

Case #2: Canadian Tire Corporation

2003: Canadian Tire Corporation and Business Intelligence

The case defines business intelligence (BI) as “the consolidation and analysis of internal data and/or external data for the purpose of effective decision-making.” According to “The Architecture of Business Intelligence” article, BI encompasses not only analytics, but also processes and technologies necessary for decision-making.

BI, in theory, could provide numerous benefits to CTC. In general, BI for retailers has been known to improve sales and customer service. CTC’s competitors (Hudson’s Bay and Ace Hardware) are using BI to access and interpret data about suppliers, financial performance, and category and store sales, as well as information regarding promotions, pricing, and product decisions and trends. A new and standardized business intelligence architecture at CTC would enable quick and easy extraction of accurate data required by the business – yielding a “consistent version of the truth” essential for analytics¹. BI would also likely reduce IT spending over time. To summarize, BI would enable sophisticated analytics by providing consistent access to standardized data for all CTC groups that would be the basis for crucial business decisions.

Currently, CTC appears to be in Stage 3 of the 5-stage evolutionary process companies typically follow to develop their IT analytical capabilities: “The organization has a proliferation of business intelligence tools and data marts, but most data remains unintegrated, nonstandardized and inaccessible.”² Stage 5 is CTC’s goal: “The organization has a full-fledged analytic architecture that is enterprise-wide, fully automated and integrated into processes, and highly sophisticated.”

CTC’s BI strategy is laid out in four guiding principles: to be business driven, support the IT strategy, keep the learning in-house, and make changes sustainable. These principles were established to support the BI program goals which included: embrace the value of an optimized BI environment, foster a culture that values high data quality, realize cross-functional synergies within BI and data management, gradually

¹ “The Architecture of Business Intelligence: Aligning a Robust Technical Environment with Business Strategies.” Davenport, Thomas H. Case No. 2202BC. Published 03/06/2007, Harvard Business School Press, Page 3.

² Ibid. Page 4.

implement necessary technology changes, and implement necessary organizational changes in stages (processes, roles, responsibilities).

2003: BI Implementation Challenges

Of the ten biggest challenges of BI implementations, ROI justification and budget constraints would capture my attention most if I was a non-IT manager. Education and training for end-users would also be of concern to me. As an IT manager, my top concern would be data quality. As we read in “The Architecture of Business” article, the greatest data challenge facing companies is “dirty” data: “information that is inconsistent, fragmented, and out of context.” To be valuable, data must be correct, complete, current, consistent, in context and controlled, a tall order considering the current state of affairs in most companies.³ This tall order is illustrated by the estimate that between 25 to 30 percent of a BI initiative typically goes toward initial data cleansing.⁴ To further emphasize the point, according to the “What are data warehouses and what are their benefits?” entry in our Business Driven Information Technology book, “A successful data warehouse is the *foundation* of [...] business intelligence” (italics mine).⁵

2003: “Shadow IT” Groups

The “shadow IT” groups pose significant challenges for the implementation of the BI strategy. They represent not only additional unknown cost, but also security risk because they work outside the governance of the IT function. These “shadow IT” groups have brought in multiple independent data sources, technologies, and applications to meet the needs of their user groups. While better business decisions were enabled in the short-term as a result, these groups now stand in the way of an enterprise-wide set of systems, applications and governance processes that enable sophisticated analytics across the entire company. Without their cooperation and agreement to migrate to the new BI architecture, BI efforts will remain fragmented, costly and ineffective.

³ “The Architecture of Business Intelligence: Aligning a Robust Technical Environment with Business Strategies.” Davenport, Thomas H. Case No. 2202BC. Published 03/06/2007, Harvard Business School Press, Pages 11-12.

⁴ Ibid. Page 12.

⁵ “Business Driven Information Technology: Answers to 100 Critical Questions for Every Manager.” Laube, David R. and Zammuto, Raymond F. Page 90.

2006: Response to Perceived Technology Risk

Upon learning that the enterprise risk management (ERM) framework cited technology of one of 15 principal risks at CTC, and that technology risk had the potential to affect CTC's reputation and customer service, three committees were formed within the board of directors, playing to the firm's collaborative culture. While these committees may have added a nominal amount of political support for BI, it did arguably nothing to actually move the BI project forward. What the BI initiative needed at this point, more than ever before, was an executive order from Wayne Sales (President and CEO), Andrew Wneck (SVP IT & CIO) and Mark Foote (President, CTR) together announcing that the IW would be decommissioned immediately and that all company resources necessary would be committed to data cleansing and migration to the EDW. As the ERM framework noted, "The integrity, reliability and availability of the technology and of the data processed and stored by that technology are critical to the daily requirements of our business and finance operations."⁶ The report goes on to describe the potential consequences that would result if this risk were to be realized. Now is not the time for a collaborative decision, but for a strong executive order to protect the short- and long-term survival of the firm.

2006: Data Governance

In respect to data governance – "specifying how the data should be managed and controlling who had access to it" – Canadian Tire was in a rough spot.⁷ The company had significant "dirty data" problems discussed above under "BI Implementation Challenges." CTC's data was inconsistent across the board and even the same businesses used differing data collection and aggregation conventions. In the midst of this inconsistency, however, CTC executives were comfortable and reluctant to change. This is not surprising considering CTC's cautious and results-oriented culture. Executives had not yet been convinced that the new BI initiative would bring greater benefits, and so had not made a move to wholeheartedly support the initiative. I wonder what would convince them? Perhaps adoption of BI by CTR (by executive order) would be a good place to start. In that way, BI would start by supporting one

⁶ "Canadian Tire: Business Intelligence in 2006." Richard Ivey School of Business. Page 2.

⁷ Ibid.

of CTC's strategic goals, to "strengthen and accelerate growth and performance in CTR and the associate dealer network (ADN)." Once adoption in CTR was complete and results began to show, it's likely that the other businesses would jump on the bandwagon. On the other hand, if these executives were truly results-oriented, they should clearly see that the results they're getting right now are not acceptable. High-level sponsorship and education regarding benefits of BI are essential components to improving data governance. However, high-quality data governance is foundational to a successful BI initiative, and therefore should not be subject to the whims of CTC executives or those assigned a role in the "Data Stewardship program." Policies, standards, guidelines and business rules must be put in place immediately and then enforced by all business managers. Requiring feedback on each request from a Data Steward, Owner or Custodian would introduce significant costs, delays and inefficiencies.

2006: CTC and BI

CTC has barely moved the BI project forward. Essentially they are still at square one, although it seems that they do have the technology infrastructure in place, including the new EDW which was supposed to be ready in Phase I (although we learn later that it's still not up and running yet in 2008). According to the entry "What is data mining and what are its uses?" in our Business Driven Information Technology book, "Any data-mining capability starts and ends with the business objectives and a design of the learning environment."⁸ This learning environment is a "specific plan of discovery" whereby questions raised in the pursuit of business objectives may be answered.

CTC has no idea what questions they're trying to answer (even though one of their guiding principles is to be business driven)! They're attempting to pull together data that is already floating out there somewhere into a nice and neat EDW package which will then magically give analysts and end users whatever information they want. Eubanks is just beginning to realize this, in his admission that BI

⁸ "Business Driven Information Technology: Answers to 100 Critical Questions for Every Manager." Laube, David R. and Zammuto, Raymond F. Page 91.

involved “much more than just having the right technology in place: the right people and processes were also crucial.”⁹

CTC needs to go back to the drawing board and ask the following questions: “What data is needed to compete on analytics? Where can this data be obtained? How much data is needed? How can the data be made more accurate and valuable for analysis? What rules and processes are needed to manage data from its creation through its retirement?”¹⁰ And business leaders need to be very closely involved in this effort; business leaders should be held accountable for understanding the critical role of technology in their business.¹¹

2008: CTC and BI

Now, in March 2008, CTC is still at square one. They are touting the same plans they did in 2003 (“improve process, upgrade underlying infrastructure, rationalize IT systems and develop new applications, replace legacy systems”)¹². It seems that between 2003 and 2008, all that CTC did was emphasize data as a resource to employees and managers and give at least some clients access to data mining capabilities through BICC. However, we learn that only 5 percent of the data in the IW had been moved over to the EDW, the necessary foundation of the new BI initiative!

And again, the BI team wants to turn to a business sponsor (supported by several working committees) and another executive-level committee to increase focus on BI. Clearly the BI team is planning to spend their 5th consecutive year increasing commitment from the business for BI instead of actually implementing the system. It seems that the BI team is crippled by their collaborative culture, taking no decisive action until all 45,000+ employees are on board with the idea.

⁹ “Canadian Tire: Business Intelligence in 2006.” Richard Ivey School of Business. Page 4.

¹⁰ “The Architecture of Business Intelligence: Aligning a Robust Technical Environment with Business Strategies.” Davenport, Thomas H. Case No. 2202BC. Published 03/06/2007, Harvard Business School Press, Page 7.

¹¹ Ibid. Page 2.

¹² “Canadian Tire: Business Intelligence in 2008.” Richard Ivey School of Business. Page 1.

Sample #2

According to Michael Eubanks, the director of marketing information technology for Canadian Tire Corporation (CTC), business intelligence (BI) is “where the real return on investment is.” Being a tech guru, Eubanks probably feels this way because he sees BI as a source for making CTC run more efficiently. BI allows companies to consolidate and analyze internal and external data in order to make more effective business decisions. “At the core of all BI initiatives is a data warehouse to hold the data and analytics software. The data warehouse stores data from operational systems in the organization and restructures it to enable queries and models to extract decision support reports.”

By adopting better BI in 2003, CTC would be able to communicate better through their multitude of technology-based systems and programs including hardware, software, operating systems, network services, and applications. In all, the CTC IT group managed in excess of 100 various mainframe, server and desktop development and integration tools during 2003. BI would allow CTC to reduce its IT force because there would be a greater sense of familiarity and expertise with fewer systems than the 100-plus that they were currently working on each day. CTC would also cut down on their general IT operating expenses because they would be working on a giant integrated system as opposed to a massive system that did not communicate or work well together. Another benefit of utilizing BI would be to create a better platform for communicating information across various channels of the company that would allow for all of the branches to make more profitable business decisions.

From the perspective of CTC, their BI initiative primarily revolved around Canadian Tire Retail (CTR) and an effort to effectively “deliver real business value” which would involve changing infrastructure, organizational structure, and business processes. At the same time, CTC did not feel that they could completely abandon their current needs and operating tactics and tools. By doing so, CTC was aiming to allow itself to take advantage of unexploited profit and growth opportunities within preexisting areas of the company, enhance their growth and performance initiatives, explore new opportunities, and improve their financial capabilities through capital and cost productivity.

The BI initiative would require implementation challenges, the most difficult which would be modifying CTC’s complex legacy system and complex architecture. This endeavor would require an enormous amount of man-hours to marry all of the existing systems to that they could communicate. With over 450 production applications, 14 operating systems, 10 hardware platforms, and seven database management systems, the IT department would have their hands full. Furthermore, once a fluid system existed, employees and associates would have to be retrained on the new systems and perhaps abandon those with which they were most comfortable.

The lack of acknowledgement and assessment for all of the work performed by “shadow IT” groups also poses a problem. These groups were responsible for the development of “substantial IT resources that were neither being managed nor considered in the high costs under scrutiny within the IT function.” As BI ideally allows the company to operate more efficiently and analyze cost-saving procedures, they will or should recognize that they were not accounting for a fair amount of expenses within IT. This is problematic because IT costs were already higher than industry standards and

growing. The number that CTC is currently looking at in order to reduce costs for IT is incorrect and more expensive than perceived.

An fairly easy challenge involving BI was addressing IT's reaction and focus on short-term needs. The IT manager and managers of other departments should make sure that the objectives and missions of the company as a whole and those within each department are explicitly stated and understood. With clearly defined long-term business strategies, IT employees could then determine which issues were more critical than others.

By 2004, CTC had completed a risk management assessment by making use of its enterprise risk management (ERM) framework. Upon doing so, the assessment identified 15 principal risks which included technology. The conclusion behind the technology risk was that it had "the potential to CTC's reputation and its ability to service customers." The response by CTC was to assign each member of the company's board of directors to one of three committees: the social responsibility committee, the risk governance committee, and the audit committee. With this appointment also came responsibility for reporting, executing oversight, and operational accountability.

I feel that this was a poor way of addressing the technology risk because the board of directors is supposed to act as a governing body that provides guidance and advice while making overarching decisions that affect the company. These appointed roles essentially make each individual an acting manager but this is not what they should be spending their time doing for CTC. Areas like operational accountability should fall on the shoulders of managers within each respective department and the employees that they manage. Plus, these individuals collectively want CTC to perform well and look and

as if it's performing well, but there are no checks-and-balances systems in place to ensure that committee reports are accurate.

Data governance also became an issue during this time as access to data was becoming more limited. The problem was that had historically been collected, managed, and aggregated through an assortment of methods, depending on the individual and/or department, so the data was inconsistent. Due to this inconsistency, it was hard to determine which data should be available to whom and why. This made a lot of employees and managers apprehensive and irritable when they began to feel as if their resources were being constrained. The changes brought about by data governance contradicted the culture of CTC which was trying to evolve into a company that consolidated data for the purpose of sound and educated decision-making. How can managers be expected to make good decisions based off of data that is either inaccurate or that they are denied access to for unspecified reasons?

It appears as if CTC is heading in the right direction in 2008. Through their BI initiatives and programs like Data Stewardship, CTC was actively trying to make improvements to the company's IT and operating methods while proactively and reactively addressing issues and concerns. They had not given up on their efforts to seek out areas of improvement through BI and other initiatives. CTC appears to be more financially and technologically headed in the right direction.