

Hunter Harrison and the Transformation of Canadian National Railway

A Case Study of the Five Ps of Cultural Change

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When Hunter Harrison joined the recently-privatized Canadian National Railway (CNR) in 1998 as Chief Operating Officer, the company was generally acknowledged as one of the worst railroads in North America, highly indebted, perpetually in the red, and losing market share to the more efficient, flexible and newly deregulated U.S. railway and trucking industries. Recruited by Chief Executive Officer, Paul Tellier, for his skills and experience at Illinois Central, Harrison along with Tellier moved swiftly to transform CNR into a “scheduled precision railway” and to introduce needed efficiencies. Soon thereafter the company shed over 11,000 employees and thousands of miles of track.

After Tellier left the company in 2003, Harrison was appointed as his successor. The challenge was enormous. A cultural overhang still existed from the railway’s public sector days when it was more of an employment generation device than a business, complete with regionalism, isolation from commercial pressures, formal chains of command, hostile unions and a culture of entitlement. Would Harrison be able to complete the transformation or would the company sink back into mediocrity? Fast forward to 2008 and CNR was then widely recognized as the most efficient railway in North America. How he accomplished this cultural transformation is nothing short of miraculous.

An effective change leader needs five skills which I call the five Ps: Passion, Plan, Persuasion, Partnering and Perseverance, and Harrison had all of them in abundance.

Passion

Change leaders need a passion for their organization and its mission or else their energy and commitment will wane when the change they are advocating faces daunting obstacles, as it almost inevitably will.

Hunter Harrison got his passion for railroading honestly, starting as a laborer, oiling railcars in Memphis while working his way through school. By 1998 his career had culminated at Illinois Central Railway, where he served as President and Chief Executive Officer (CEO). It was at Illinois Central that he perfected the details for a scheduled precision railway and in the process drove down the railroad’s operating ratio to the best in the industry. Not afraid to get his hands dirty, witness his first job, Harrison loved railways and loved to spread the gospel of scheduled railroading.

After CNR acquired Illinois Central in 1998, Harrison was recruited by CEO Paul Tellier as his second in command. Harrison had one pre-condition – that he be allowed to fix the railroad’s operations without interference while Tellier took care of the external relations and the political issues leading up to the company’s privatization. Tellier agreed to give Harrison a lot of leeway to make changes. “I told Tellier I only know one way to railroad,” Harrison said. “And I told him that if he was willing to go along, I’d stay and work my ass off.”¹ What Harrison would be working on was the transformation of CNR into a scheduled precision railroad – the business model he had ultimate faith in.

Harrison knew he was asking a lot of the CNR employees and had a lot of persuading to do. His passion for railroading helped. “I was asking people to make changes overnight in operating style, the operating model and so forth,” changes as stark as day and night. Right from the beginning, he gave his enthusiasm free reign. “I got the top 100 people together across the street at the Bonaventure (a hotel in Montreal) and I talked to them all day.” When he returned to Headquarters, Tellier came running into his office and said, “Heard you had a great day over there... I understood you talked for 10 hours in front of those people without a note.” Hunter said, “Paul, I can talk about railroading for hundreds of hours without a note.”²

¹ Watson, Thomas (2003). On Track, *Canadian Business*, May 12, p. 24-30.

² Quotes and information are from interviews conducted by the author in 2005 with Hunter Harrison, Peter Edwards, and Les Dakens.

Passion is contagious. As Les Dakens, then Senior Vice President of People explained: "I can honestly say that we've had a lot of younger people come to a Hunter Camp (an offsite meeting at Harrison's hunting camp) and they see this 60 year-old with passion for three full days. They come out saying, 'He's got more passion than I do and I'm 40 years younger than him. I have to step up my game.'" After the Hunter Camp experience, this passion also spread to older employees who had worked at CNR for 30 or 35 years, and they committed to making their last years at CNR more passionate than they'd ever done. "It really turned into a pretty inspirational three days for these people. Most have never been with a CEO for a minute let alone for three days."

Plan

But passion without a plan is not enough. The plan has to fit the circumstances, and it must be detailed and precise if the organization is undergoing a large transformation like CNR was facing. Furthermore, the plan must consider the entire system as a whole and ensure that all the parts work together. Harrison had the plan that had worked so well at Illinois Central – the scheduled precision railway plan. At that time, most commercial trains in North America moved out of the railway yard only when a full complement of cars was assembled. That meant that customers often had to wait days or even weeks before their merchandise arrived at its destination. No wonder they turned to trucking as a more flexible and timely shipping method.

Harrison wanted to change the industry dynamics by establishing a definite schedule, just like passenger rail, just like trucking, just like parcel delivery. He wanted CNR to be able to quote delivery times in a matter of hours not five to ten days and to offer its customers a fully integrated electronic process to manage rail shipments. The objective of the plan was to generate growth by attracting service-sensitive customers from truckers and other rail companies by improving price, speed and reliability all at once. It is one thing for the CEO to understand the plan, but the rest of the organization has to execute it, so they must understand it as well.

As he explained: "Most of us who have spent a lot of time in this industry were not taught scheduled railroading concepts. We were taught old, conventional wisdom: When you get a big train together, run it. In a regulated industry, everything is cost-driven. We talked about service but didn't do anything about it. Moving to a concept that said good service is going to drive costs down and improve asset utilization caused people who for years had been taught otherwise to start shaking their heads. It was a difficult task to get the message out and have people understand it."³

The first part of the plan rested on cutting costs and controlling margins. For example, Harrison cut the number of locomotives, a heresy at the time. "To make a long story short, we went from 1900 locomotives to 1300 in about 14 months. That's huge and each locomotive costs \$2 million. And people went, 'Wow. Maybe there is something to this (scheduled precision model).'" Of course, the plan went far beyond reducing the number of locomotives. It rested on a web of interconnecting factors targeted at simultaneous improvements in cost, reliability and service. The "intermodal" improvement is another example of the integrated nature of Harrison's plan.

The old intermodal model, whereby terminals served as de facto storage yards, resulted in excess cost and slow service. Loads were picked up by truckers whenever it was convenient for them. Transforming this interface into more of a "just-in-time" system saved a lot of costs. Plus the system improved delivery times for customers, who now had to book reservations on trains and pay for either delivery or storage if they didn't arrange to pick their merchandise up on time. Of course, CNR needed to invest in information technology to support this precise scheduling. "It's not just scheduling trains and cars," said Harrison. "It's a whole operating

³ As quoted in Vantuono, W.C. (2001). How CN does it. *Railway Age*. May, 202(5) 27-30.

philosophy of balancing assets and costs. It involves scheduling all the processes that lead up to the movement of trains and cars. If trains are running on schedule, you can predict where they're going to meet. You can look at line capacity issues. It's far more involved than a lot of people give it credit for."⁴

But improved efficiency and service by themselves will not necessarily translate into growth. For growth, the plan meant further expansion of the railway all over North America and this was accomplished by a series of mergers and acquisitions and partnerships.

CNR needed to control costs, reliability and service from point of entry to final destination; in essence it had to create a rail network that served the North American Free Trade Agreement geographical area—Canada, the United States and Mexico.

Partnerships

Passion and a plan are necessary for transformation, but no successful change leader operates alone. "You can have vision, but if you don't have strong people from top to bottom to actually execute on that vision and strategy, you don't succeed."⁵

Support from the senior executive team is critical and so is developing a cadre of "missionaries" and "disciples" deeper down in the organization, including supervisors, managers, employees and even unions. Harrison reached out to each of these stakeholder groups in an attempt to make them partners in change. Some attempts were more successful than others, but in the end a critical mass of supporters formed and tipped the balance in favour of the change.

The first and most important group to get on board was the senior leadership group. Indeed, John Kotter asserts that a change leader must convince 75% of the organization's managers to support the change or it will not succeed⁶. Harrison knew that support from the senior executive could not be taken for granted, so he carefully structured and developed this group. First of all, he brought some senior managers with him from Illinois Central after the merger with CNR. Coming into a potentially hostile organization and trying to change the culture is tricky, so it was important to bring along some people who believed in both the plan and its leader. Also as an integrated North American railroad, the new CNR needed American as well as Canadian leadership. As unpleasant as it was, Harrison also had to move aside some of the senior executives who could not or would not climb aboard. And he promoted some of the best people from within – those who embraced the change agenda and who demonstrated a passion for the organization. In all, there was not a wholesale change at the top of the house, but the necessary changes were done quickly.

With the new group on board, Harrison wanted to turn them into a real "railroader" team. VP Dakins and Assistant VP Peter Edwards helped create an internal railroader 'MBA' for senior leaders and high potential middle managers. This two-year intensive educational program trained a significant number of managers in all the details of running a railroad. And what Harrison was trying to create, according to Edwards, was a "new kind of PhD – passionate hungry driven people who really wanted to make a difference in the company."

Harrison enthused about the benefits of the Railroader MBA. As an example, the Senior VP of Labour Relations learned to run engines, switch cars, work in the shops and in dispatching. "Now when she comes back and sits down with the labour people, she knows the language. She understands about the business. Our Chief Financial Officer, Claude Mongeaux just became a qualified conductor. Our General Counsel is a

⁴ Ibid.

⁵ Quote from Dzinkowski, R. (2005). Canada's CFO of the Year Talks Privatization. *Financial Executive*, Jul/Aug, 21(6) 24+.

⁶ Kotter, John P. (1995). *Leading Change: Why Transformation Efforts Fail*. Harvard Business Review. March-April, 59-67.

qualified engineer. I don't think you'll find any other railroad in North America where the General Counsel is qualified to run an engine and to actually pull a train. It makes them have an appreciation for what we do."

And they didn't stop there. Harrison explained: "Another thing that we've done is all the senior leaders -- 10, 12 of them -- have an external coach... He sits in on their meetings. Some of them were very uncomfortable with that. He just sits there and observes and watches as they maybe reprimand someone or recognize someone, or deal with a problem." The purpose of these programs was to turn the senior executive group into a team that could act as partners in change. "Keeping this team together with the right chemistry is important -- you don't need to get the best five railroaders. That's not a recipe to success. You need to get the best five railroaders that interact well together." A side benefit of the Railroad MBA was evident in 2004 during a month-long strike by the Canadian Auto Workers Union, when CNR was able to maintain "near-normal" service after replacing 5,000 striking workers with 2,000 managers.

The next group to get on board was the employees. Employees will not generally join a change effort unless they have confidence in the competence of management. So Harrison took his message directly to employees in various personal appearances, including both large town hall meetings and small interactive sessions. His goal was to make them believe in the scheduled precision railway and a lot of it involved personal contact and building trust: "I know this. There's no substitute for getting with people on their level and having an exchange and explaining to people why (we need to make the change)... At first, they didn't understand it. I would have dialogue with them and I would say, 'What would you do if you were me? Think about if you were in my shoes. I'm trying to think about if I was in your shoes. Would I expect to work four hours, but get paid for eight? ... And I've seen people that we thought were 'bad boys' make huge turnarounds and become productive and you look back and you say, 'When was that change? When did it take place?' Never can I say, well, it was because we had a corporate magazine or we put out a story or we did this. But when you sit down there with them, sometimes, if you do have a significant emotional event, they change."

The middle managers, supervisors and first-line managers were also crucial partners, but this group was more challenging. Harrison commented: "I can communicate with my direct reports and we probably do a pretty good job getting through to the next level. But somewhere around middle management 'mud' sets in and you can't get through it. One of the things we've done, to attack that mud in several different ways, is we've tried to start from the bottom and the top and meet in the middle. If you can spend time with the people, it's so important. And if you can convert one, they become a disciple and they convert two more."

Some, a small minority of supervisors who could not make the necessary adjustments, had to be replaced. Others needed help in putting plain old management principles in place. Harrison had to intervene personally in the yards. "We had to dismiss officers, for example, and leaders that just couldn't do it. It's very difficult if you've been a part of something for 10 or 12 or 15 years and an agent of change comes in and says, 'Now, we're going to do it this way.' ... I can tell you it's not a high percentage, but several of them said, 'I just can't do this.' And you say, 'Well, why can't you do it?' 'These are my friends.' 'Well, it's okay to ask your friends to do the right thing.' 'I can't do that.' So we said, 'Okay, we need to work with you. You need to go back to tools or we need to train you for something else, or you need to leave the organization.'"

Harrison and his human resources (HR) team concentrated on coaching supervisors in how to manage employees through what they called the ABC technique, or Antecedents, Behaviour and Consequences. He explained: "If there are no consequences, you can't make change with people. If you ask somebody to come to work on time and they don't and there's no consequences, they're probably going to continue to be late. It's both positive and negative. It's not all on the negative side." Every supervisor in the entire company had ABC training and it made an enormous impact on their managerial skills. If ABC sounds like Skinnerian reinforcement theory, that's because it is based on Skinner's principles. And although it is simple to

understand, it is difficult to apply because it demands that the supervisor pay close attention to employees, find the time to reward good and the courage to confront bad behaviour.

Finally, making sure that the right people were selected for managerial positions created a more cohesive middle management team, one that acted in partnership with the senior executive and with the change. Harrison and the HR team discussed every high potential employee that they identified through training events. As Harrison commented: "I'll come back and I'll say, 'You know, we had a bright young lady, 32 years old, and she's doing this and she's done all these things. When are we going to do something with her?' 'Well, when Bob retires.' 'When is that?' 'Well, I don't know, 12 years.' I say, 'She won't be here.' You have to make spots. When we find those exceptions to the rules, what we call really the high potential, high performers -- I don't know what it is, eight percent of the population, six or eight percent -- you have to make spots for them."

Harrison's final word of wisdom about building partnerships for change: "The first thing I do when I go somewhere is assess the team. What have I got in the way of talent, where are the weaknesses? That's number one. Number two is to simultaneously let them know what's expected. 'Things are going to change. We're going to do it this way or that way. I hope you buy in. We want you to be here.' That's the first thing you have to do. And when I have had bumps along the way, it's when I forgot that about people."

Attempts to build a better relationship with the unions at CNR had more uneven results than other partnership initiatives. Dakens explained one of the successful aspects: "None of the other railroads in the U.S. negotiate with their unions directly. They are all part of industry-wide pattern negotiations and they're all on the mileage basis. One of the advantages of having them on an hourly rate deal is you don't need as many of them because you're working them on an hourly basis versus a miles basis, and in theory, you can have them work twice as many miles on a regular hourly basis than on a pure mileage basis... We shared the savings ... Once you get a few of them, pockets of them, on an hourly basis, they make more money, they have better work-life balance, then this (message) spreads like wild fire."

Still the relationship was testy with some of the unions, although Harrison saw a cause for optimism. "Things are swinging back. I've seen it with labour and engagement. It goes too far one way and management gets the upper hand and they abuse things and then the pendulum swings back and labour gets it and they go too far. We are working very, very hard there. We have made some huge breakthroughs with labour relations."

Harrison even saw potential in convincing his competitors to adopt the scheduled railway model. The goal was to work together to make railways more competitive with trucking. "We have no pride of authorship, but we think we have something here," he said. "We're trying to influence our railroad partners to work with us. If we can all schedule, cut down congestion at gateways, we'll gain market share. We'll all benefit."⁷

Persuasion

My research into the key success factors of change initiatives strongly supports the importance of persuasive communications and many other experts agree. But merely recommending that change leaders communicate is not helpful enough. What is needed is more detailed descriptions of how change leaders' communicate, and Harrison provides an excellent example. Throughout the transformation of CNR he had to convince multiple audiences to accept the scheduled railway with all the big, difficult changes it entailed. Think about it: he was surrounded by skeptical executives, complacent employees and hostile unions. Communicating

⁷ Vantuono, W.C. (2001). How CN does it. *Railway Age*. May, 202(5) 27-30.

well required a lot of hard work and skill.

For example, soon after his arrival at CNR he uncovered widespread “early quits”, a sloppy work practice that was totally at odds with the efficient railway CNR was trying to become. “I walked up into a control tower in Battle Creek Michigan where I saw five or six engines sitting at 2:00 pm which meant the daylight shift had already gone home and the afternoon hadn't come. ... There were a lot of them who turned in 12 hours (for pay purposes) but only worked six. ... I said, ‘We're not going to do this on my watch. So stop, today. That's grounds for dismissal.’ As we were leaving the tower, one of the officers came up behind me and said, ‘It's worse than this in Canada.’ They began to see my reaction and I stopped in my tracks and I said, ‘Where in Canada?’ They said, ‘Everywhere.’ So I said, ‘Look, this is where we're going to start.’.... We started everywhere overnight.” Leaders cannot get this sort of on-the-ground intelligence sitting in their offices and Harrison's willingness to go into the field, to observe, explain and fix problems meant his communications efforts were on target.

Harrison started by stopping the bleeding from practices like the “early quits” and safety violations, but he knew that wouldn't be enough to change the inefficient culture. It took a campaign of communication using various devices – training, town halls, frank discussions, discipline, among others. One of the most original and effective was the previously mentioned “Hunter Camp”. Harrison invited a cross-section of employees below the VP level to a three-day retreat, originally held at his camp, thus the name. He used this opportunity to get across all facets of the railway business to the retreat participants. It was so effective with the first group that he and his HR executives increased the number of retreats from four in 2003 to 18 in 2006. In the end over 2000 people attended the Hunter Camps. “If I can take 20 leaders and influence those 20 I'm actually going to impact maybe 400 to 600 people because those leaders are going to reflect and do what we want to get done.” Once enough of these company leaders became precision railway disciples, they in turn convinced others until there were enough converts to create a critical mass of support. And then he began to experiment with inviting selected union leaders to the camps as well.

Hunter camps were key to getting people together from all over the system and the camps became a team-building exercise. Thus they overcame the common weakness today that organizations have talented leaders but they don't function as a cohesive team.

A good change leader has to set an example to convert people and Harrison was not afraid to put himself on the line to do this.

One vivid incident occurred when he travelled to a CNR site badly affected by a flood to watch the reopening of the track. As they got ready to run the first train across, an official reported that the engineer didn't want to go because he thought it was unsafe. Harrison said, “That's understandable, it's fine. He doesn't have to go.” Then the conductor said he wouldn't go if the engineer didn't. Who was going to take the train across? “I said, ‘John and I will take it (John was the operating vice president). We're capable of doing that. It's just two miles across.’ I was a little concerned about it. It wasn't just a slam dunk.” But as the two senior executives started off, the engineer changed his mind. “He said if you're going, I'm going, and so all four of us went.” Of course, this anecdote complete with photographs, spread like wildfire around the company. A story like this can be worth a thousand admonitions.

Another similar incident occurred when Harrison noticed that an employee was slowing down a switching operation. There were several officers and supervisors in the tower above the yard, observing on a computer terminal, ignoring the issue. “They'd much rather deal with the tube than deal with people. They don't want to see those behavioural issues that have to become confrontational. So I stood watching what they were going to do. They saw me watching. They knew I was becoming upset and they were getting nervous. Finally, one of them got on the radio and started calling the person and saying, ‘Pick it up a little bit or --’.

Out of frustration I finally said, 'Wait a minute. You all stay here.' And I went down the steps and walked out. It was a hot summer day in Memphis and 95 degrees. He was a heavysset switchman/brakeman and I said, 'What is your problem?' He said, 'I don't have any problem.' I said, 'Sure you do. Do you understand how your performance is slowing down this whole operation and impacting our customers? ... We have to go. You have to pick it up. You are going to have to do better. If you don't do better in the afternoon than you did in the morning you're not going to be with us anymore.' And he said, 'You know, I've been here 15 years and nobody has ever told me that.' And I said, 'Well, sorry, but you can't say that anymore.' He picked it up and that story was all over the railroad overnight." It is difficult to think of a better way to communicate the importance of efficiency than this story.

There were many such stories and so Harrison and Edwards decided to collect them in a book. When they heard about the book, a lot of employees started sending in their own stories and the collection, *How We Work and Why: Running a Precision Railroad*, grew from there and was distributed to each employee. As Edwards commented: "I think you get a core group who are excited. We've had letters from employees about the book and we see employees saying, 'I'm part of a railway revolution, I feel that, I know it, I can see it.'"

Harrison and his executives waged a campaign for the minds and hearts of the employees. But they did not neglect the pocketbook. First of all they gave the employees an economic education and an economic stake in the company. There were interest free loans given to anybody that wanted to buy CNR stock, and stock was given at a preferred rate. Plus the company matched 35 percent of the employee's investment up to 6 percent of wages. It wasn't long before almost 65 percent of the employees bought into the plan. Savings from increased efficiency were shared with employees, answering the perennial question of "What's in it for me?" Edwards explained the tradeoff for hourly workers: "For them, it meant a 30 percent increase in salary, which is not bad, and they're home at night more often. Before, out of five nights a week, they might be home one. Now they're home mostly five and making more money. There's a quality of life, but when you come to work you've got to work."

Aware of the old adage 'what gets measured gets done' CNR introduced a performance score card for unionized employees. Dakens explained: "It's a single piece of paper that says to the employee 'Here are the five principles (that are important) and how they relate to your job. Every year we're going to give you some feedback on how you're doing.'" This was a simple yet relatively rare practice to ensure that every unionized employee got formal feedback on their performance on a regular basis. "I know that 95 to 98 percent of those score cards will be a positive experience for that employee because they're doing the right things. If you want to encourage people to continue doing what they're doing, you have to continuously recognize and reward them." To help them, supervisors were trained to give employees appropriate feedback through the ABC program. Furthermore, they were encouraged to use a four-to-one positive to negative feedback ratio with employees, a ratio which is a scientifically proven way to change undesirable behaviours and reinforce desirable ones. But, when you do apply a negative consequence it's got to be significant enough to eliminate the bad behaviour that you're trying to eliminate."

The big payoff for CNR would come when a majority of people moved further along the continuum from just complying to being engaged, and even beyond to feeling fully empowered to make a difference in the company. As Edwards summed up: "Some people make a difference in their corporate histories. Hunter is changing the game. It is very exciting."

Perseverance

Many companies make it through the initial stages of change but falter when things threaten to revert back to the mean. That's when perseverance is especially required. According to Edwards, the effort must be unremitting: "Some people are always looking for cracks where the rats can slip in.... Some people think that we're going to ease off change, so we're always fighting that." He explained further: "Every morning when you come in, the behaviour you accept, the standards you set, accept, communicate, measure, and reward determine what the culture and the performance of the company are. The goal is to get everyone to commit to continuous improvement and not sink back into complacency, to walk in every day and even though things are running well, to ask 'What can we do differently to improve even further?'"

Dakens estimated that it would be a 15-20 year struggle to change the CNR culture. In his view people are a product of their environment and their values and beliefs are fixed by the age of 20, unless they have what he calls a "significant emotional event" that changes their value system. He says: "As a leader, you need to understand where these people are coming from and to accept that having a different set of values is okay. You just need to work through that with the individual." Accepting that people's value systems don't change easily does not mean that their behaviour is immutable, and CNR has devised many ways to affect behaviour change.

Harrison understood the necessity of continually reinforcing the change message to prevent any drift back to way things were before. "I try to bring it up all the time what got us here. Don't forget what got us here. We've been talking about the same values since '98.... We don't have a different deal every year. It's the same blocking and tackling, same ABCs, same service, cost control, asset utilization. Everybody knows that at the company now." In Harrison's opinion, culture change takes a long time and may have to be accomplished one person at a time, but "it's rewarding, and that's the way you get your payoffs." And in the end, perseverance made the final difference in completing the transformation of CNR.

The Results

Since the transformation began, CNR has seen a constant rise in its sales, profits, cash flow and, consequently, its market value. The operating ratio - the cost of operating and maintaining the railway as a percentage of revenue - fell from 89% in 1995 to 61% in 2006, well below that of its main competitors, which average about 80%. At the same time, its revenue almost doubled. By any measure, CNR is now a huge turnaround story and is now considered by railway analysts to be the most efficient, profitable and innovative railroad in North America.

The Rest of the Story

Hunter Harrison retired from CNR in 2010 and planned to raise and train horses for show jumping. But railroading seems to be in his blood.

In the fall of 2011, Harrison was approached by the hedge fund Pershing Square Capital Management led by activist investor Bill Ackman, who was undertaking a proxy battle with the board of directors of Canadian Pacific Railway (CPR). Ackman was ultimately successful in the proxy battle, the CEO was dismissed and on June 29, 2012, Harrison was appointed President and CEO of Canadian Pacific Railway, the main Canadian competitor of CNR. Peter Edwards joined him soon after and so began the transformation of CPR. Its stock went from \$74.72 on June 30, 2012 to a high of \$241.67 in October 2014.

About the Author



Carol Beatty is former Director of the Industrial Relations Centre at Queen's University at Kingston, Ontario, and an Associate Professor with Queen's School of Business, where she has taught in undergraduate, graduate and executive education programs.

An acknowledged expert on change management, strategy development, high performance teams and facilitation, Dr. Beatty focuses her consulting on human and organizational issues in modern organizations. She has studied the implementation of change for over 25 years, including technological change, strategic change, mergers and acquisitions, structural change, and employee buyouts.

An active researcher, she is currently completing a multi-faceted study on the key success factors of change management, comprised of a large-scale survey and several detailed case studies. She is also well-known for her major study of high-performance teams in which she isolated the three skill sets teams need to develop to be effective. Dr. Beatty's publications have appeared in such journals as the *Sloan Management Review*, *Human Relations*, the *California Management Review* and the *Business Quarterly*. She completed her MBA and PhD at the Ivey School of Business at the University of Western Ontario.

Carol is a sought-after consultant and speaker who has helped many private and public sector organizations become more effective. She is a trained facilitator in Future Search (Weisbord and Janoff) and Whole System Change (Dannemiller Tyson).

Recent publications include *Building Smart Teams: A Roadmap to High Performance Teams* (2004 with B. Barker), and *Employee Ownership: The New Source of Competitive Advantage* (2001 with H. Schachter). In addition, Dr. Beatty has authored several complex multimedia business simulations used in high-level human resources education: Panorama at the Crossroads, Change-O-Meter, and Harmon Health.

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