

# Metex Legacy Application Modernization Solution

## Customer Solution Brief – Bank of Montreal



The Bank of Montreal successfully transforms a critical risk assessment application from Visual Basic 6 to .Net using Metex's modernization services.

**Customer:** Bank of Montreal  
**Web Site:** www.bmo.com  
**Industry:** Financial Services

“Metex transformed our critical PMD system from Visual Basic to modern, native .Net code with a significant cost savings and reduction in risk.”

Manager, BMO Capital Markets

### Organization Profile

Established in 1817 as Bank of Montreal, BMO Financial Group (TSX, NYSE: BMO) is a highly diversified financial services organization. With total assets of \$397 billion as of July 31, 2010, and more than 38,000 employees, BMO provides a broad range of retail banking, wealth management and investment banking products and solutions.

BMO Financial Group is made up of three operating groups:

- Personal and Commercial Banking (P&C)
- Private Client Group (PCG)
- BMO Capital Markets

In the United States, clients are served through Harris, a major U.S. Midwest financial services organization with a network of community banks in the Chicago area and wealth management offices across the United States.

### Background

BMO made a corporate decision to standardize on .NET and eliminate all 4GLs such as PowerBuilder, VB and others over a period of several years.

The Bank of Montreal's Price Manipulation Detection System (PMD), written in VB6 is a critical system which monitors and detects suspicious stock market trading activity.

The Toronto Stock Exchange, Montreal Stock Exchange, CORPDB and the Trade Capture System (TCS) provide source files feeds into the PMD application to generate daily and monthly reports which show transaction attributes necessary for determining price manipulation activities.

PMD offers consolidated reporting for equities and derivatives for Wash Trading, Inventory Parking, Retail Parking, Front Running and Derivative Surveillance.

### Business Challenge

BMO was concerned that the Visual Basic 6 platform had been discontinued and was no longer supported. Additionally, there were a number of enhancements and improvements the bank wanted to make to the PMD application that were not possible with the existing Visual Basic technology.

### Business Goals

BMO was intent on eliminating unsupported application platforms for critical applications.

The objective was to consolidate to a currently supported platform and architecture in an effort to reduce on-going support and license fees and to increase agility to respond to new application enhancements and market demand.

The bank identified a number of specific goals and objectives they wanted the new PMD system to address including the following:

- Web based solution for easier access
- Conform to object-oriented (SOA) multi-tier architecture and coding standards
- Reduced maintenance and support costs
- Ease of upgrade and addition of new features
- Performance improvements
- Improved user interface
- Improved code quality

### Metex Solutions Partner



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### Solution

BMO looked at three options to address their challenges. They could perform a manual rewrite of the PMD application, migrate the existing system or purchase a commercial package with similar functionality and customize it to suit their purposes. After careful consideration of all options, BMO engaged Metex to migrate and modernize PMD in order to preserve and leverage their intellectual property and original capital investment in the system.

Metex's Application Modernization Solution allows customers to leverage their investment in existing legacy applications by automatically regenerating the existing code bases into more up-to-date technologies and programming languages.

Using a sophisticated set of in-house tools and a proven methodology (developed over numerous years), Metex modernized the PMD System from a Visual Basic 6 platform to .Net which allows BMO to take advantage of new and future technologies.

Metex also optimized the usability and flexibility of the User Interface and conformed to BMO's architectural, design, coding and security standards.

### Benefits

The new application has an enhanced, web-enabled user interface and is much easier to use.

The structure and quality of the code was significantly improved and transformed into native .Net code which allows the bank to easily modify and maintain the system going forward.

Installation time was reduced as users could access the UI interface download via a url rather than having a system administrator visit each user.

### Advantages

#### **Risk Mitigation**

The PMD system now runs on BMO's most current technology stack and conforms to the bank's IT and security standards.

#### **Reduced Total Cost of Ownership**

The bank no longer has the additional overhead of supporting a non-standard technology.

#### **Flexibility**

Web-based system allows for easier access and upgrades.

#### **Improved System Reliability, Availability and Serviceability (RAS)**

The new system is easier to maintain with the bank's existing development and support infrastructure.

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