

# Business intelligence strategy at canadian tire



Over the last year, the IT group at CT had promoted a strategic initiative to deliver all business value from business intelligence (81) over the next three years. A massive change effort involving infrastructure, organizational structure and business processes across most of the business would be required. Nevertheless, the plane was still in flight and current needs could not be completely ignored. As the door swung closed on their meeting, Wine and Banks sat down to discuss how they might keep the plane in the air while rebuilding the engines.

Canadian Tire Corporation In 1922, John and Alfred Bibles, two brothers, opened a garage and auto parts store in Toronto, Canada. By 2003, their enterprise had grown into CT, a network of businesses including retail, financial services and petroleum operations. More than 45, 000 individuals worked at CT operations across Canada in more than 1, 000 stores and gas bars. CT businesses were divided into five main groups: 1. Canadian Tire Retail (CTR) was one of the best-known Canadian retailers, with 390 associate dealers owning and operating 430 stores. Each store was effectively three specialty stores under one roof: automotive, sports and leisure, and home products. An associate dealer was the owner/manager of a CTR store. As a group, they were important within CTR as it was through their investment and community involvement that CTR had grown throughout its history. This structure also made CTR an unconventional retailer in the retail industry since the associate dealers were CTR's main customers. 2.

Canadian Tire Financial Services (ACTS) was the financial services arm of CT and was primarily responsible for managing the Canadian Tire Options

Mastered program with over two million cardholders. Additionally, ACTS managed the auto club, offered a variety of insurance and warranty products to more than six million customers and provided integrated support to CT stores, automotive service centers and online and telephone shopping businesses. Located In Wellhead, Ontario, and Burlington, Ontario, ACTS employed more than 1, 300 people. 3.

Canadian Tire Petroleum (ACT) consisted of more than 200 gas bars, 20 Simonizes car washes and 14 Pit Stop locations. Considered an Important, Integrated component of the overall strategy, ACT partnered with CTR to give customers discounts on store merchandise through the popular Canadian Tire Money loyalty catered to avid home mechanics and professionals. . Marks Work Warehouse was acquired in early 2002 and was a large retailer of casual and work wear for men and women at over 300 locations across Canada (known as Liquefier in Quebec).

Corporately, CT had completed a strategic plan in late 2002 that stated a clear corporate goal – to become a top quartile performer in our market sector as measured by total return to shareholders. This strategic goal was to be accomplished through four strategic imperatives: 1 . Strengthen and accelerate growth and performance in CTR and the associate dealer network (DAN). 2. Pursue unexploited growth and profit opportunities in existing business. 3. Explore new business growth opportunities. 4. Enhance financial flexibility through capital and cost productivity.

This new CT strategic plan guided the development of a CT IT strategy in February 2003, an effort led by senior vice president and CIO Wine, to

complete the first IT strategy document in several years. As CIO, Wine was responsible for overseeing the information systems (IS) of the entire enterprise, but not within the associate dealers stores. The Bal initiative, while important to the organization overall, was primarily associated with CTR, and it represented one of many IS initiatives competing for CT support and funding based on the new 2003 IT Strategy 2003.

Figure 1 provides an organizational chart of the senior management at CT and CTR. Figure 1 : Organizational chart of Canadian Tire Corporation and Canadian Tire Retail Source: [http://www. Candidature.](http://www.Candidature.Ca/Stenciling/h_restore.HTML)

Ca/Stenciling/h\_restore. HTML, accessed August 22, 2003. Information Systems at CT and The New IT Strategy for 2003 to 2005 The Web of businesses comprising CT was accompanied by a highly complex technical architecture (see Figure 2 for an overview of their organization).

A recent enterprise genealogy review revealed a multitude of hardware, software, operating systems, network services, development tools and applications being utilized across the business. Figure 2: Canadian Tire Corporation enterprise technology overview For example, CTR ran IBM AS/400 systems at the store level with point-of-sale (POS) systems and servers that networked to IBM mainframe systems at the CTR data centre. These systems were funded 50 per cent by CTR and were supported by the retail systems group at CT.

The systems at Marks Work Warehouse still remained entirely separate from the rest of the CT infrastructure. ACTS in Wellhead operated on IBM ERRORS with Intel-based workstations. Paratroopers and ACT relayed transactions

directly into the corporate network from their POS systems. In fact, the CT IT group supported, operated and managed over 100 different mainframe, server and desktop systems, seven database management systems and over 450 different production applications and desktop-based applications and tools.

Substantial proportions of the hardware, operating systems, network services, data services and development and integration tools were identified as niche (exceptions to current standards) and unset (to be retired) technologies that needed to be addressed in order to meet the objective of bringing IT spending as a percentage of sales under industry benchmarks of about two per cent. Currently, CT's IT spending, when measured by accounting for all IT expenditures (including assets and resources expended on IT in other areas), was around this benchmark.

The CT IT strategy document concluded that IS at CT had evolved into a highly complex and costly environment that offered substantial opportunities for consolidation, simplification, integration and cost-cutting. The results of several IT reviews carried out by consulting firms over the last seven years supported this conclusion. The results highlighted several themes faced by the IT group:

1. The staff were good, hard-working people who did not necessarily have the right skill set for future programs.
2. IT costs were higher than industry standard and growing.
3. Business users were not assigned responsibility for their IT costs.
4. Project priority was not set using business value in relation to costs. Poor coordination had resulted in redundancies and lack of standards.
5. A complex legacy environment existed as a result of modifying existing systems and adding new systems

with consideration of global costs. 6. IT reacted to short-term needs as there had been no long-term business strategy. 7. “ Shadow IT” groups within the business units had developed and represented substantial IT resources that were neither being managed nor considered in the high costs under scrutiny within the IT function.

In spite of these challenges, IT had delivered several key initiatives in the past few years, including the development of a demand forecasting and replenishment system, YAK upgrades, the development of www. Antimatter. Ca and Customers a supply chain management system. To build on their strengths and the recently developed business strategy, IT Strategy 2003 laid out a strategic vision to be an agile IT team, aligned to business priorities, operating a simpler technical environment with the appropriate standardized processes. Consistent with this vision, three strategic IT imperatives were identified: 1 .

Better alignment to the business to support strategic and operational priorities, timely project delivery and adaptability to changing business priorities. 2. Cost intro through simplifying the technical architecture, improving productivity and controlling expenses. 3. Implementing governance of IT resources including standardization, risk management and the development and implementation of sustainable processes. These three imperatives were laid out to guide action and proportioning within the IT group and the CT network of business as a whole.

Four programs were developed to enact the IT vision for the period of 2003 to 2005. Quarterly and assume responsibility for developing enterprise

standards, monitoring IT spending, undertaking annual IT planning, monitoring the IT strategy and roving opportunities for sharing and collaborating across the enterprise to realize synergies. The second program, organizational and people capabilities, specified key capabilities and services the IT group would need to be able to offer to the organization.

Business-consulting, solutions integration, end-user services and support, platform operations and management, and enterprise IT planning and architecture were just some of the capabilities outlined in the IT strategy document. The third program, process improvements, included coordinating an annual IT treated planning process based on the corporate strategic planning cycle, the development of an opportunity management process that would standardize and regulate the identification, analysis and approval of IT project requests and a monthly IT scorecard reporting on key performance indicators including IT spending as a percentage of sales.

The final program was entitled technological direction, and it laid the foundation for re- architecture the organization. To support the IT imperatives outlined above, this program identified five areas for attention: business intelligence and data management, application deployment, integration and messaging, standardization and simplification, and security deployment. Business intelligence and data management activities were identified as high priorities. Consequently, Bal quick win projects were prioritize first with development and implementation of a Bal strategy and structure to follow over the life of the IT strategic plan.

Business Intelligence and the Retail Environment Historically, retail organizations have invested significantly less in information technology than other industries (two per cent of revenue compared with about eight per cent of revenue across other industries). This spending has focused mainly on POS and supply chain management systems. One of the important exceptions to this rule is Wall-Mart. However, due to increasing competition, retailers have turned to BI to improve sales and better serve customers.

A recent Forrester Research report indicated that IT executives at 286 North American companies with over \$1 billion in sales intended to make business intelligence analytics their second largest IT investment after their Web portal investments. BI is the consolidation and analysis of internal data (e. G. , transactional POS data) and/or external data (e. G. , purchased consumer demographics) for the purpose of effective decision making. Assembling and merging data from various sources is a complex task, and analysis requires the use of highly sophisticated skills.

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 (e. G. , inventory, POS, accounting, marketing, etc. ) and restructures it to enable queries and models to extract decision support reports. With no clear dominant players in the business intelligence market place, many niche players have emerged to serve data warehouse and BI analytics markets an industry that is expected to grow from US\$30 billion to US\$75 billion by 2005 in marketplace.



The supply side of the BI marketplace has been characterized by a proliferation of specialty suppliers rather than dominated by a few major players. It has grown through the evolution of various software products and tools offered as standalone products or as part of other product offerings such as ERP systems and data warehouses. The result is that any given organization using BI may be managing and maintaining a half dozen (or more) BI packages, depending on the needs of the end users groups. However, industry watchdogs are predicting consolidation in the BI marketplace around a few high-profile players offering end-to-end BI solutions in the four dominant tool areas: enterprise reporting, ad hoc query and analysis, online analytical processing (OLAP) servers, and analytic dashboards. 2 The recent acquisitions of Crystal Decisions by Business Objects for US\$820 million and of Brio Software by Hyperfine for US\$142 million (during the summer of 2003) provide some evidence of this, although, currently, it is difficult for end-to-end providers to compete with the functionality and capability of discrete specialty providers.

This naturally makes it challenging for organizations selecting BI products and tools. BI software is provided by a range of organizations: 3 Insightful: specializes in predictive modeling and data mining in the financial services, pharmaceutical and government markets ([www.insightful.com](http://www.insightful.com)). Brio Software: is an established player whose Performance Suite helps organizations spot trends and manage performance goals through its query and reporting analytical tools ([www.brio.com](http://www.brio.com)). MM: provides a range of tools to manage both the data warehouse and applications that assist in mining the data including OLAP tools and data mining ([www.bmi.com](http://www.bmi.com)).

Cons: another established player, Cons furnishes analytical software that provides a 360-degree view of the business including sales, accounts receivable, suite of products is used by Best Buy, Ace Hardware and Hudson's Bay Company, to name a few. Recent product development efforts here have focused on predictive modeling based on historical trends (womb. Microsurgery. Com). Business Objects: specializing in analytical tools, this company's Bal products help track performance using established metrics and use predictive modeling to forecast customer behavior. 1 . Wild profusion of Bal tools.

Source: <http://www.Densities.Com/research/display.Asp?Id=6642&t=y>, accessed August 24, 2003. 2. Analysis of recent Bal marketplace changes.

Source: <http://buckminsterfullerene.Toolbox.Com/documents/document.Asp?I=2316>, accessed August 24, 2003. 3. A data mining directory. Source:

<http://www.PCMCIA.Mom/5,o.Asp>, accessed August 24, 2003. Figure 3: Business Intelligence Analytics Suppliers For example, in order to improve profit and customer service, Hudson Bay Company (HUB), a major Canadian department store chain, is currently in the process of a multi-year effort to upgrade its IS.

Two major data warehouses (one for department store operations and one for discount store operations) have been merged into a single data warehouse enabling executives, store managers and business analysts access and interpret data about store sales, category sales, financial performance and suppliers. Ace Hardware (American hardware retailer similar to CTR in that stores dealer-owned) launched a Bal initiative with its 5,000 stores whereby store owners and Ace executives could view and <https://assignbuster.com/business-intelligence-strategy-at-canadian-tire/>

analyses information to aid in category management and promotion decisions.

With over 65,000 products from 3,000 vendors, these activities would be impossible for a single store to undertake. A price-setting model has been particularly effective in allowing Ace Hardware store owners to see the implications of setting prices above or below those recommended by head office. While the current application focuses mainly on analyzing historical trends, Ace is also developing an application to use and view real-time POS data in real time to see the status of pricing, product and promotion decisions. Numerous other examples of the effective application of Bal in the retail industry have also been observed. Despite the benefits from Bal and data warehousing investments, implementation of these projects consumed huge organizational resources and was difficult. An DC report revealed many challenges associated with the iterative nature of over 400 Bal implementations reported by over 1,300 respondents. Importantly, the study findings indicated that 35 per cent of all Bal implementations were unsuccessful, 35 per cent were adequate and 30 per cent were described as successful: the larger the organization and the more complex the Bal implementation, then the lower the likelihood of launching Bal successfully, including being on time and on budget.

These organizations also prioritize the 10 biggest challenges to achieving success in quality, understanding and managing user expectations, culture change, time required to implement, data integration, education and training, ROI Justification, business rules analysis, and management sponsorship. However, two groups of respondents reported different

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priorities for these challenges. IT managers more frequently mentioned data quality and cultural change as their biggest hurdles. Business managers placed higher priority on education and training for end-users.

The study concluded that Bal initiatives were iterative projects whereby user expectations and training needs expanded as they gained access to and experience with analyzing data. Additionally, variation in the viewpoints of IT and business managers could be pressure points for implementation. Given that most organizations expect their data warehouses and Bal investments to continue to grow, these variations in opinions, especially with respect to data quality and end-user training and education, pointed to important areas of Bal project management. 2 Business intelligence becomes a hot commodity, especially for retailers. Source: [http// Boston. Is\]urinals. Com/Boston/stories/ 2003/01 /06/focus. Tm](http://Boston.Is]urinals.Com/Boston/stories/2003/01/06/focus.Tm), accessed August 24, 2003. 3

Ibid. Business Intelligence and Data Warehousing at Canadian Tire Bal analytics started at CT in 1994 with the development of the information warehouse (OWE), which was implemented by the CT IT group at the request and ending of CTR. Around that time, the CT chief executive officer (CEO) began trying to change Star's image and role from that of a wholesaler to that of a retailer. This led to the realization that more data was required in order to begin analyzing data like a retailer going beyond the store level to examine product, store and margin trends.

To facilitate this new logic, the IT group built the II into which they extracted, transformed and loaded data from a variety of sources, including POS data downloaded from the stores. At that time, Wine was chief financial officer (GOOF) for CTR. His efforts to provide teeter information for business

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decision-making led to the creation of retail analytics in the CTR finance group. This ultimately led to a separate department the Finance Retail Analytics Group (BRAG) that performed the bulk of the analysis and prepared reports for the various marketing departments at CTR.

Between 1994 and 1998, the II grew dramatically as more educated end-users in CTR Marketing and analysis within BRAG demanded more data and CPU time to conduct analysis to support business decisions. During this time period, Bal efforts fragmented a situation that persisted and then accelerated from 1998 onwards. The IT group gradually took on a more technical focus for the ' W, focusing on loading data and transforming it into more and more summary tables to balance the need for CPU time for user queries against capacity queries.

During this period, due to a lack of resources which were being used for other projects), the II was evolving on old infrastructure and a poorly defined data model. Further, a lack of standard data definitions meant that several versions of the truth could be extracted from the II; depending on the way you defined it, you could ND up with six different numbers for inventory levels. Also, some data was just simply not available: a marketing analyst in the sports segment for instance, could not evaluate the results of a weekly promotional effort on golf clubs nor evaluate the performance of various brands against each other e. . . , how Titles performed against Nikkei products). In its current state, the data model in the II did not reflect the data requirements of the business. Throughout CT, user groups gradually undertook more responsibility for II data management activities so they could perform their own analytic tasks. User groups developed applications

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and hired business analysts who extracted data from the II, then cleaned it, integrated additional data and transformed it into their own reports.

While this division of labor and IT resources enabled better business decisions because it facilitated better analysis of the available data, it also distributed Bal and IS responsibilities and resources across the organization. For example, as many as 100 people were being employed in end-user communities in CTR finance and supply chain in positions that were largely IT responsibilities (technology acquisition and management, application development, database management, technical support, etc. But who worked outside of governance of the IT function. These shadow IT groups provided an alternative source of IT resources to the user groups but at unknown cost and security risk to the CT IT infrastructure. By 2003, CT IT was largely seen as a hardware provider and manager but not as a strategic business partner. CTR marketing maintained its own analysts, developers and end-user support for Bal efforts, and CTR BRAG provided most of the retail analytics needed by marketing. Figure 4 provides a depiction of the current architecture of the II.

The major challenges were the multiple independent data sources not included in the II, lack of standard data definitions and consequent inaccuracies in the data, the strained resources associated with storage and querying the ' W, and the increasing delays and denial of access to information required by the end-users. Figure 4: Current business intelligence environment When Wine assumed the role of CT CIO, he understood the barriers to Bal success. His work in the mid-ass had led to

the initial development of the II and BRAG. This gave him a good perspective as to what was needed to realize the value of Bal.

To get the ball rolling, four major activities were undertaken: 1. The restructuring of the IT function to include a specific focus on retail IT (see Figure 1). Michael Banks was hired as director of marketing IT early in 2002, with a responsibility to understand the needs and partner more effectively with CTR. Banks previously worked for Best Buy in the United States and Canada, as well as for other retailers. 2. The development of an IT vision and IT strategy that would guide the transformation of the function in terms of its technology, organization and processes. Assessment of Star's Bal efforts. 4. The assignment of a lead business consultant to the Bal project in early 2003. Bridget Martens, reporting to Banks, had over 11 years of experience at CT and was assigned to the responsibility of business intelligence program manager. She was working closely with Cap Gemini and with the business to coordinate the Bal program as it unfolded. 4 Business intelligence buy-in. Source: <http://www.information.com/story/charities.jhtml?articleid=970006>, accessed August 24, 2003. Business Analytics Implementation Challenges: Top 10 Considerations for 2003 and Beyond, January 2003, DC Report #28728. Business Intelligence Environmental Assessment and Quick Wins In their assessment, the consultants from Cap Gemini found Bal to be a crucial element to the long-term success of CTR hence its placement as a major IT program in the IT strategy. The vision established for Bal at CT was to provide the right information for the right decisions at the right time, enabling proactive, accurate business decisions.

The Bal program goals were to: 1 . Develop an enterprise philosophy that embraced the true value of an optimized Bal environment. 2. Foster a culture that valued high data quality. 3. Support and enable the CTR business strategy and the IT strategy. 4. Improve Bal efficiency through cross-functional synergies within business intelligence and data management. 5. Define and incrementally implement the technology changes required to enable and sustain the business Bal goals and objectives. 6.

Define and incrementally implement the organizational changes processes, roles, responsibilities required to enable and sustain the business Bal goals and objectives. Four guiding principles were established to support these goals: to be business driven, to support the IT strategy (including making technical changes in line with the genealogy plan), keep the learning in-house (even if external expertise was used), and make changes sustainable. Effective execution of the Bal strategy over the next three years would result in a new Bal environment (see Figure 5).

Figure 5: Future business intelligence environment In this new world, data would be sourced and consistently managed and integrated from across the company, historical data would be organized according to standard data formats and housed in the central data warehouse, and there would be simple and easy to update access to metadata (data about the data). This would result in various data views or data marts. 7 Decisions about implementing physical data marts example, the financial data mart (or view) would provide consistent access to standard financial data that would be the basis for enterprise performance management.



Similarly other areas would have their own data marts/views to assist in their own decisions while masking the complexities associated with access to the full corporate data structure. Bal specialists would assist in organizing the data marts/views, retail analytic specialists would have access to Bal tools and the data arouses to perform sophisticated analysis and predictive modeling, and end-users would have instant access to information they needed to make relevant business decisions.

Given the current state of Bal at Canadian Tire, several steps were planned for the short term namely dedicating resources to implementing quick win projects and finalizing a detailed Bal strategy-and-planning document to serve as a guide for proportioning actions over the next three years. Quick win opportunity assessments happened in early 2003. These projects consisted of shorter actions that IT could take to improve Bal capabilities and to provide users tit new information.

These included opportunities such as providing access to daily promotional sales data; market basket analysis capabilities; forecasting and model simulation of incremental sales; pricing optimization reports by region; price competitiveness analytics and brand analysis such as comparisons by brand, brand manager, margin, shipments, centralization, etc. Quick win projects were selected based on offering the highest potential value at the lowest cost to IT resources. The development of the Bal strategy document had also commenced with a series of user meetings, surveys, benchmarking studies and workshops.

Meta-data is data about data. Source: [http://www.Techies.Com/encyclopedia/definitely?Term= meta-data](http://www.Techies.Com/encyclopedia/definitely?Term=meta-data), accessed August 22, 2003. 7 A data mart is a subset of a data warehouse for a single department or function. Source: [http://www.Techies.Com/encyclopedia/definitely?Term= data+mart](http://www.Techies.Com/encyclopedia/definitely?Term=data+mart), accessed August 22, 2003. Going Forward: Creating a Bal Mindset and Realizing Value As Banks and Wines meeting progressed, they reflected on the difficulties faced in the next several months. First, they had to determine what to do about new quick win requests while they finalized the Bal strategy and implemented the program.

On the one hand, what was the point of the Bal strategy and program plan if they kept reacting to new quick win requests, rather than using the plan to prioritize them? However, on the other hand, they had to think about the business implications of not delivering new quick win requests that could provide real value to the business today. They wondered whether rejecting new requests would diminish the end-users enthusiasm for the Bal initiative and whether the work would be picked up by the shadow IT groups. Second, several elements of the Bal strategy still needed to be finalized, and programs,