given the national capital's status as the company's R&D base and single biggest employment centre.

His answer is yes, but with serious caveats. After a punishing period of trying to build world-class firms, DiPietro is concerned the next generation of entrepreneurs has too many strikes against it.

“The ideas for startups are weaker, the teams are less experienced and there's no money to invest,” is his succinct summary. “The next four or five years are going to be very tough.”

DiPietro's assessment is a warning for those who believe history will repeat - that the demise of Nortel Networks will release hundreds of entrepreneurs into the local economy and rejuvenate the industry.

That's what happened nearly 40 years ago when Nortel shut its chipmaking operation, Microsystems International. The threatened closure helped to convince Terence Matthews and Michael Cowpland to quit and launch Mitel - a telephone systems company that achieved \$342 million in annual sales in its first decade with a global workforce of more than 6,000.

Cowpland went on to create Corel, for a time the world leader in certain types of graphic software. Matthews founded Newbridge Networks, a data-networking firm, in 1986. He sold it 14 years later for \$10 billion. The Welsh billionaire now manages a collection of investments in high-tech and other firms through his holding company, Wesley Clover.

The activities of these and other entrepreneurs helped secure a role for the Ottawa-Gatineau as Canada's most technology-intensive region.

At the peak of the telecom boom in September 2000, about 66,000 people were employed in high-tech firms - representing 11.5 per cent of the metro area's employment base.

Toronto, with 7.2 per cent of its workforce in high-tech, was next closest.

By September, 2009, Ottawa-Gatineau's tech employment level had slipped to 52,000 - just 7.7 per cent of total jobs. But that was still the highest in the country, ahead of Toronto, where 5.7 per cent of workers were classified as high-tech.

The question now is whether the base is still big enough to support a rebirth.

The odds seem against it, not least because the makeup of the tech jobs has changed profoundly.

Nine years ago, the industry was driven by firms with headquarters in Canada - Nortel, JDS and Newbridge accounted for more than 40 per cent of the tech workers in the national capital region.

Indeed, Nortel alone employed one in four.

Following the acquisition by foreign firms of several regional champions - including Newbridge, Cognos and JDS - Ottawa-Gatineau's tech sector is dominated by branch plant operations. It's not the best environment for nurturing entrepreneurial talent.

Only one in 12 tech employees now work at Nortel. And in the coming months, these employees will either be laid off or hired by Ericsson, Avaya, Ciena and other foreign firms.

But the most interesting research-and-development - the stuff that matters most to the companies' future - tends to be done closest to headquarters.

The branch operations, in contrast, focus on R&D basics such as upgrading software and tweaking the technology for local markets.

This is why it's so important to have R&D based here. But it also helps to have marketing, finance and corporate operations handled locally as well. Entrepreneurs exposed to all aspects of management have a better chance of creating a successful startup - an experience denied to many Nortel employees.

Through Vengrowth, DiPietro has financed seven startups for which he is directly responsible. After Nortel shut down certain projects, DiPietro invited former colleagues to join his firms. The startups' products were different than the ones under development at Nortel, but the engineers could adapt their technical knowledge very readily.

However, Nortel's business managers tended to work out of offices in Boston or Dallas and had weak personal ties to the Ottawa engineers.

When R&D projects were killed, the U.S. managers left to seek opportunities at tech firms in their own region. This left DiPietro's Ottawa startups with little experience in actually running a business.

DiPietro tried to fill the gap by training engineers to become chief executives. It didn't work. In the past couple of years, he and fellow board members have replaced nearly all the original CEOs.

Only Bernard Herscovitch - the chief executive of BelAir Networks - has stayed the course. And Herscovitch was a manager previously.

DiPietro's experience has been instructive for another reason. His startups were the inspiration of the first wave of Nortel refugees - the ones who left or were let go during the great downsizing of 2000-2003.

That group at least had been involved in state-of-the-art projects such as the terabit router.

But for much of the past decade, Nortel spent most of its R&D budget on keeping older product lines fresh, rather than breaking new ground. Starting in 2006, the company targeted newer technologies but also cut overall spending on R&D. Consequently, Nortel's engineering talent is less exciting to venture investors than it might have been.

There are exceptions, to be sure.

Rob Chaplinsky, managing partner of Bridgescale Partners - a California-based venture firm - says he likes what he sees in Ottawa, which he's been visiting monthly.

``Historically, Nortel's been a better breeding ground for startups than Microsoft," he says. ``A lot of Nortel employees are no longer stuck in a slow- growing behemoth and will become entrepreneurs."

However, Chaplinsky acknowledges there will be a lot of short-term pain.

Indeed, the loss of Nortel as a flagship will hurt in a number of ways.

Even during its long descent into ruin, Nortel attracted visitors from giant carriers such as BT, Verizon and China Mobile. These executives - who

spend billions each year on new gear for their networks - paid calls on other tech firms when they were in the city.

There will still be trips to Ottawa, but far fewer.

Many of Nortel's former executives have opted for careers at former competitors.

Indeed, ex-managers kept running into one another during this year's bankruptcy proceedings, as they advised their new employers about the quality of Nortel's assets.

Stephen Slattery, a former head of Nortel's business telephones division, works for Cisco Systems of California.

Sue Spradley, the former head of Nortel's global operations, is a senior executive with Nokia Siemens Networks.

Gary Kunis, former chief technology officer, has been advising the owner of Avaya.

Stephen Pusey, Nortel's former top sales executive in Europe, is chief technology officer of Vodafone, the U.K.-based mobile services company.

The message to be taken from this is clear: managers used to dealing with multi-billion dollar budgets probably aren't very excited about running smaller firms.

But there's still hope for Canada's high-tech. Waterloo, Ont.-based Research in Motion surpassed Nortel last year in annual revenues and continues to grow at a rapid clip.

In Ottawa, firms influenced by Terry Matthews are showing signs of developing into local champions.

Mitel Networks, the rejuvenated successor to the original Mitel Corp., generated nearly \$850 million in sales in fiscal 2008. Breconridge, a Mitel spinoff, recorded more than \$300 million in revenues.

Several startups financed in part by Matthews are showing exceptional promise. Bridgewater Systems, a wireless software outfit, will top \$60

million this year. DragonWave, a wireless technology firm - run by ex-Nortel manager Peter Allen - is on track to reach \$130 million in sales this year.

“DragonWave is starting to bring talented people back into the Ottawa region,” says DiPietro approvingly.

But it took many years of painstaking development to get to this stage. DragonWave was founded in 2000 during the high-tech boom by ex-Newbridge managers. Peter Allen at the time had left Nortel to run an optical startup, Innovance Networks.

Allen took over as DragonWave's CEO in 2004, by which time he had lots of experience running a startup.

Despite their growing pains, DiPietro's startups are also making solid progress. SiGe last year topped \$120 million in sales. BeAir Networks has consistently ranked No. 1 in its market niche - Wi-Fi wireless mesh technology. Collectively, the group of seven Vengrowth firms racked up sales last year of more than \$300 million US and collectively employ between 700 and 800 people.

Nortel-trained engineers continue to fuel the development of new products.

But much hard work remains. It will require dozens of startups such as SiGe and DragonWave to make up for the loss of Nortel, which employed 6,000 last year in Canada - the vast majority in Ottawa. If the region's entrepreneurs actually deliver on their promise, the result will be a much more diverse and competitive high-tech industry.

However, DiPietro understands, better than anyone, just how difficult the job will be. The overarching lesson of Nortel is that the rest of the tech world won't stop while Ottawa's tech sector sorts itself out. The tech firms maturing now have to succeed. If they don't, there'll be no coming back.

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