

The “Pull” for Lean Six Sigma Business Improvement Has Begun

BMO Financial Group (BMO) has achieved significant breakthrough of Lean Six Sigma deployment in the past 12 months. The momentum of Lean Six Sigma business improvement has triggered interest across the organization and beyond. The deployment targets have been reached 21 months ahead of the 5-year plan. Simple return on investment (ROI) has now reached 1,164%, up from 699% last year, outperforming all expectations. The ongoing success is attributable directly to all the hard work of the people throughout the Product Operations division of BMO. The deployment has evolved from ‘Push’ to ‘Pull’, and other business groups outside of Product Operations have expressed high interest in Lean Six Sigma.

Deployment Statistics At-A-Glance



Deployment Start: May 2005
Hard Benefits Delivered (by Fiscal 2009): \$44 million
Hard Benefits Target (by Fiscal 2009): \$38 million
Simple ROI: 1,164% or 11.6 times investment

Projects Completed: 252
Projects In-Progress: 28
Internal Rate of Return: 189%
Hard Benefits Delivered (5-Year Period): \$86 million

A Major Lean Enterprise Breakthrough: 5.5 million pages of paper reports eliminated annually (a stack equivalent to the height of the CN Tower – one of the world’s tallest structures) – significant contribution to the **Green Environment**.

BMO Financial Group, one of North America’s oldest chartered banks, is a highly diversified financial services company headquartered in Toronto, Ontario, Canada. BMO employs more than 36,000 employees worldwide and has more than \$376 billion in managed assets for personal, commercial, and corporate customers. For more information, see www.bmo.com.

DEPLOYMENT OVERVIEW

2004: Consolidation of Product Operations

A consolidated “Product Operations” group was formed in 2004, bringing together multiple back-office, operational fulfillment and servicing functions that were decentralized across Canada and the US. Senior executives recognized the opportunity this consolidation provided to achieve operational excellence across these operational functions; and therefore launched a quality program within this group of 3,500 employees.

2005: Program Pilot

Six Sigma was piloted in Product Operations beginning in May 2005. A seasoned Lean Six Sigma Deployment Leader, Richard Lam, from a major U.S. bank was brought onboard and the first wave of Black Belts was internally “grown”. The success of the pilot led executives to move forward with a full-scale deployment. [See Exhibit 1 – Product Operations Geography](#)

2006: Infrastructure Development & Acceleration

The Deployment Leader was challenged to deliver bottom-line results quickly while concurrently developing the required supporting infrastructure. Lean Enterprise was strategically rolled out early to demonstrate rapid successes and many other deployment infrastructure components were implemented. By year-end, through relentless focus and execution, the deployment was tracking to achieve its aggressive five-year targets. [See Exhibit 2 – Deployment Vision, Mission & Purpose](#)

2007: Integration

Delivery of project results continued while additional breakthrough elements of the deployment strategy were introduced, setting the stage for a pivotal 2008. A Project Pipeline Strategy was developed, Lean Six Sigma performance objectives were cascaded down through levels of senior management, new linkages to other internal programs were established and a Strategic Project Identification & Selection Methodology was introduced. [See Exhibit 3 - Ties to Other Internal Initiatives](#)

2008: The “Pull” Has Begun

The deployment achievements have rippled through the organization and have triggered an unsolicited pull for Lean Six Sigma business improvement. This can be attributed to positive pressure steadily built up by doing many different things consistently well over time which led to two visibly celebrated achievements – (1) reaching the deployment’s financial targets 21 months ahead of schedule and (2) winning WCBF Global Six Sigma awards – have generated credibility and significant interest for Lean Six Sigma business improvement in areas that were outside the deployment mandate. Demand for training and Lean Six Sigma support has exceeded supply. Pilot projects in non-Product Operations areas such as Information Technology, Customer Call Centres, Sales Organizations, MasterCard, Online Banking, Finance, and Strategic Sourcing have begun, while external companies, including those from outside of the banking industry, have sought deployment best practice advice.

2009-2012: Institutionalization

This period will focus on embedding Lean Six Sigma deeper into Product Operations’ culture, expanding the deployment footprint to Information Technology, and supporting its potential adoption in the rest of BMO. [See Exhibit 4 – List of Institutionalization Highlights](#)

SUPPORTING EVIDENCE

Strategic Relevance: *How does the business improvement deployment fit in with the organization’s strategic objectives?*

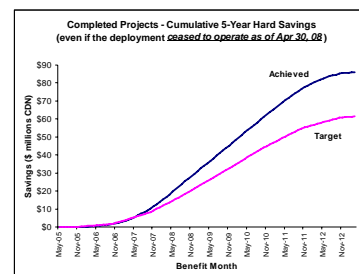
- **Strategic Alignment:** Lean Six Sigma is directly aligned with corporate imperatives to improve the Customer experience through service quality improvements, increase Pace through speed of delivery improvements, and drive Growth by freeing up capital for reinvestment to increase BMO’s competitiveness. The deployment target is to realize \$38 million in hard cumulative savings by 2009 (exclusive of benefits realized beyond 2009). As a result of the deployment’s success, the organization’s strategic plan has extended the deployment through 2012 and is now seen as an essential ingredient to achieve strategic goals. [See Exhibit 5 - How Lean Six Sigma Supports Growth, Customer and Pace](#)

- **Top-of-the-House Sponsorship, Support & Approval:** The Lean Six Sigma deployment is sponsored by Karen Metrakos, Executive Vice President of Operations, and is fully endorsed by BMO's executive Management Committee, chaired by Bill Downe, President and CEO. Karen personally introduced Lean Six Sigma and holds her executive team accountable for the achievement of deployment results. Among the tremendous number of initiatives within BMO, Bill Downe chose to feature the accomplishments of this deployment in his 2007 year-end message to all BMO employees.
- **Strategic Project Identification & Selection Methodology:** Based on feedback from business units, a robust methodology that could be applied in very small or very large target processes was developed. The methodology integrates Hoshin strategic planning, Lean Six Sigma tools, Management by Facts, Master Black Belt / Black Belt facilitation, and unique integrated software. Its purpose is to identify and prioritize new projects that are tightly aligned with strategic priorities. This collaborative approach assists business managers to explicitly link Lean Six Sigma projects to their goals and objectives, fuelling a sustainable commitment to continuous improvement. [See Exhibit 6 - Strategic Project Identification & Selection Methodology](#)
- **Aligning Projects with Strategic Corporate Programs – The Green Environment:** By aligning with the objectives of BMO's Environmental Sustainability Program, many win-win projects are underway. BMO celebrated 'Earth Day' with the completion of a breakthrough Lean Enterprise project that eliminated significant volumes of report prints stacking as high as the CN Tower - one of the world's tallest freestanding structures. This amounts to nearly 5.5 million sheets of paper annually or \$1.5 million saved. Another in-flight project is targeting to reduce CO₂ emissions by optimizing courier runs between BMO locations. [See Exhibit 7 – Supporting the Green Environment](#)



Value Generation: How significant to the organization was the value generated from the business improvement deployment?

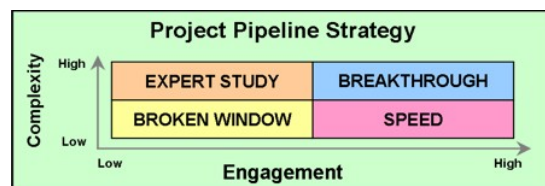
- **Hard Savings:** The deployment has achieved 116% of its savings target, 21 months ahead of schedule. Savings are based on 252 projects completed to date. The current cumulative hard savings total is \$86 million based on a 5-year benefit period and excludes all other soft benefits such as cost avoidance and future revenue generation.



- Taking the cumulative savings and applying the total deployment costs of \$7.4 million incurred to date results in a simple return-on-investment of 1,164% or 11.6 times investment, up from 699% or 7 times investment one year ago. This represents the return achieved even if all Lean Six Sigma activities ceased immediately. This also equates to an incredible internal rate of return (IRR) of 189%. The savings are based on measurable improvements that impact the financial income statement and all project savings claims result in corresponding cost centre budget adjustments. As the Six Sigma project pipeline continues to expand, savings will continue to grow. [See Exhibit 3 - Deployment Results & Exhibit 4 – Chart of Cumulative Hard Savings Achieved](#)
- **Productivity Gain:** Projects achieved defect reductions ranging from 10% to 95% improvement, cycle time improvement ranging from 10% to 50% and waste elimination. These have contributed 266 full-time equivalent (FTE) saves to date, representing the majority of hard savings described above. Other savings types include vendor fees and expense reductions.
 - **Soft Benefits:** Additional benefits represent significant improvements to business operations, and while difficult to quantify against Lean Six Sigma projects, have a direct impact on the performance of the organization and are not included in the financial benefits stated. Some of these include improved customer service levels, revenue generation, cost avoidance, employee morale, work conditions and reduced operational risk.

Innovation: How innovative was the deployment?

- **Project Pipeline Strategy:** The deployment started with two basic project categories: Speed (Lean) & Breakthrough (Six Sigma). Two new project categories, Expert Studies (strategic project identification) and Broken Windows (Just-Do-It), were added to give business units the flexibility to fill their project pipelines to meet their varying business needs. Broken Windows enables the capture of opportunities that are collectively meaningful but individually, due to their relatively small size, do not justify a full engagement led by Black Belts. Lean Kaizen Events were added in 2008 as a fifth project category to provide additional pipeline flexibility. This facilitates a constant stream of projects. [See Exhibit 10 - Project Pipeline Strategy](#)
- **Deployment Risk Management:** Risk of deployment failure was reduced by diversifying along the dimensions of project complexity (complex to simple), project duration (long to short), business units (all units), geography (all cities), and quality tools (Just-Do-It to Strategic Project Identification). The diverse mixture has resulted in a steady pattern of benefits that the business units can depend upon and has strengthened deployment credibility.
- **Sharing with Fortune 500 companies:** On behalf of BMO, the deployment co-hosted a two-day Lean Six Sigma Summit with Six Sigma Canada that brought together 60 delegates from Fortune 500 companies across North America to share Lean Six Sigma best practices and challenges that helped improve all participants' deployments.
- **Sharing with the Top 5 Canadian Banks:** The Canadian Banks Forum, established by the deployment in 2007, brings together over 40 delegates from across the major Canadian banks semi-annually. This forum supports an environment of professional business cooperation and informal networking that addresses issues, shares best practices and identifies opportunities related to Lean Six Sigma.
- **Sharing Globally:** BMO's deployment leader, Richard Lam shared its successful signature practices with the global Six Sigma community at the 2007 WCBF New York Conference and 2008 WCBF Chicago Summit.
- **Sharing Six Sigma Benefits within BMO:** The deployment promoted the benefits of Lean Six Sigma at a BMO internal knowledge-sharing conference – "The Professional Excellence Symposium" - in 2007 and 2008. More than 1,000 people attended this annual conference across BMO.



- **Deployment Standardization:** Following Lean principles, deployment administration was standardized to enable efficient management of more than 40 projects simultaneously across all business units and geographies. Rigorous reporting and tracking includes: a deployment dashboard, monthly tollgate reviews and tracker, project execution and documentation, control phase monitoring, benefits reporting, financial sign-offs and human resource adjustments. An annual master training schedule is published based on business demand.
- **Deployment Community SharePoint:** A secure, intranet collaboration tool, leveraging a corporate standard architecture, was developed to facilitate knowledge sharing within the deployment community, centralize document safekeeping, promote a Lean Six Sigma sense of community, and reduce administrative waste.
- **Multi-Channel Customized Training Innovations:** Customized industry-relevant training content was developed by the deployment to help students learn Lean Six Sigma tools through online and classroom settings. Monthly, self-paced “One-Tool-At-A-Time” learning modules covering the spectrum of Lean and Six Sigma tools augment traditional classroom training. A standardized training feedback survey was implemented to support continuous improvement of both training content and instructors. Currently, training is performing consistently at 95% learner satisfaction. [Exhibit 11 – Public Intranet Lean Six Sigma](#)
- **Learning from Leading External Organizations:** The deployment visited Toyota Manufacturing, world leader in quality management. This resulted in the deployment increasing its activities that promote Continuous Improvement and using more performance metrics to promote a business culture that seeks to consistently identify process improvement opportunities.

Implementation: *Quality of the implementation process in the deployment*

- **Hybrid Centralized Internal Consulting Model:** Fifteen Black Belts report to the Deployment Leader in a “Hybrid Centralized” configuration with two-thirds forward-deployed into specific business units to balance resource management and depth of business specialization. The Deployment Office acts as an internal consulting group - supporting, facilitating, advising and working as Lean Six Sigma project managers. The business units are accountable for identifying, championing, implementing and realizing the benefits of Lean Six Sigma projects. [See Exhibit 12 - Hybrid Centralized Lean Six Sigma Organization and Exhibit 13 - Internal Consulting Model](#)

▪ **Infrastructure Implemented:**

- **Roles & Responsibilities:** Clearly defined and accepted by all stakeholders as the project Operating Guiding Principles. [See Exhibit 14 - Roles & Responsibilities](#)
- **Resource Assignments:** People and budgets allocated to support deployment and adjusted periodically as required.
- **Reporting Tools:** Standardized financial, project and divisional performance metrics reporting.
- **Communication Channels:** Management reporting, team forums, newsletters and in-person functions. [See Exhibit 15 - Communication Channels](#)
- **Governance:** Oversight provided through deployment standard processes, metrics & controls, and executive oversight via Product Operations Change Management Review Forum.
- **Change Management:** ‘Push’ was provided via the executive governance drive and Champion’s personal accountability to deliver on cascaded Lean Six Sigma targets. ‘Pull’ was provided via extensive training, consistent delivery of measurable benefits and ongoing broadcasting of deployment results through many communication channels.
- **Operations Risk Assessment:** Standard risk assessment tool completed for each project prior to sign-off.
- **Career Management:** Specific career management ladder to enhance the management and development of Lean Six Sigma professionals. Promotion of Black Belts begun into senior leadership roles in business units as well as in the executive support for the Office of the CEO that continues to act as a channel for Lean Six Sigma advocacy. To develop leadership, two high-performance Black Belts have been nominated to receive bank sponsored MBA education while 1 Black Belt is currently being supported for the Executive MBA program.
- **Talent Recruiting:** Members of the deployment team, recruited from internal and external senior roles, create a diverse group of talented people with a broad range of business experience. [See Exhibit 16 - Team Experience Diversity Matrix](#)
- **High Calibre Team:** For two consecutive years, 2 Black Belts have won the ‘Consultant of the Year’ awards at BMO’s Professional Excellence Symposium and 3 Black Belts plus the Deployment Leader received BMO’s ‘Awards of Excellence’ among 7,000 people.
- **Portfolio Management:** Monthly rigorous tollgate meetings to review the status of up to 50 projects
- **Financials:** Deployment office custom-built standard project forms with database integration for benefits tracking, automated roll-up and report generation, and integrated cost centre management provide constant full visibility.
- **Training:** Extensive training provided resulted in a high certification rate of 93% of the Black Belts, 100% of Executives and Champions fully trained and ongoing training of Yellow Belts, and Lean practitioners continue with Green Belt training added in 2008. Investment has also been made in ‘soft’ skills to balance the ‘hard’ skills to create great Belts. Curriculum in this area includes Change Management, Train-The-Trainer, Consulting, and Sensitivity Training. [See Exhibit 9 - Deployment Results under “Training to Date”](#)



Customer Benefit: *The beneficial impact of the deployment results on customers – internal or external*

- **Partnering with Operations “Customer Care”:** Leveraged customer-centric activities to identify opportunities for improving processes that ultimately lead to improved customer satisfaction. [See Exhibit 17 – Customer Care Activities](#)
- **Voice of the Customer:** Listening posts to capture feedback from BMO’s external customers.
- **Critical Service Reports:** Tracking of service incidents affecting BMO’s external customers.

- **Business Partner Agreements (BPA):** Bi-lateral agreements between Product Operations and internal business partners that formalize performance standards and set targets for an improved end-customer experience.
- **Customer Service Metrics:** Performance metrics supporting BPAs that measure customer-related process capability.
- **Service Surveys:** Feedback from Product Operations' internal business partners to better serve external customers.
- **Focus Groups & Meetings with Key Business Partners:** Customer-centric opportunities identified through internal business partner relationships and focus groups.
- **Project Client Feedback Survey:** In 2008, an online Six Sigma survey was implemented to collect internal business partner feedback on project performance to facilitate continuous improvement of the deployment and individual Belt performance.
- **Enabling BMO's Customer-Facing Organizations:** The deployment is providing Lean Six Sigma training to customer-facing BMO divisions such as MasterCard, Direct Banking, Product Management, and End-to-End Process Management. This training provides these groups with the capability to identify Lean Six Sigma opportunities, using their expertise and product knowledge, to directly and positively impact the experience of our customer when dealing with BMO.
- **Sampling of 252 Completed Projects Benefiting our Customers** [See Exhibit 18 - Additional Sample Projects](#)
 - **90% Less Payment Defects – Capital Markets Export Letters of Credit – Toronto/Montreal:** Corporate customers wishing to undertake an Export Letter of Credit complete an application that triggers the transaction. We were making input errors that caused customer frustration and dissatisfaction jeopardizing current and future business opportunities. The Lean Six Sigma project team achieved a breakthrough 90% error rate reduction, which has significantly improved customer satisfaction and operations productivity and resulted in \$136,000 annualized hard savings.
 - **59% Faster Funds – Client Services Loan Suspense Resolution – Chicago:** Commercial loan payments are transacted and matched to incoming funds for customers. If they do not match, Client Services investigates the discrepancies while the funds remain in a suspense account for an average of 34 days, which caused customer dissatisfaction. The Lean Six Sigma team successfully standardized the resolution process and expedited the resolution time by 14 days, which translated into a 59% faster customer experience and resulted in \$98,000 annualized hard savings.
 - **95% Less Tax Reporting Defects – Wealth Management Tax Reporting – Toronto:** Private Client Group Product Operations experienced process defects in T3 tax slip production for Income Trust income reporting. Incorrect tax slips were sent to customers and lengthy delays correcting and re-issuing tax slips to customers for income tax reporting resulted in a high level of customer dissatisfaction and frustration. The Lean Six Sigma project team achieved a 95% error rate reduction with significant customer satisfaction improvement that resulted in \$108,000 annualized hard savings.
- **Testimonials:** Our business partners have expressed delight for the customer centric results achieved. [See Exhibit 19 – Sample Testimonials](#)

Leadership Engagement & Organizational Learning: *The level of senior management involvement and how did the organization develop as a result of the business improvement deployment*

- **Operations Leadership Team (OLT):** This team, comprising senior executives of all Product Operations business units, recognizes the value of Lean Six Sigma and are providing full support by setting expectations within their organizations, assigning resources, ensuring all senior managers are trained and removing obstacles.
- **Senior Management Engagement:** Senior Managers are the Champions and have successfully supported and implemented every Lean Six Sigma project within their work groups.
- **Performance Management Alignment:** To ensure the right level of engagement, Lean Six Sigma objectives were embedded into the performance management plans of Product Operations executives and senior managers. In 2008, it was cascaded down to front-line managers to complete the alignment of leadership. This has boosted levels of leadership engagement and encouraged closer integration and collaboration between the deployment team and business units.
- **Widespread Organizational Learning:** 76% (1,011) of the deployment's 2009 target of 1,329 people have been trained. In April 2008, the target was increased to 4,500 by the end of 2012 including people outside of Product Operations, representing 90% of all Operations employees.
- **Regular Executive Involvement:** Consistent executive involvement has resulted in Lean Six Sigma being top of mind for BMO's leadership which has helped embed Lean Six Sigma into the culture. Governance is facilitated through ongoing reporting and decision-making at a Product Operations management forum and at a BMO management forum chaired by BMO's President & CEO.
- **Senior Executive Sponsorship:** A critical factor in the deployment's success has been the unwavering support and leadership provided by our Operations senior executive, Karen Metrakos. Her contribution ranged from initiating the deployment to personally acknowledging special achievements. [Exhibit 20 – Examples of Karen Metrakos' Commitment](#)
- **Widespread Teamwork:** The ongoing success of Lean Six Sigma was achieved through the widespread teamwork of the people within Product Operations. Many Champions, Yellow Belts, Lean Practitioners, Subject Matter Experts and others collaborated to identify opportunities, build business cases, gather data, generate solutions, implement, measure and control progress. For every step taken, Lean Six Sigma is being absorbed into the culture.
- **Organizational Recognition of Lean Six Sigma as a Sustainable Process Improvement Tool:** When introducing Six Sigma to BMO, the deployment was challenged to build awareness, demonstrate value and deliver results within Product Operations. With the success of BMO's Lean Six Sigma deployment we are now witnessing a cultural shift towards a "pull" for Lean Six Sigma expertise. We are beginning pilots in Customer-Facing areas of our businesses and BMO's End-to-End initiatives are utilizing Lean Six Sigma as a core methodology when building solutions. The adoption and successes realized through Lean Six Sigma over the last four years within BMO is a testament to exceptional work of our people, outstanding leadership support, engagement of our lines of business and breakthrough deployment strategies.