

Redknee Solutions Inc.: Planning for success

Mississauga, Ontario

Date established: March 1999

www.redknee.com

MISSISSAUGA, ONTARIO — When music fans in London, England, broke the world record for the most text messages sent during a fundraising promotion for the Live 8 benefit concert in July 2005, they were using wireless technology developed by Redknee, an up-and-coming Canadian software company that was started in 1999 with less than \$500 by four friends from university. Six years later, the company is fast becoming one of the world's leading players in the wireless software industry, with \$32 million in sales, 332 employees and offices in Canada, the United States, Singapore, India, Austria, France, Germany, Ireland, the Netherlands, the Middle East and the United Kingdom. What's even more significant is that Redknee's growth occurred at a time when the high-tech bubble had burst, causing massive layoffs and forcing many telecommunications companies into bankruptcy.

Redknee's success is due to a combination of the personal drive, energy and vision of owner Lucas Skoczowski, and a clear business strategy that has focussed on making Redknee a global leader in software solutions for the wireless market in 10 years. "I figure it takes five years to prepare a company, and five years to really explode it," he said. "We just passed our first five years, so I figure our next four to five years are spent on exploding the organization in terms of getting exponential growth."

Wireless communications industry

Redknee provides telecommunications software solutions and network products for the wireless network market, including messaging, mobility, payment, charging, convergence billing and data call control solutions, and customer relationship management services. Their software allows wireless network operators to provide such services as messaging, multimedia, ring tones and images to their subscribers.

Convergence of the Internet and wireless communication has allowed the transmission of voice, data, video and images over the same networks, creating business opportunities in all sectors of the industry and opening up potential new sources of revenue for operators as their subscribers demand new services. Mobile phones are no longer "just phones" to be used for the transmission of voice. It's estimated there are some two billion cell-phone

users worldwide, with 553 wireless networks in 187 countries. The market for software solutions alone is estimated between \$43 and \$65 billion, excluding network infrastructure and hardware. The industry consists of network operators or carriers that provide wireless services to their subscribers, infrastructure and equipment manufacturers, and software developers, content providers and system integrators.

Planning for success

When Redknee was started in 1999 by Lucas and his four co-founders, they were looking for wireless opportunities at the peak of the high-tech boom. “We had a solid background in mobile networks. We understood the network architecture side of things and we saw the areas not being picked up,” said co-founder Duncan Ratcliffe, former President and Chief Executive Officer (CEO) of Redknee and now a member of the company’s Board of Directors.

For Lucas, the decision to start a company was made long before 1999. “The decision was made eight or ten years before that, back when I was still in high school,” he said. “I had to decide whether to work in the corporate world, or try and create a company.” Originally from Poland, Lucas immigrated to Canada in 1987 when he was just 14 years old. He came with his older brother and they wanted to make a new life for themselves. In a 1993 interview with *The Ottawa Citizen*, he said that his dream was to become a high-tech wizard and create “something great, something that will change the world.”

He said he was fortunate to be introduced to the concept of entrepreneurship early on by one of his high-school teachers. “He taught a course in auto mechanics, but he also ran his own business,” said Lucas. In fact, he had two businesses — an auto wrecking shop and a small airplane company. “He was a bush pilot, and he had three planes that would fly people into northern Ontario. He would discuss how he’d set up his business, and why he set it up. One of the things he said that was very important to me is that he was doing what he enjoyed as a hobby. He liked flying and exploring northern Ontario, so he set up a business that allowed him to do that.”

Inspired by the teacher’s stories and enthusiasm, Lucas enrolled in an introductory business course that was being piloted at his high school that year. Students studied successful entrepreneurs such as Michael Cowpland, founder of software company Corel, and real estate magnate Robert Campeau. “It was interesting to see how people started with very little, created companies, and created quite enormous value and impact in their own communities, and beyond,” said Lucas. One of the requirements of the course was to

write a business plan and to “think through, at least on paper, how such a venture might work.”

Lucas mapped out plans for two businesses — one in computer training and one in custom software development — and set out to put his business plans to work. “I wanted to learn what I didn’t know,” he said. “That was the key aspect. From then on I thought this is really cool.” He received funding from a government-sponsored youth entrepreneurship program that offered repayable loans to students interested in starting their own businesses. “You had to submit a viable business plan and then execute it,” said Lucas. “It was a loan, so you had to pay back the money at the end of the summer.” Despite a rocky start — only three people attended his first training session — he managed to make enough money to pay off the loan and go back to school. By the end of the summer, there were 12 people enrolled in his training course.

The experience exposed him to new ideas and a whole new world, one that he was fascinated by. “I became aware that there was a choice beyond the corporate world,” he said. “That there was more than one way to create something. It allowed me to test the water, to see that something is feasible, within my reach. It taught me that I was responsible for the outcome. I was in charge of the destiny of that business.”

But Lucas also realized that going from high school directly into business was not a good idea. “I needed to learn more,” he said, “and to meet more people that I could work with in the future.” From high school, Lucas went to the University of Waterloo in Ontario, graduating in 1995 with a degree in electrical engineering. He attended the electrical engineering honours co-op program, which included a work term designing computer software for Bell Northern Research, the research and development (R&D) arm of Nortel Networks. While at the University of Waterloo, he met many of the people who would later become instrumental to Redknee’s success, including three of the company’s co-founders.

After university, Lucas went to work for Nortel Networks as part of what he referred to as his “applied MBA” in learning how to run a company. “I call it an institution in Canada because anybody who has been involved in telecom probably has been touched in one way or another by Nortel,” he said. His earlier stint as a co-op student had introduced him to some key contacts at Nortel who helped guide his career, among them Jeff Popoff, now Redknee’s Vice-President of Marketing, and Duncan Ratcliffe, who served as Redknee’s first CEO.

While Lucas was still in university, Jeff had arranged for him to do a co-op session at Nortel's office in London, England, which was quite unusual at the time. "You see people with ambition and the willingness to step up and succeed or fail on their merits, and it's very hard to say no to that," said Jeff. "If somebody wants to take the chance, and take the responsibility, my theory is you get out of the way and let them do it."

After university, Lucas joined Nortel full-time and worked in a variety of locations across different technologies and different departments — research and development, testing, quality assurance, product-line management and several account teams. "It was an excellent experience because it allowed me to see a lot of different things. I learned a great deal about a world I was fascinated by, but hadn't had any exposure to until then," he said. "Most important, I met tons of very smart people." As it happened, it was important because he later hired many of those people to work with him at Redknee. In fact, he has capitalized on the connections he made at both Nortel and the University of Waterloo to help shape Redknee's development. When Nortel laid off about 60 000 workers worldwide during the high-tech crash in 2000, Redknee scooped up more than 100 of them over the next three years. Today, about 30 percent of the company's staff worldwide once worked for Nortel and 60 percent are graduates from the University of Waterloo.

After gaining broad experience in the telecommunications field, he turned his attention to filling in the gaps. "I wanted to work in finance to get exposure to the non-technology aspects of the business," he said. There was one problem: once companies learned of his engineering background, they wanted him to work in R&D or in their sales and engineering group, which made it difficult to get any financial experience. The valuable connections he'd made through his mentor network helped land him a job working in the accounting department at Weston Bakeries in Calgary. "I learned a lot," he said. "You don't make a lot of money on bread, you only make a few cents on each loaf and that adds up to a \$100 million business at the end of the year."

In addition to financial management, he picked up other concepts that were transferable from the retail food sector to the telecommunications industry. For example, shelf life: "How long can your product stay on the shelf before it expires? Every service, every concept has a shelf life," he said.

Once he learned as much as he could about accounting, Lucas returned to the telecommunications industry to work in marketing at Clearnet Communications. At the time, Clearnet was one of Canada's largest wireless network operators, and Lucas was interested in working for what he saw would eventually be a potential customer. He also

wanted to gain a practical understanding of the sales and marketing side of the industry. While at Clearnet, he realized that if he was serious about building a successful telecommunications company it was important for him to work in the United States. He spent a year and a half in Nortel's Texas division before returning to Canada. "I learned that if I put my mind to it, I can be quite successful, both globally as well as in the U.S.," he said.

He returned to Canada at the beginning of 1999. The wireless communications industry was just beginning to take off, and it seemed like the right time to start Redknee. "It wasn't about a single idea," he said. "It was about an opportunity that was emerging as the mobile networks were becoming more pervasive." The large network operators and equipment manufacturers, such as Bell Mobility and Nortel, were concentrating on developing the "access technologies," such as expanding the physical infrastructure and network coverage, boosting signal strength, and increasing transmission speed and capacity. In the initial rush to build network capabilities and expand the subscriber base, the needs of the end-user or subscriber were being neglected.

As the networks built up and the industry matured, Lucas believed that the subscriber experience would become increasingly important. "There was an interesting opportunity emerging," he said. "How subscribers are being served, how to improve the service, how to create more value, how to offer new capabilities for subscribers." He foresaw that network operators would soon be looking for ways to meet subscribers' needs.

Building a strong team

Lucas knew that he would need a strong, dynamic team to help him create a company that could compete both nationally as well as globally. He turned to the networks and valuable connections he had developed at university and in the telecommunications industry, knowing from experience that the people he chose had the smarts and commitment he was looking for: Dan McDonald, who went from the University of Waterloo to Disney Interactive and now heads up Redknee's Advanced Technology Group; Vishal Kothari, who worked with Bell Mobility after university and is now Redknee's Vice-President of Business Development — Channel and Partnerships; and Rubens Rahim, who spent a couple of years at Microsoft and Clearnet and is now Vice-President of Product-Line Management for Redknee.

His first sales job, he said, was to convince them to leave their well-paying jobs and take a risk on starting a new company with no assets. They were all in their early 20s, had only been out of university for three or four years, and the prospect of building something

from the ground up was exciting. They were in, and Redknee was born. For the first six months, they worked out of Lucas' home — four guys and a couple of computers — until they landed their first contract and could afford an office.

From the beginning, Lucas had a clear vision for the company's future. Just as he had carefully planned every move in his personal career strategy — from deciding which university to attend to working in the financial department at Weston Bakeries — so too did he plan the company's corporate direction. Each situation was analyzed and decisions were made strategically, right down to the decision to bring in a fifth and more seasoned member to the team of co-founders at the beginning of the company's second year. It was during the peak of the high-tech implosion, when young dot-com companies were self-destructing everywhere. "I didn't want to be one of them," said Lucas. He also worried that the negative perception of yet another up-and-coming high-tech company (Redknee) headed up by yet another group of young 20-somethings might damage the company's reputation.

"I'm an engineer by training, so I like to divide and conquer problems," said Lucas. He decided to bring in Duncan Ratcliffe, a former mentor at Nortel Networks, to serve as President and CEO. Duncan, who had been one of Lucas' co-op supervisors in England, was older and more experienced than the Redknee team; Lucas knew that he would bring stability to the company and lend credibility to its "public face."

"I offered him three times what I paid myself just to bring him over from Nortel," said Lucas. Duncan served as President and CEO from 2000 to 2003. He helped the company through its formative years before handing the reins back to Lucas, who had been serving as the company's Chief Operating Officer during that time. Duncan continues to be actively involved with Redknee as a member of the company's Board of Directors.

Product development and marketing

Redknee is in the business of providing software solutions for the wireless communications industry. "We're in a problem-solving industry, which is really quite exciting," said Lucas. "You need passion, vision and commitment to make things happen." Once he had identified the business opportunity and established a strong team with the expertise to capitalize on that opportunity, the next step was to develop a product. They had two options. "One was to put on the white lab coats, invent a new product and then see if anybody would buy it," said Lucas. "But I'm impatient by nature, so I did it the other way around."

Redknee was not starting from scratch. They had already identified an area that wasn't being addressed. "I knew, based on previous experience, that the area of monetization — the charging of new services such as messaging and prepaid phones — was going to become a major issue with network operators," said Lucas. "That was the first product we pitched."

Lucas believed that if they narrowed their focus even more, they would have a better chance of giving customers what they wanted. Otherwise, they ran the risk of spending time and resources on developing a full-scale solution to the problem when the customer was only interested in one part of that solution. He decided to find out what customers actually wanted by talking to them directly.

"I'm a strong believer in the discussion," said Lucas. "You have to bring something to the customer, to the table. And what we were bringing was software expertise, and also domain expertise, so customers actually felt engaged as a result." The first customer he approached was Bell Mobility, Canada's largest wireless operator at the time. A snag in the company's billing system had caused it to lose \$10 million in revenue due to the inability of the system to handle the rapid growth in prepaid calls. The problem gave Lucas just the opening he needed.

Before he could pitch the product, he had to get someone at Bell Mobility to listen to him. "They kicked me out several times," he said, but he was persistent. "I don't understand the word 'no' and I knew that if I spoke with the person who actually had to deal with the issue, I could convince them that we could fix the problem." He eventually persuaded Bell Mobility to give Redknee a try. There was just one hitch: Redknee was too small to qualify as one of Bell's vendors. "At that point, we were supposed to give up and walk away," said Lucas. "They said they only buy from big companies, so I asked them who they'd like to buy from." As it turned out, one of Bell's largest suppliers was Nortel, so Lucas approached Nortel and offered them a deal to sell Redknee's product in return for a percentage of the sales price. It was a win-win situation: Bell Mobility got the product they needed to solve their problem, Nortel looked good in front of its customer and Redknee got its first contract.

They finalized the contract at the beginning of July and delivered their first product to Bell less than three months later. "I remember one engineer at Bell Mobility used to laugh at me," said Lucas. "Because I would make presentations with the management team during the day, and then I would change into jeans and work at night in their lab to actually develop the product. They thought that was funny, but I didn't have a choice. You have to do what's required to actually get the job done."

Redknee used that first product as the building block in the design and development of its core product line, gradually adding new components and features as required. “We added one new or significant main product line per year over the last five years, which grew our product portfolio quite significantly,” said Lucas. “It did not happen ad hoc. What set us apart from our competitors is that the speed in which we’ve done it was determined by the opportunities presented by our customers and the markets” — opportunities that Lucas and Redknee were well-positioned to capitalize on.

Financing

“Redknee has been profitable from the very beginning,” said Lucas. “I’m a firm believer that, if you’re in business, you have to be profitable in order to meet the obligations to your customers, the obligations to your employees and to your shareholders,” he said. When Lucas first started the company in March 1999, he had just finished paying off his university bills. “I was broke,” he said. But he did have a \$15 000 line of credit and a credit card that he used to finance the company until they received their first cheque from Bell Mobility. There was no venture capital, no outside investment, no bank loan. By September, he had run up \$40 000 in debt just to keep the company going.

“I figured I would be the last one to get paid, as I needed to pay people and cover expenses,” said Lucas.

From day one, the company had a well-developed business plan. However, rather than spend time raising investment money, the founders felt that their energies would be put to better use demonstrating that their proposition was viable. “I can go and convince people to give us money, but that would take three to six months,” said Lucas. “I felt that it would be more prudent to bring on one or two customers during that time, which would give us a more powerful demonstration of the validity of our business proposition.”

After the first six months, they had three contracts and healthy cash projections for the next 12 months. Once again, they determined that they had sufficient cash and that they could continue to build their company without external investment. That went on for the first three years, said Lucas. “Every time we looked at the financials, we had sufficient cash and felt that the process of proving ourselves to investors would not create as much value as bringing in new business.” Later, they took out a government-backed repayable loan through the federal Small Business Loans program, not because they needed it but because “we felt it was important to start developing a track record,” said Lucas. The money was used as a safety net to bolster cash flow.

Bell Mobility's first payment came through in the fall of 1999, which helped Redknee to hire its first employee and buy some desks. "But you still had to bring your own chairs," jokes Lucas. In October, they had moved out of Lucas' home and into an office, although much of their work was done on-site. "We told customers it was good for us to be on-site to provide them with an immediate response, but it was actually because we needed somewhere to sit down and power up our computers."

Redknee's first employee was Joel Hughes, a former colleague from Nortel. The four co-founders were working around the clock and couldn't keep up with the orders. "By the time we hit our third order, we couldn't deliver anything any more," said Lucas. "I convinced him, from a lifestyle perspective, that it would be an interesting ride." But Joel preferred to come on board as an employee rather than a co-founder. "All of a sudden you need an office. And if you have an office, you need phone lines. You need furniture. And that fifth guy, you actually need to pay him. So hiring that single person was a huge, huge decision," said Lucas. "It seems silly now, but I was agonizing over it so badly that I still have the psychological scars."

Lucas said that hiring the first 25 to 40 people was the hardest because the company was still relatively new and unproven, and he had to convince people that Redknee was a credible organization. In the beginning, the company concentrated on hiring the technical expertise they needed to fulfill contracts. By the third year, they began hiring managers. "We always had a structure," said Lucas. The company was organized around three key areas — R&D, sales and customer fulfillment.

As Redknee grew, the area of customer fulfillment was broken into two — product development and support. Job descriptions were fairly broad — everyone did whatever was required to get the job done. In 2005, Redknee hired its first Chief Human Resources Officer to manage the company's worldwide team of employees.

Redknee's employees no longer need to search for space to plug in their computers. The company's Canadian headquarters occupies four floors of a five-storey office building in Mississauga, Ontario. It recently expanded its facilities to include a state-of-the-art R&D lab for testing new products and solutions before releasing them.

International market development

After the initial contract with Bell, Redknee continued to work with the company on developing additional product components. Meanwhile, Lucas turned his attention to Europe and the international market, which was much larger and offered more

opportunities than the North American market. “Europe is at least a year or two ahead of North America in wireless development,” he said. “They have a much larger penetration, more sophisticated services and they have a much higher subscriber base.”

Within nine months of starting Redknee, Lucas was on a plane to Ireland where he landed his first international contract. “A lot of the things I was talking about were resonating with them in terms of relevance and value. They were keen to listen, keen to provide blunt feedback and we were able to negotiate a contract with them fairly easily.” Lucas had targeted the European market because, like Canada, many of the countries were based in British law and English was spoken fluently, thus reducing some of the risks associated with doing business overseas.

Lucas has developed the international market the same way that he approached the Canadian market, strategically building on a network of existing customers and specifically targeting the world’s largest network operators. Redknee’s initial deal with the customer in Ireland, O2, expanded to include contracts with O2’s sister companies in Germany and later the United Kingdom. They are still Redknee’s customers today, representing 20.7 million subscribers. Redknee now has 26 customers, with more than 187 million subscribers across Europe, North America, the Asia-Pacific region and the Caribbean.

In 2004, Redknee opened a new office in Pune, India, to take advantage of India’s expertise in wireless technology. Unlike the company’s other international locations, the Pune office is Redknee’s only R&D facility outside of Canada and the third largest direct Canadian employer in India. “That’s significant,” said Jeff. “A lot of people outsource to India. Redknee’s approach is to hire directly. We actually have our own lab, and they’re all Redknee employees.”

Pune is located on the western side of India, about 110 kilometres southeast of Mumbai, formerly Bombay. Home to a large university, it offered Redknee ready access to a pool of trained engineers and software developers to help develop and provide support to the burgeoning wireless market in Asia, one of the company’s target markets. “You can outsource non-core competencies, but you cannot outsource problem-solving for your business,” said Lucas. “The core of what we do is solve problems and we package those solutions in software.”

Establishing a physical presence in India also demonstrated Redknee’s long-term commitment to the market. Lucas pointed out that, although outsourcing was potentially easier, it couldn’t compare with the benefits of having your own, locally-staffed office.

“We wanted to have the same culture,” said Lucas. “We wanted one global organization that thinks, behaves and has the same value sets.”

Redknee’s expansion into India was strengthened in part by the company’s diverse workforce. More than 30 percent of its Toronto engineers are Indo-Canadian, which helped ease cross-cultural differences, and facilitated the company’s move. They started by sending three managers from Canada to set up the Pune office. They’ve since hired a local manager, and the office has grown to more than 100 people.

Redknee’s goal for the next five years is to become one of the world’s top three software companies in the wireless industry. “Today, if you ask me how big should we get, in my opinion we have to get much bigger. Over the next five years, it is imperative for us to increase more than tenfold,” said Lucas. “Ten times the growth over the next five years is a lot. And it’s more than that. For me, it’s how do we train this company over the next five years to be able to become a billion-dollar company?”

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