

From *The Art of Business*<sup>\*</sup>

## **Medtronic<sup>1</sup>** ***Restoring People to Full Life***

*During a visit to the Medtronic headquarters, where I gave a lecture, in Minneapolis, MN in December 2000, I was utterly surprised to discover that the company had created a corporate meditation room, a tranquil spot where any employee could get a few moments of quiet during an otherwise busy daily routine. I was also awed by the company's symbol of a rising man, created by artist Alan O. Hage, with the company's motto of "Towards Full Life." Both the symbol and motto serve as a constant inspirational reminder to each of Medtronic's 30,000 employees of the purpose they serve. When I saw the symbol, I knew then and there that the story of this marvelous company had to be told. I was truly delighted when I met Earl Bakken, the creator of the wonderful Medtronic story over the past 50 years and the company's co-founder, in November 2001 at a symposium in Hawaii.*

The dream began in a tiny, un-insulated garage in the heart of the freezing Minnesota winter. It was 1949, and Earl Bakken, an earnest and unknown engineer, and his brother-in-law Palmer Hermundslie were cooking up red-hot ideas that would eventually change the face of medical technology. Bakken dreamt of a time when doctors would actually implant tiny electronic devices on or in the human body to reduce the debilitating effects of major diseases. As a child Bakken was fascinated with using electricity to heal the human body, a practice that dates back to the Roman Empire. With a directness known only to the young and the great, the two decided to form a company to produce electrical devices for healing the human body, promptly naming their venture Medtronic, a cross between the words "medicine" and "electronic." Thus began a tiny company with a huge dream, a company that today ranks in the Fortune 500, is considered one of the top 100 companies to work for, employs approximately 30,000 people worldwide, reported more than \$7.7 billion in revenue for FY03 and was ranked #11 by *Money* magazine<sup>2</sup> on return to shareholders with 19.46% annual return over 30 years. Medtronic is also the leader in most of its markets. In [16]<sup>†</sup> 1949, however, this great company earned exactly \$8 in revenue during its first month of operation.

### First Success

Like most startups, Medtronic was fed on raw inspiration and meager dollars. Bakken and Hermundslie scrounged what work they could by repairing electronic medical devices for local hospitals and representing several medical equipment companies. Their first breakthrough

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<sup>\*</sup> Raymond T. Yeh, PhD with Stephanie H. Yeh, *The Art of Business: In the Footsteps of Giants* (Olathe, Colo.: Zero Time Publishing, 2004). Excerpted from Chapter 1, "The Art of Possibility."

<sup>†</sup> Original pagination in brackets.

product was the world's first external wearable, battery-powered pacemaker, which they created for Dr. C. Walton Lillehei at the University of Minnesota. Bakken describes the inspiration for this device:

*“Dr. Lillehei had these babies he was doing open heart surgery on and he lost one during a power failure. He was upset about that. We had an AC pacemaker, a big AC pacemaker that was keeping this child’s heart going during the surgery and it was working fine. During a power failure, they lost the child. I envisioned the whole story there and then.”*

It turns out that “the whole story” is told not in words, but in pictures. Bakken developed a two dimensional graph (see Figure 1.3), in which he captured every type of medical device he could imagine in terms of function (prosthetic, therapeutic, monitorial, and analytic) and placement on the body (no contact, external contact, temporary entrance into the body, and permanent implant). He then drew a diagonal slash across the entire graph and proclaimed that Medtronic would create products only for those areas below the slash. Why? Because he held true to his original vision of inventing devices that would be used on or in the body itself.

In his early vision Bakken saw devices that could be implanted into the body, devices that had to be of the highest quality and reliability. He describes why Medtronic initially veered away from monitoring equipment and other products above his diagonal slash:

	Prosthetic	Therapeutic	Monitorial	Analytic
No Contact	Cybernetics Simulation (Nerve Cell, etc.) Breath Simulator	Cobalt X-Ray Laser Hyperbaric Chambers Ultraviolet and Infrared Lamps	Closed Circuit Television  Capacity Plethysmograph Cineradiography	pH Meter Flame Photometer Colorimeter Electronic Microscope Blood Cell Counters Radio-isotope Scanning Osmometers Electrophoresis Autosynthesizers
External Contact	Artificial Limbs  Artificial Larynx	Cardiac Massage Defibrillators Pacemakers Respirators Walking Aids	Electric Beds Ultrasonics Hypothermia Phlebo Byssostat Stimulators Electric Sleep Labor Stimulators	Audiometer Breath Gas Analyzers Pulmonary Function Basal Metabolism OSR Eye Pressure Ultrasonic Scanning
Temporary Entrance Into Body	Heart Lung Booster Pumps Artificial Kidney (Dialysis)	Electroshock Respirator Pacemakers (SRX) Catheters	Coagulation Forceps Paired Pulse Ven Eraser Plasma Gas Scalpel Brain Stimulator Cycosurgical Pain Inhibitors	Angiocardiology Fiber Optics Radio Pills (pH, etc.) Foreign Body Locators
Permanent Implant	Artificial Pancreas Artificial Heart Oral Vibrator	Implantable Hearing Aid CSX Implantable Pacemakers Incontinence Simulator Bladder Simulators	Drug Capsules Bone Heaters Transplant Aids	Transducers Potency Detector Expendable Monitors

Figure 1.3 The Original Medtronic Roadmap

*“Medtronic couldn’t make monitoring equipment cheap enough. This stuff has to be built very cheaply if you’re going to do business, [17] and if it fails, you just get it fixed. But if a pacemaker fails you can’t get it fixed. The person’s gone. We only knew how to make tremendously high quality products.”*

With the creation of the first battery-powered pacemaker, Medtronic entered the medical community with a splash. An article about the new pacemaker appeared in the *Saturday Evening Post*. Bakken laughs about what happened next: “Our insurance agent called us up and said, ‘What a marvelous thing you’ve done. It’s great what you’re doing for these kids. By the way, your insurance is now \$30,000 a year’—up from \$300, which was a blow to a little company in a garage.” In 1957, Dr. Lillehei successfully performed the first open-heart surgery using the new battery-powered pacemaker, and a new market was born. Today, Medtronic’s pacemaker is a silver-dollar sized device that assists about 300,000 new patients every year worldwide. [18]

## Desperate Days

Even with the resounding success of its first major product, Medtronic experienced the growing pains typical of any small company struggling to break into the big time. By 1960, the company had run out of money, and Bakken and Hermundslie were rapidly running out of time. Not a single banker or investor would put up the badly needed cash and the two struggling founders barely found time to woo potential investors. They juggled repair work and equipment distribution duties with the creation of custom electronic devices for physicians and the mass production of the model 5800 pacemakers. They were drowning in their own attempts to keep the company capitalized.

It gradually became clear that Medtronic had become so distracted from its original vision that bankers and investors had no idea what the company actually did. With this realization, Bakken, with the help of the company’s Board of Directors, drafted the defining *Tao* for Medtronic:

### ***The Medtronic Mission Statement***

1. To contribute to human welfare by application of biomedical engineering in the research, design, manufacture, and sale of instruments or appliances that alleviate pain, restore health, and extend life.
2. To direct our growth in the areas of biomedical engineering where we display maximum strength and ability; to gather people and facilities that tend to augment these areas; to continuously build on these areas through education and knowledge assimilation; to avoid participation in areas where we cannot make unique and worthy contributions.

3. To strive without reserve for the greatest possible reliability and quality in our products; to be the unsurpassed standard of comparison; and to be recognized as a company of dedication, honesty, integrity, and service. [19]
4. To make a fair profit on current operations to meet our obligations, sustain our growth, and reach our goals.
5. To recognize the personal worth of employees by providing an employment framework that allows personal satisfaction in work accomplished, security, advancement opportunity, and means to share in the company's success.
6. To maintain good citizenship as a company.

Nearly half a century later, the Mission Statement continues to serve as both the ethical and practical framework for Medtronic's strategy and operations. These mission statements clearly define the company's vision (1<sup>st</sup> statement), purpose (2<sup>nd</sup> statement), and values (4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> statements). In 1962, soon after Bakken drafted the mission statement, Medtronic was able to secure long-term financing in the form of a \$100,000 note from Central Northwestern Bank and a \$200,000 private placement from Community Investment Enterprises, a local venture capital firm. In addition to funding, the venture capitalists also brought savvy managers to Medtronic's Board for strategic and management advice.

The founders of almost every company sit down at some point in their company's evolution to write a vision or mission statement, but history shows us that it is not the statement itself that creates success, longevity, or dominance. It is the ability to stay inspired and re-create that statement on a daily basis. Medtronic has leaned on these six statements for more than 40 years, and judging by its dominant presence—the company has been called “the best medical device company in the world” and the “Microsoft of the medical device industry”—such devotion to *Tao* is a worthwhile endeavor.

### ***The Tao of Medtronic (extracted from its Mission Statement)***

*Vision:* To contribute to the restoration of people toward full life.

*Purpose:* To direct growth in the areas of biomedical engineering where the company displays maximum strength and ability. [20]

*Values:*

- The greatest possible quality and reliability.
- Being the unsurpassed standard of comparison.
- Being recognized as a company of dedication, honesty integrity, and service.
- Making a fair profit.
- Recognizing the personal worth of employees.
- Maintaining good citizenship.

## Back to the Garage

Great leaders of exceptional companies seem driven from some inner source of inspiration, and motivate others around them with their desire for greatness. But in a company of approximately 30,000 employees, how do you connect every employee, from janitors and bookkeepers to corporate officers, to the original vision that kept Bakken and Hermundslie on fire in the midst of meager circumstances? How do you bring every person in the company back into the experience of that tiny garage lab? With pomp and circumstance!

In the early 1960s, Bakken and a group of company officers created the “Mission and Medallion Ceremony,” a rite of passage every new employee must experience six months or so after joining the company. This rite of passage is a journey back in time, a virtual trip back to the garage where the dream began. For a recent ceremony, Bakken, who is long retired from the company, flew from his home in Hawaii to co-host the occasion with current Chairman and CEO Art Collins. Not only did Bakken review Medtronic’s mission and discuss its meaning in detail, he took the new employees on a virtual tour of the important events in the company’s history. He showed slides of the company’s first AC-powered pacemaker and the tiny garage that was the company’s first lab. Finally, he and Collins gave each employee a bronze medallion depicting a person rising up and walking toward a full life, with the words “Toward Full Life” inscribed on the edges. On the back of the medallion is the first statement from the Medtronic Mission Statement. With each medallion, Bakken urged the new employees to remember, [21]

*“Your work here at Medtronic is not just to make money for yourself or the company, but to restore people to fuller lives.”*

Every December at the Medtronic annual holiday program, the company invites six patients, along with their families and physicians, to tell their personal stories, in which Medtronic products play a vital role, and to offer thanks for restoring them back to full life. At the 2001 party, more than 1,500 people attended in-person and thousands more were linked-in via videoconferencing. For Medtronic employees, it’s a day of personal inspiration and connection when the true meaning of their work is literally brought to life in every patient’s story.

The year-end program is also a way to reinforce the company’s tradition of serving its customers well and focusing on quality. Art Collins says, “When I’m in the operating room and see the product being used on a person, that customer is no longer a statistic but an individual. It reinforces the need for quality in our business.” For instance, famed comedian Jerry Lewis recently filmed a video for Medtronic in which he talked about his own story of healing. He had been in pain for 37 years, the result of performing all of his own stunts. In the early part of 2002, he could endure his pain no longer and was seriously considering taking his own life. Luckily, he found out about Medtronic’s “pain pacemaker,” a device that helps him to control his pain. He is now virtually pain free, can work on his book, conduct his telethon,

and pick up his 10-year-old daughter. He has been restored to full life. Jerry's experience is representative of what people with chronic pain go through to find a solution that works.

Bill George, the former Chairman and CEO of Medtronic, and Art Collins proclaim the holiday program to be the most important meeting of the year, outranking even the annual shareholder meeting. They say,

*“Medtronic is not in the business of maximizing shareholder value. We are in the business of maximizing value to the patients we serve.”*

Adds Collins: “We are so fortunate with this combination of doing a tremendous amount of good for millions of people and, in the [22] process, having a very sound, financially successful business.” Bakken concludes with this comment on Medtronic's holiday program:

*“The presence at the holiday program of those wonderful patients, from all around the world, is not merely intended to make us feel good at Christmas time. Their bright, smiling, pain-free faces and their bold words of hope and triumph remind us why we do what we do, why we are what we are—365 days of the year.”*

## To the Letter

Medtronic officers are savvy enough to know that just having core values does little in terms of daily action. To give these values weight and significance, the company requires employees to sign a code of conduct statement each year that states their compliance with these core values. Immediate action is taken against violators of this code. For instance, when former CEO Bill George discovered that a newly promoted executive of Medtronic had violated the code, he asked for the man's immediate resignation. In addition, George publicized the event with full disclosure to the appropriate authorities so that “customers and employees would know with certainty what Medtronic stands for.” On the acquisitions level, the company stands firm on its values and strives never to acquire another company that does not share its values.

Medtronic's success hinges on its unshakable ability to focus on its well-articulated vision “to contribute to human welfare by application of biomedical engineering in the research, design, manufacture, and sale of instruments or appliances that alleviate pain, restore health, and extend life.” For over 40 years, this vision has provided meaning and motivation for Medtronic employees. This total focus on its vision is exemplified when Collins was asked how he managed the stock of the company. He answered:

*“I don't manage the stock. We manage taking care of patients. That's our business. The stock isn't our business. There's nothing we do that's different because the stock is temporarily dropping. We're in this for the long haul.” [23]*

## What Tomorrow Brings

Through all of the business fads over the last 50 years, Medtronic has never allowed itself to get bogged down in projects outside the scope of its vision. While the company has reinvented itself many times during this period, it has always stuck to Bakken's original mission statement of "restoring people to full life," a vision which continues to breathe life and motivation into the workforce even today. Bill George summarized the results of such focus:

*"Over time, an innovative idea for a product or a service will be copied by your competitors. Creating an organization of highly motivated people is extremely hard to duplicate."*

To keep its executives focused on the company's vision and not on exotic perks, Medtronic does not maintain a corporate jet, nor provide company cars for its officers. In fact, it does not even offer reserved parking for its executives. Instead, the company traditionally spends around 10 percent of its revenue on research and development, one of the highest among major corporations. The company encourages innovation in a number of ways, including a program where employees who have good ideas are given the opportunity to try them out with \$50,000 of initial funding. As a result of continued R&D spending and acquisitions, currently more than two-thirds of Medtronic's revenue comes from products introduced within the last two years.

By 1999, the company's 50<sup>th</sup> anniversary, Medtronic had enlarged its focus to include technology for treating a range of chronic diseases and conditions including heart failure, sudden cardiac arrest, coronary artery disease, spinal conditions, diabetes, back pain, chronic pain, and Parkinson's disease. Since its first month, when it earned only \$8 in revenue, Medtronic has never slowed its pace. Art Collins elaborates, "Well, think about the way the body works. Not exclusively, but in large part, the body functions because of a series of chemical and electrical reactions. The brain, the spinal cord, the heart—you have nerves that run all over as well as electrical conduction pathways. For example, if you have heart block, you basically then recreate the [24] electrical pathway with the pacemaker. Therefore, anything involved in the correction of a faulty electrical pathway is our business." Bakken jokingly said during the Induction ceremony, "At one time Medtronic only wanted your heart. Now they want every organ of your body."

As Art Collins looks into the future, he declares, "The lifeblood of our company is creating new products and ensuring that patients who have a need for our products will have appropriate access. Reducing cycle time through the patient access chain from product definition and development through product launch and availability is key to our future." What is his vision for Medtronic's future?

*"Medtronic can be characterized by the statistic that every seven seconds someone in the world is being helped by a Medtronic product. So my vision for Medtronic is we will*

*continue to use medical technology and taking advantage of two other major, significant technological trends, which are the advances in information technology and biotechnology. We will incorporate those so that we are treating larger and larger populations of people that have a need for our products. The 7-second statistic keeps going down.”*

Before his retirement, Art Collins aims to reduce those seven seconds to one.

## **Notes**

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<sup>1</sup> All unreferenced quotes are taken directly from interviews with Earl Bakken and Art Collins by the author of this book.

<sup>2</sup> Birger, Jon. “The 30 Best Stocks From 1972–2002.” *Money*. Fall, 2002. Vol 31, Issue 11, p. 88.

<sup>3</sup> George, Bill. 2000. *Authentic Leadership: Rediscovering the Secrets to Creating Lasting Value*. New York: John Wiley & Sons.