

GROWING FROM A MONOPOLY SITUATION: CASE STUDY OF MED-ENG SYSTEMS INC.¹

By Prescott C. Ensign
Telfer School of Management
University of Ottawa
ensign@telfer.uOttawa.ca

Nicholas P. Robinson
Faculty of Law
McGill University

Abstract: This paper presents a case of a fast growing SME in the area of *bomb suits and protective gear*. The entrepreneur has taken the risk not only in product and market in an environment characterized by a high level of uncertainty, but also by testing on himself his product with live bombs. The repercussions of this confidence in one's products proved very beneficial in the marketplace. Although the company is now internationally successful in many ways, the entrepreneur is still wondering where to go from now on with respect to product lines, markets, and funding in an area that requires secrecy and discretion.

Résumé: Cet article présente le cas d'une PME à croissance rapide dans le secteur des vêtements de protection contre les explosifs. L'entrepreneur a pris le risque non seulement sur le produit et le marché dans un environnement caractérisé par un niveau élevé d'incertitude, mais également en testant son produit sur lui-même avec de vraies bombes. Les retombées de cette confiance en son produit se sont avérées très bénéfiques sur le marché. Bien que la firme soit maintenant internationalement un succès à plusieurs égards, l'entrepreneur se demande encore où aller en ce qui concerne la ligne des produits, les marchés, et le financement dans un secteur qui exige le secret et la discrétion.

INTRODUCTION

THIS CASE STUDY PROVIDES A GLIMPSE into Med-Eng Systems and the man behind (and sometimes wearing) the company's flagship products—primarily bomb suits and protective gear. Med-Eng was an Ottawa, Ontario based firm incorporated in 1981 to manufacture a newly designed explosive disposal helmet. The firm began international activities in 1982. By the end of 2006, the firm had 50 employees and over \$50 million in sales, the bulk of which was outside of Canada. At the time of the authors' 2006 interviews with co-founder and CEO, Richard L'Abbé, Med-Eng was a privately held company, so many details were not revealed. As a firm in a 'sensitive' industry, much information was carefully guarded.

Med-Eng had progressed through various stages of new business growth and development. There were mistakes made (e.g., in acquisitions and personnel) and some opportunities that were pounced upon had proved lucrative. The venture had experienced strong, consistent growth. One round of investors had been bought out by another round of investors. Investors expecting high returns on their investments exerted considerable pressure. Meanwhile, Richard L'Abbé was adamant that the company would remain private.

With market share near 100% for its original product line (bomb disposal suits and helmets), increasing market share was unlikely. However, new markets were a possibility. There was also the possibility of offering additional services (e.g., upgrades, training, maintenance, etc.) for existing customers.

But some deep questions remained: with regard to market share, could they go for more? After all, Med-Eng was already the market leader. If there were no competitors and they had captured the entire market, what threats and motives existed to keep the firm hungry or at least realistic? Did all product lines make sense? Should any be scaled back or expanded? What should Richard L'Abbé's priorities be? Was there an opportunity for new product lines? What about an IPO?

While most of Med-Eng's products are for protection (defence), debate was sparked around the dilemma of participating in warfare. Bomb disposal equipment is different from the Cupola Protective Ensemble (CPE) and Integrated Dismounted Armour System. These latter two items (new and profitable additions to the Med-Eng product line) were for active warfare to gain an advantage over an enemy where the wearer may have a greater chance to kill. Med-Eng had to face the resulting social and political issues that invariably arose.

Investors expecting high returns on their investments exerted considerable pressure.

1 An earlier version of this case study was presented at the Administrative Sciences Association of Canada conference in Banff, Alberta. This case was made possible through funding from the Social Sciences and Humanities Research Council of Canada

A WORLD OF TERROR

On July 11, 2006 a series of seven explosions within 11 minutes tore through commuter trains in Mumbai, India. The death toll reached 200 with hundreds more injured—four suspects were eventually apprehended. Were these bombings a precursor to the coming G8 summit? Was this ‘7/11’ event tied into others? Richard L’Abbé, President and CEO of Med-Eng Systems, watched the newsfeeds on CNN, while eating his breakfast and wondered if his company’s products could have been deployed to prevent these deaths. But dealing with bombs required foresight and identification of threats.

9/11, Bali, Madrid, 7/7 London, Istanbul, Riyadh, and numerous other bombings by fundamentalist organizations increasingly against Westerners caught the attention of the media and changed the mood of the world. After “September 11” police forces and militaries felt an heightened need to deal with the threat of explosive ordnances. The human tragedy of violent incidents was remarkable and provided impetus for governments throughout the world to take measures necessary to discourage or prevent future occurrences.

PROVEN PROTECTION FOR A DANGEROUS WORLD²

Many firms were actively attempting to address the need for better security and had developed products aimed at protecting police and civilians from the growing threat of global terrorism. One such enterprise was Med-Eng Systems Inc. based in Ottawa, Ontario, a leader in the research, design, and manufacture of a plethora of personal protective systems aimed at helping police forces and militaries confront explosive ordnances in a way that ensured the safety of their personnel. This meant selling products, such as bomb disposal suits, that employed ‘advanced engineering solutions’ to protect people and infrastructure from hazardous threats.

For this privately-held venture, the key to developing cutting-edge products and staying on top was to “do the right things right every time, through the collaboration of its clients, vendors, and employees.”³ This stakeholder-driven approach to product development and marketing led Med-Eng to be on the receiving end of numerous awards, both for the company’s competitive strength and international posture. Superior technologies had also led to superior profit margins. Although at inception in 1981 the

firm manufactured protective helmets solely, Med-Eng went on to garner over 95% of the bomb disposal suit market worldwide—a market that the firm was forced to enter in 1991 after Med-Eng fought off a takeover attempt from a US-based competitor. At the time, Med-Eng’s only product was a protective helmet that went with another manufacturer’s bomb suit.

“In an effort to weaken Med-Eng’s bargaining position, the US firm bought the suit maker, then cut off supply. They bought the company thinking they could put us out of business,” says Med-Eng’s co-founder, Vince Crupi. “We either had to get in bed with them, or come up with our own suit.”

Med-Eng chose the high road. Crupi and president Richard L’Abbé took the resulting prototype – a less cumbersome, more protective suit and helmet combination with two-way radio technology – on a three-month tour to clients in 45 countries. “We asked them what they thought of it, what needed to be done and asked them for input,” explains Crupi. Involving potential clients in the design process helped Med-Eng develop a superior suit and created immediate buy-in among their “consultants,” most of whom placed orders. Moreover, Crupi explains, the integrated suit gave Med-Eng new sales leverage: “It made us much more competitive. I don’t think we would have survived without the whole package.”⁴

Med-Eng emerged victorious, stealing away the acquiring firm’s market and wiping out their bomb disposal business. This type of gusto was a trademark of the Med-Eng culture, where management believed in the product so much that they actually tested their suits with live bombs. Richard L’Abbé was surely the only CEO in the world to “blow himself up” for his company and 260 employees. L’Abbé had tested his product 19 times with the use of explosives such as C4 and dynamite—often enough to destroy a car.⁵ His tests and the faith he displayed changed public opinion that bomb suits were “little more than just body bags.”⁶

Even after giving up on testing Med-Eng suits himself—after a noteworthy call from his life insurance agent—L’Abbé’s attitude toward the company and its products was

2 This phrase was a trademark of Med-Eng Systems Inc.

3 <<http://www.med-eng.com/>>

4 Bruce Livesay, “Great moments in marketing.” Profit Magazine. May 1998.

5 Ottawa Business Journal. October 20, 2003.

6 Ottawa Business Journal. October 20, 2003.

steadfast. What had changed, however, was the security environment internationally. Terrorism and escalating conflict in many parts of the world led Med-Eng equipment to markets in over 140 countries worldwide.

BACKGROUND

Richard L'Abbé graduated from the University of Ottawa with a degree in mechanical engineering in 1979. He went to work briefly at Biokinetics (<http://www.biokinetics.com>), with which Med-Eng still maintains a relationship for product testing. The Ottawa Business Journal (CEO Profile, October 20, 2003) recounts that in 1980:

He was busy studying the mechanics of bodily injury when the company received a contract from the Royal Canadian Mounted Police to design a bomb-disposal helmet. When the president of the company approached L'Abbé to ask for some fresh ideas, L'Abbé sat down for three hours and drew a basic blueprint of what he thought the prototype should look like. After seeing the drawing, his boss replied, "That's pretty cool, why don't you build it?"

In 1982 Med-Eng sold one helmet to the German Federal Police for \$4,000. In 1983, L'Abbé secured their first major sale to "a seemingly rude and arrogant gathering of potential clients in France"—six suit and helmet combos for \$66,000.⁷ From that point on, things looked up in subsequent years (Exhibit 1). The First Gulf War led to "spectacular" sales in 1991. L'Abbé remarked:

We were a one-product company for the first 10 years of our existence and we've now diversified into new fields ... the company is very different. Each year the company devotes a full four days to strategic planning to evaluate their current strategic direction, assess what's working and what's not working, discuss what's looming on the horizon and make decisions about whether to shift direction or stay the course.⁸

L'Abbé credits an executive seminar he attended where Clayton Christensen spoke as the impetus for Med-Eng's disciplined progress. A few follow-up phone calls with the Harvard Business School professor, eminent for his insights into innovation and disruptive technology, furthered L'Abbé's resolve toward strategic planning and an entrepreneurial search for growth.

PRODUCTS

Med-Eng Systems did not just produce equipment for the war on terrorism. Med-Eng produced a variety of inter-related wares that were used for other purposes; however, most purchases were for police forces and defence organizations.⁹ The firm produced most of its 'gear' with a mix of sourced and in-house components and tried to integrate the ideas and concerns of stakeholders into the process. Med-Eng was reputed for its top-notch research activities (often conducted with the input of customers, suppliers, and users of its equipment). Products sold by Med-Eng were subdivided into six main areas of application:

- (1) Bomb suits and helmets. This product line represented the firm's core competency and the firm had over 95% of global market share in this area. From the period 2002 to 2005, this segment moved from 80% of Med-Eng's overall sales revenue to 20%, as the firm grew exponentially. While sales for this segment had remained steady, efforts to diversify were proving fruitful.
- (2) Remote handling devices. Known as 'hook and line kits,' remote handling equipment was used to move explosive devices.
- (3) Demining protective wear. Visors, helmets, hand protection, and footwear – including the company's



⁷ Catherine Morrison "Protective dress spells success for Med-Eng" Summit Magazine. November 1998.

⁸ Queen's School of Business "Managing for Growth Report" Kingston, Ontario. 2003.

⁹ Med-Eng products could be ordered by a government body for official use; no products were available to the public. This was in contrast to companies that 'cashed in' on the public's fear to sell bullet-proof vests, stab-proof clothing, and armour plating for residences and vehicles.

ENTREPRENEURIAL SEARCH:

trademark Spider Boot – were all part of its line of demining protective wear. With millions of anti-personnel landmines still buried and thousands falling victim each year to landmines left from past wars, Med-Eng made it a priority to manufacture suits to safeguard those individuals in the field responsible for removing landmines (deminers). This line of business arose from a \$2 million injection of venture capital in 1997, the year of Princess Diana's treaty to ban landmines.

- (4) Force protection outfits. Used to equip soldiers facing the threat of being hit by blast, fragmentation, flame, ballistics, and electronic (radio wave) weaponry, these suits were engineered to provide military personnel the best possible protection when faced with serious threat. This segment was pursued as it showed great promise in fulfilling US military need.
- (5) Crowd management solutions. This line included gear for prison riots and public demonstrations where items such as Molotov cocktails, stones, and glass bottles posed a threat to the safety of a security force. Gloves, shinguards, helmets, and suits were tailored to this purpose. The outfits came in a variety of configurations and colours—depending on application. They could be worn 'armour out' to look tough or could be covered by loose clothing to look less intimidating.
- (6) Personal climate systems. Cooling vests, specialized garments, and chillers were designed and built for use in high temperatures, but recent battlefield reviews from Iraq and Afghanistan were mixed.

THE POLITICS OF BOMBS

Prior to September 11, 2001, Med-Eng took a variety of steps to diversify its business outside of conventional bomb suits and into other areas that might provide a more stable flow of revenues. Orders for bomb suits often fluctuated greatly and were sporadic in nature, so the company chose to look at areas of expansion that could smooth revenues while remaining within the firm's core competencies.

After a healthy influx of cash from US policing groups concerned with the possibility of a major bombing at the Salt Lake City Olympics in 2002, the firm invested in the development of body cooling systems to be used in conjunction with bomb suits and riot gear, in the hopes of securing a source of stable revenue. Furthermore, the company firmly believed that it could sell the cooling gear to industry at large¹⁰ – thereby further diversifying the firm's target market.

Until this point, Med-Eng's primary customer base consisted of government organizations such as police forces and armies. The opportunity to sell outside of these groups, Med-Eng thought, would help the company weather future political storms and stabilize otherwise unpredictable cash flows. According to L'Abbé, large fluctuations in cash flow had pushed Med-Eng to adopt a policy whereby the company had "enough staff to supply a spike in demand, but not enough to satisfy that level of demand continually." Selling other products to new markets year-round, he expected, would ease the stress arising from revenue swings that often "doubled or halved the firm's output for a particular product over the course of a year."

Surprisingly, the company's choice to enter the riot gear market in 2001, when it acquired a manufacturer by the name of Rovex V-Top, was a failure. Despite having received numerous orders prior to the 2001 Summit of the Americas in Québec City from Canadian police forces of all ranks, and receiving even more orders for gear in preparation for the Battle of Seattle (World Trade Organization meeting riots) in 2000, the firm's sales in riot gear very quickly dried up for a number of reasons. First, only months after the conclusion of the meetings in Québec City, the events of September 11, 2001 sent the world into a state of panic. Though one might assume that this new political mood of fear and terror would spur on sales of equipment such as riot gear—the exact opposite occurred.

After 9/11, public protests experienced a sharp decline as people chose not to involve themselves for two reasons. First, large public gatherings on US soil were seen as potential targets for terrorists seeking to take the lives of Americans and second, protesting was regarded as 'un-American' or 'anti-American.' Dissenters defying government order were thought to weaken the stance of the US and destroy the solidarity needed to confront the threat posed by extremism. Altogether this meant fewer protests and far fewer orders of riot gear by police forces in the US (the biggest consumer of the product) and throughout the world.

COMPETITION AND NEW ENTRANTS

In addition to the public mood shift leading to lower sales, the number of companies offering riot-type protective gear exploded, with many firms offering suits of varying degrees of quality throughout the world. Given the comparably low degree of technological complexity involved in manufacturing and building riot gear, firms from South America, China and other regions of Asia, and Eastern

10 There was evidence that corporations—particularly outside North America—were interested in guarding the health and safety of employees routinely exposed to substantial heat.

Europe all competed in the market.¹¹ Whereas the development of a bomb suit required a notable amount of R&D investment and advanced materials engineering,¹² in contrast, designing and building a riot suit was an attainable task for a company without the same degree of technological sophistication as Med-Eng.

Med-Eng's problems were further compounded as competitors chose to copy the company's superior product design. This was a sizable issue in countries where local authorities wanted to buy suits from local companies, and also had little respect for the concept of intellectual property. As a result, Med-Eng's designs were reproduced and sold throughout the globe—illegally, under different brand names. Roughly seven or eight clones of Med-Eng's product emerged on the world market and the firm twice successfully challenged and won injunctions against companies that stole Med-Eng's product design.

The firm held the Czechoslovakian government at ransom when they decided to order product from a local Czech company that had replicated Med-Eng suits; the government was then forced to purchase the product from Med-Eng after its courts recognized that their designs had been reverse engineered. Also, in Ecuador, the firm managed to protect its proprietary ideas after it hired a prominent local lawyer and law professor (with political connections) to take Med-Eng's case. Despite these success stories in protecting the firm's new riot gear suits, some major setbacks occurred as a result of foolishly filling one order.

Med-Eng accepted an order of about 150 suits from China in 2001—which Chinese officials reassured would not be copied in any way. This purchase, L'Abbé mused, "represented a good order, but it was not huge—maybe a couple percentage points of annual sales for that product." Within six months of delivering the product, a Chinese company began marketing an exact replica of the Med-Eng equipment—just as L'Abbé had foretold. "They had obviously taken moulds of our gear," remarked L'Abbé, "but there's no way to know what the integrity of their stuff is." After substantial investments in this product line, "we lost a good chunk of the market in a matter of mere months."

Ultimately, lagging sales, intense competition, and copycat products led Med-Eng to believe that their entry into this market would prove to be relatively unprofitable. The firm's attempts to diversify its product line by entering

the body temperature control market yielded similar lessons. After buying Delta Temax Inc.—a Pembroke, Ontario body cooling system maker—in January of 2001, Med-Eng focused on marketing its new acquisition's line of refrigerated vests to industrial workers by presenting the idea to unions, management, and workers themselves. Med-Eng believed that this approach would open up considerable opportunity and lead to new orders from an entirely new market—thereby diversifying the company and steadying sales.

CLOSING ONE DOOR, OPENING ANOTHER

The firm's sales in the industrial sector flopped and by the summer of 2004, Richard L'Abbé decided to "pull the plug" on selling cooling apparel to the industrial market. Coinciding with this let down was a spark—the US Army began to face a dilemma in Iraq: troops located there were having difficulty tolerating the extreme heat of the Middle Eastern climate while driving often un-air conditioned vehicles and wearing several pounds of thick personal body armour and other heavy gear that acted as insulators trapping body heat.

"This was expected to be a very profitable new market for Med-Eng," remarked L'Abbé, "we hoped to see sales of our cooling devices to the US Armed Forces go into the stratosphere." Med-Eng put to use some of Delta Temax's sewing facilities to start manufacturing different items such as the bomb disposal suits. On the redeployment of resources, L'Abbé commented: "So, despite an unsuccessful bid at selling cooling systems in the industrial market, we managed to acquire a new skill set that could be used more generally in the manufacture of other products."

SELLING "MADE IN CANADA" IN THE USA

Med-Eng's Canadian identity had several interesting impacts on the firm's ability to sell its products in the US and elsewhere internationally. The fact that Canada, under the leadership of Prime Minister Jean Chrétien, had decided in 2002 not to join the US-led 'Coalition of the Willing' to invade Iraq made the company an obvious target for criticism that it was not playing on the right team to do business with the US. In the past, the Canadian aura had generally served Med-Eng well; Med-Eng benefited from the popular conception worldwide that Canadians were peacekeepers, polite, friendly, and a good dependable neighbour.

11 V-Top's guards for ankles, shins, knees, hips, and thighs had even been marketed to crash-prone downhill mountain bikers prior to Med-Eng's acquisition of the company.

12 Certainly Med-Eng's R&D efforts had put the company sufficiently ahead that competitors were barely recognizable for much of the company's product offerings. And Med-Eng did not rest on its laurels; more and more money was ploughed into product development every year. On several occasions, Med-Eng has availed itself of help from the National Research Council's Industrial Research Assistance Program.

ENTREPRENEURIAL SEARCH:

US defence contractors from countries supporting the Iraq invasion were generally given preferential treatment, whereas Canadian defence contractors were in many ways left out. Med-Eng's position as a contractor that sold mainly to non-defence markets meant that the firm did not bear the full brunt of the Bush administration's retaliation. Med-Eng did, however, get labelled with the stigma that it came from a country that did not support the US position on the 'War on Terrorism.' This label, L'Abbé lamented, "had a huge effect" on Med-Eng's ability to sell itself in the US, where government and police forces were clamouring for bomb disposal gear. The fact that the firm controlled 95% of the market and was the internationally recognized leader in this market meant that US military and government agencies had little choice but to buy from the firm, while at the same time Med-Eng scrambled to come up with a solution that was patriotism-proof.

Med-Eng needed to formulate a way to meet requirements of a US law known simply as 'the Berry Amendment,' which stated that "funds made available to the Department of Defense" may not be spent on apparel items (clothing and other fabricated materials) "unless it is grown, reprocessed, reused, or produced in the United States." In order to satisfy this law, in the spring of 2005 Med-Eng established a branch plant in Ogdensburg, New York, less than a kilometre from the Canadian border.

The Med-Eng facility, located on the shore of the St. Lawrence River, could be reached from Med-Eng's Canadian headquarters in Ottawa, Ontario by car in less than an hour as the city is immediately south of Ottawa. According to L'Abbé, "the move was of strategic importance since the Ogdensburg facility could now supply US military demand for goods 'made in the USA' by Med-Eng." The firm had previously attempted to get exempted from the Berry Amendment by seeking a signoff from the US Department of Defense and its then head, Secretary of Defense Donald Rumsfeld, but failed to receive this. L'Abbé remarked, "we almost got the waiver back in 2002, but even with it—as a Canadian company—you really need somebody down their [in the US] fronting your product."

After contemplating several bids for substantial contracts, Med-Eng discovered that, for the most part, lucrative US Government contracts were awarded to large US companies with good connections and a strong presence in the

US. This meant that, as a medium-sized Canadian company with revenues below the US \$100 million mark, chances of single-handedly succeeding in a bid for a sizable US contract were slim. For this reason, the company pursued partnering with large US firms for larger contracts (over US \$20 million). These contracts for military equipment for the US foray into Iraq were often widely publicized and criticized by political pundits; fearful of this, few elected officials wanted to hand out a contract of this nature to a foreign company. Avoiding this dilemma through partnerships, while securing big contracts with US defence contractors in need of equipment, was a promising avenue for Med-Eng. Furthermore, according to CEO Richard L'Abbé, "getting with the right partner could mean receiving additional support in other areas—it could be a new source of knowledge and skills."

IPO POTENTIAL

As Med-Eng grew, those on both the outside and inside began to ask whether a company with revenues in excess of \$50 million would be better served as a publicly held firm. L'Abbé and many others in the firm were convinced that the volatility of the company's revenues would disappoint analysts and create an element of instability. L'Abbé knew that because of their client base and trends in police and defence spending, revenues could not be steadied to the extent that investors would tolerate and that fickle investors would not appreciate the company's business structure. According to L'Abbé, "sometimes, you have to have a bad year before you can have a great year." Besides, L'Abbé felt Med-Eng would not want to have to "drop its pants in front of analysts every quarter just to make them happy." The firm's CEO was convinced that being privately held meant that the company could operate free of the rhetoric and pressures of investors looking for a steady return. The nature of the company's product also meant that publicly announcing new innovations and strategies would be infeasible. Altogether, despite the firm's size, being privately held meant freedom from undue scrutiny coupled with better control over the company's direction and secrets.¹³ In some instances, Med-Eng had to conceal certain information from employees, so disclosing these secrets to the public would never be an option.¹⁴

On top of that, thus far Med-Eng had been successful in getting enough private venture capital to grow. The firm received one round of financing in 1997 of \$2 million, and

13 This is not to say the company received little critical feedback. On the contrary, a board of advisors was often scathing, asked serious questions, and kept L'Abbé and the entire organization in check. L'Abbé was quick to give credit to the advisors for their positive influence, saying "this was certainly not a group of 'yes men'."

14 Ma□

Little effort was made to correct these inaccuracies. Even the company website listed the names of no employees, only job titles; email addresses contained neither first names nor last names, merely job descriptions (e.g., sales, R&D, recruiting, etc.).

received a second round in 2000 when upper management had a run-in with the board of directors. Management's vision for Med-Eng conflicted with that of the board, so in early 2000, Schrodgers & Associates Canada Inc. (<http://www.schrodgers.ca>), a buyout group from Montréal, Québec was approached by Med-Eng management "to buy out the equity participation of a group of four inactive private investors who sought to realize their investment." Med-Eng received approximately \$12 million in venture capital needed to rid itself of directors who were critical of CEO Richard L'Abbé. Less than four years later, Mr. L'Abbé was named 'CEO of the Year' by the Ottawa Business Journal as revenues skyrocketed.

AFGHANISTAN, IRAQ, AND BEYOND

Leaning back at his desk in his Ottawa office, Richard L'Abbé, CEO and a co-founder of Med-Eng Systems, looked out the window as employees streamed into the parking lot on a cold autumn morning. It was October 2006 and maple leaves were changing colour from green to yellows, oranges, and reds. The US Department of Homeland Security threat advisory colour schema was currently at the midpoint of the scale: Yellow "Elevated: Significant risk of terrorist attacks." The next higher level of terrorist threat was Orange, which was divided into two degrees of severity and had been activated eight times in the four years since the scale was introduced. The first Red alert—the highest likelihood of terrorist attack—occurred in mid-August 2006. Military operations in Afghanistan and Iraq seemed likely to continue. Med-Eng products were increasingly playing a protective role in active combat.

A number of defence contractors were working on personal microclimate cooling systems. There were those worn by the dismounted warfighter—as such, the cooling vest was typically a heat activated cold pack that would absorb the wearer's heat; alternatively there might be a source of power circulating air around the torso to provide cooling. For the mounted warfighter, weight and power were less of a concern. The soldier could be hooked up to a system that cycled refrigerated fluid through a vest. According to one soldier returning from Iraq, "You kind of get used to being shot at, but you never get used to being hot."¹⁵

Med-Eng's cupola protective ensemble (CPE) was an integrated system combining both personal safety and cooling. The CPE was worn by the gunner exposed on top of an armoured HUMVEE. The CPE's cooling system might also serve in other settings. Dave Hatcher, manager of strategic business development at Med-Eng commented, "We're

looking at numerous other applications. If you look at the Abrams, the Stryker, or the Bradley, any one of the vehicles could take that type of cooling system to cool the individuals inside of the vehicle."¹⁶ While the cooling system portion of the ensemble had multiple applications and competitors; the defence portion of the CPE seemed to have at least one more competitor than it did applications. A CROW (common remotely operated weapons station) could replace the exposed gunner. A turret with camera and weapons permitted the soldier to remain inside a vehicle to view a computer screen with one hand on a joystick. At US \$200,000 or US \$250,000 per fitting, they were an expensive alternative.

WHAT NEXT?

Med-Eng needed to increase its markets and find new ways of ensuring sustained revenue growth. The simple fact was that the world had a finite number of police departments and new growth would have to emerge from somewhere. War was becoming a foreseeable constant. There would likely always be a need for manned weapons and the CPE could play a role in protecting gunners in Stryker interim armoured vehicles and up-armoured trucks. Because the CPE was derived from the EOD (explosive ordnance disposal) suits, the product met US Department of Defense approval in just 10 weeks in 2005, including blast tests at Aberdeen Proving Ground. Med-Eng's CPE had been in service with US troops in Iraq since January 2006. With much on his mind, L'Abbé reclined in his chair and pondered the future.

The company had been through 'growing pains.' A decent cadre of middle managers was in place and L'Abbé was confident that his marketing and sales teams were taking initiative. It took some time for them and him to get used to changing roles and responsibilities—things now ran smoothly; freedom, independence, experimentation, and exploration were the norm. While these had always been strengths of engineering and design within Med-Eng Systems, moving these characteristics from the lab to the market had taken effort. Cutting-edge science was not enough, there needed to be similar thinking in approaching the marketplace. Getting entrepreneurial traits to migrate was not easy; sometimes the solution had been to replace rather than remould an employee. L'Abbé recognized that he could no longer hold onto everything, but he still knew about—even if not first hand—everything that was going on. If he had to go on holiday, the place could run without him. He had given his teams room to fail—and they had—but they got it right most of the time. The 'Midas touch' had

15 Scott R. Gourley "Chill Out" <<http://www.special-operations-technology.com/>>

16 Scott R. Gourley "Chill Out" <<http://www.special-operations-technology.com/>>

ENTREPRENEURIAL SEARCH:

spoiled them in the past, but at this point only hard work and logic was responsible for their ongoing success.

In the Fall of 2006, Richard L'Abbé was at a crossroads. Both the entrepreneur and his enterprise were doing well, but there was so much more ahead for both of them—their futures looked bright. What should L'Abbé do? If you were in his position, what would you do?

EPILOGUE

On October 3, 2006, Richard L'Abbé stepped aside and Danny Osadca (a member of Med-Eng's board of directors since July 2004) was appointed President and CEO of Med-Eng Systems. Less than a year later, at the end of September 2007, Danny Osadca was out the door as Med-Eng was acquired by Allen-Vanguard for CDN \$650 million. Shortly thereafter, the Canadian Venture Capital & Private Equity Association named Richard L'Abbé 'Entrepreneur of the Year' for 2008. In April 2009, Allen-Vanguard was "in talks" to be taken private by a new U.S. investor, in the aftermath of a failed takeover and recapitalization plan by Tailwind Financial.¹⁷ In May 2009, as expected, this deal failed, too, and Allen-Vanguard continued to report quarterly losses (a mixture of impaired goodwill and intangible assets, exchange rate fluctuations, and other operational factors), despite some pretty sizable orders for product.¹⁸ In September 2007, Allen-Vanguard hit a high of \$11.95 per share; in December 2008 it hit a low of 6.5¢ per share and by May 2009 Allen-Vanguard's market capitalization was around \$15 million with shares trading at 12 to 15¢.

LESSONS LEARNED

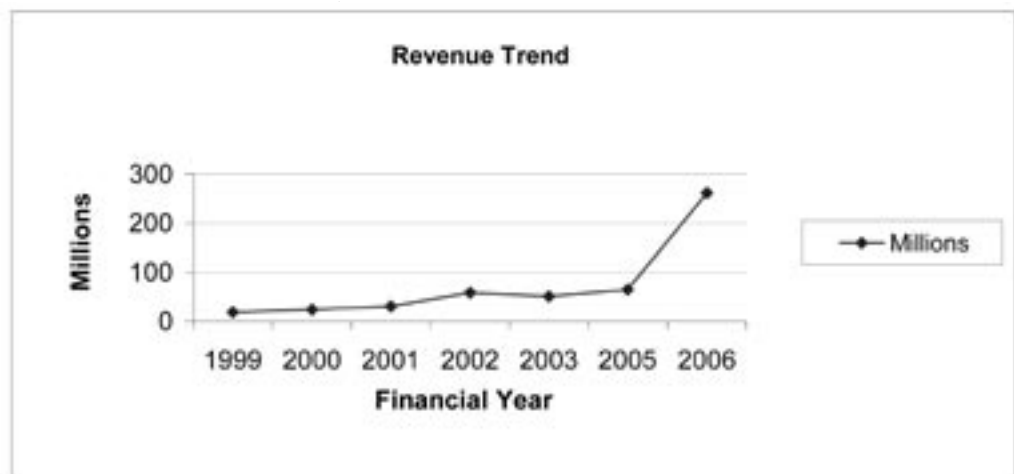
Certainly it is not unusual for founders to be pushed aside by those (investors, directors, outsiders, etc.) who think they can do better. And sometimes those interests can do better than the entrepreneurs at the helm of the enterprises they started. But not always. Being pushed aside may not be all bad. Sometimes the financial rewards are significant and it leaves those ousted the opportunity to move on to other interests—personal or professional.

Under Allen-Vanguard's umbrella, Med-Eng's

product line was extended further. Although already moving into electronics, this was accelerated. With increasing sophistication in ordnance detonation (radio controlled), it was important to match that technology with an advanced, high-tech response (bomb jammer). The U.S. military had been an important angle for Allen-Vanguard and building on those channels, Med-Eng resources were deployed in that direction. New product offerings included vehicle seats that could protect the occupant from a blast. As expected, the seat was armoured, but it also dampened the shock—including having the occupant's feet and legs off the floor. In addition, the seat cradled the occupant as the vehicle and occupants recovered ('came down') from a blast. Allen-Vanguard also much more formally offered an array of services. While having a "service tail" for products is important, for military clients this is often not part of government bids.

And just because Richard L'Abbé made it all look easy, does not mean it was. Tiger Woods makes the game of golf look relatively simple, but his efficiency and aptitude disguise the challenge and true effort necessary. Replacing leadership is a serious matter. Succession remains a grave concern for enterprises of all shapes and sizes. So, too, does altering a company's trajectory. Richard L'Abbé had worked on strategy consciously and consistently, but much of Med-Eng's evolution would be hard to articulate. A vacuum is generally felt in the absence of the company founder. While no details of transition are known, employee morale post-founder often deteriorates. Certainly the 15% workforce reduction and other efficiency measures must have caught employees' attention and raised concern.

Exhibit 1: Med-Eng Systems Inc.'s Revenues



Note: These figures are approximations from public sources.

¹⁷ Dealflow "Private practice?" Ottawa Business Journal. 13 April 2009.

¹⁸ Allen Vanguard Press Release 14 May 2009.