

## Techlogix builds state-of-the-art Web Portal for Qatar Exchange

In 2009, NYSE Euronext, the transatlantic exchange that also owns the New York stock exchange took a stake in the Qatar Exchange as part of a strategic agreement to transfer knowledge and develop the local exchange. NYSE Euronext holds an 88-percent stake in the Doha-based bourse, while the remaining 12-percent stake is held by Qatar Holding, the investment arm of the Gulf Arab state's sovereign wealth fund. As the first step towards technology transfer, the existing trading engine of the Qatar Exchange was replaced with UTP, the same trading engine that powers NYSE. In tandem, Qatar Exchange wanted to revamp its existing website that suffered from several critical shortcomings and wanted to bring its web presence to the same standards as that of NYSE both in user experience and range of functionality.

Techlogix successfully revamped the existing website - significantly improved the user experience it provided, enhanced functionality by providing interactive stock charts, better content search facility and investor portfolio management, and built real-time interfaces to the UTP trading engine and other back-end systems. The new site has resulted in reaching out to a wider investor base used to interacting with similar state-of-the-art systems in North America and Europe.

### Customer

Qatar Exchange

### Industry

Financial  
Stock Exchanges

### Offering

Application Development

### About the Client

The Qatar Exchange (formerly called Doha Securities Market) is one of the leading stock markets in the GCC region. QE primarily aims to support Qatar's economy by providing a venue for capital raising for Qatari companies as part of their corporate strategy and giving investors a platform through which they can trade a variety of products in a transparent and efficient manner. The Qatar Exchange also provides the public with access to market information and ensures correct disclosure of information.

## The Challenge

QE entrusted a team of Techlogix consultants with the challenge of revamping its existing web portal with the main aim of removing the shortcomings and adding key functionality that was lacking. QE was facing several critical issues with its existing web site:

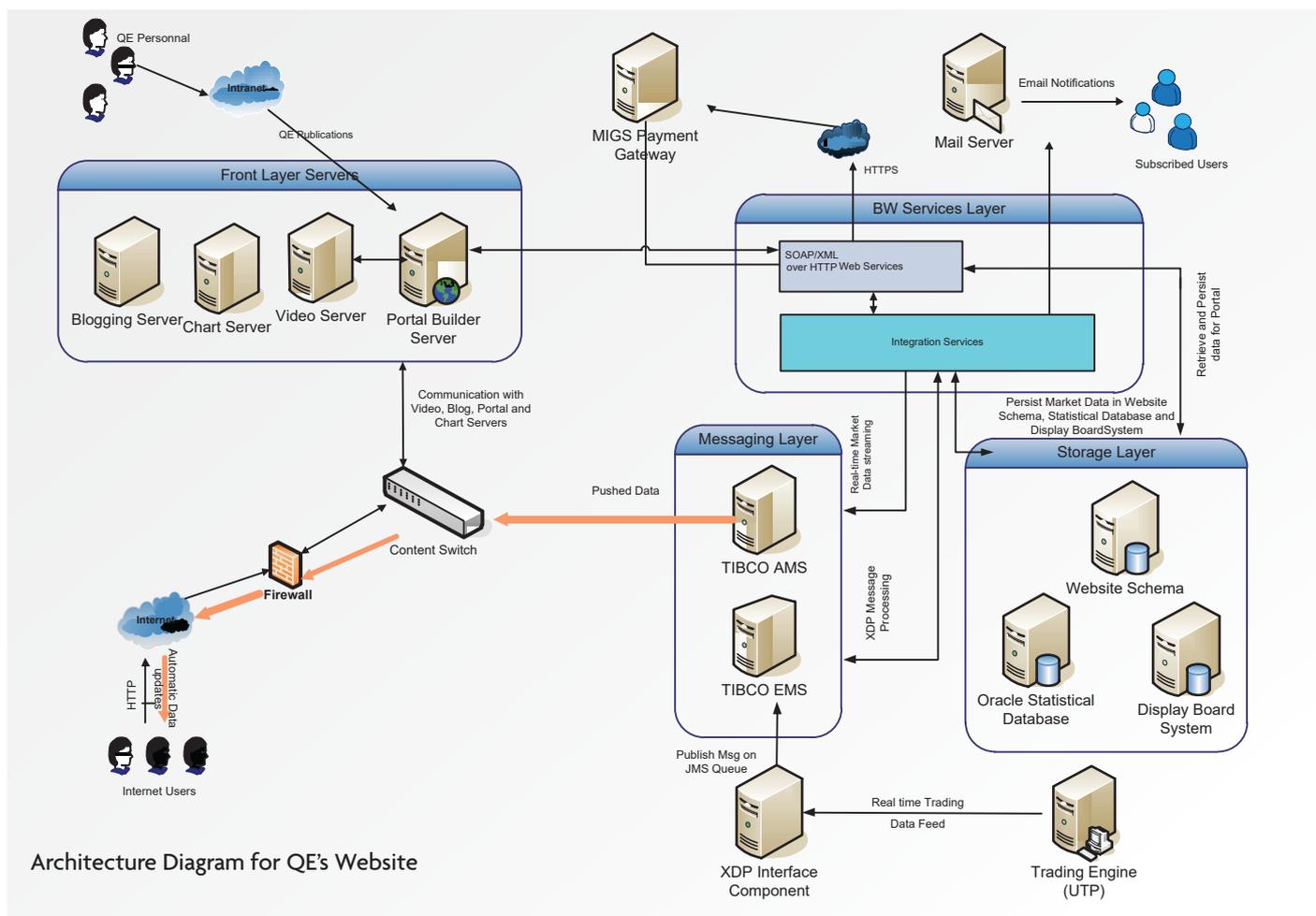
- The user interaction experience was far from desirable with a cumbersome registration request approval process, unpleasant color schemes and lack of mainstream browser support other than Microsoft Internet Explorer.
- The information key to financial data consumers was arranged in a cluttered manner added with an unintuitive and inconsistent site navigation model making it hard to conveniently access data.
- Inconsistencies in reporting sensitive financial information since data from multiple back-end systems was not properly reconciled.
- No search facility and limited data reporting was accessible for the financial health of listed companies and unavailability of interactive charts and analysis which are considered essential tools by investors.
- The existing website crashed periodically where the portal server stopped responding and needed to be restarted.

## The Solution

Techlogix completely revamped the existing QE website by embellishing it with additional features while optimizing the performance of existing ones. The project included the development of two portal sites: one for external users and another for QE's intranet users.

The solution provided the following core features:

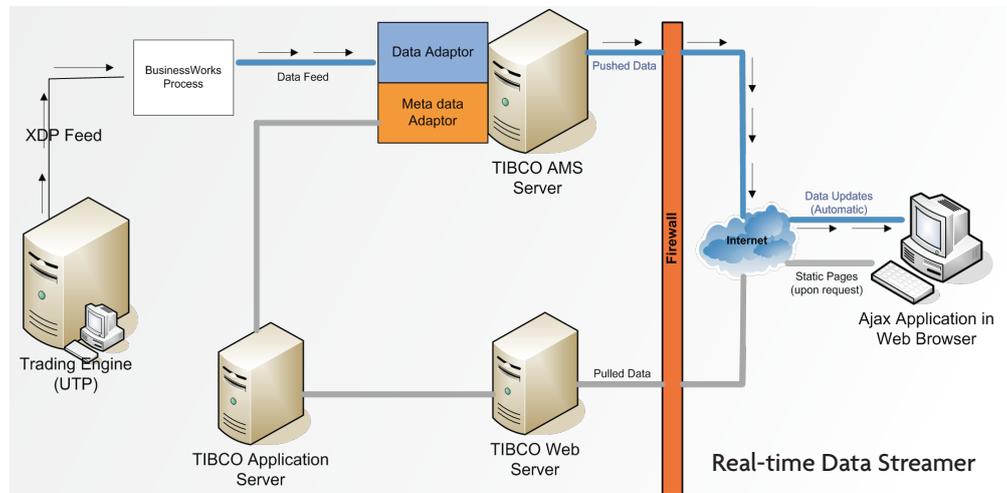
- Overhauled the website's user interface with a focus on user experience - a simplified registration process, intuitive navigation, and pleasing visual design.
- Gave investors access to the trends of listed companies' performance through interactive stock charts, enhanced reporting, an updated 'Market Watch', and an improved search facility for published company news, events, and press releases.
- Built support for multiple browsers including IE, Firefox, Chrome, Safari and Opera to interact with the improved bi-lingual website.
- Allowed users to maintain personalized portfolios to track interests in promising companies and profits earned to date.
- Provided investors with better social collaboration tools through sector-wise summaries, news stories, video streaming, reports and investor blogs.



- Provided a systematic approach to dealing with corporate actions such as dividend declarations, announcements, etc. and visually plotted these on interactive stock charts.
- Facilitated QE's intranet users to publish news, events, financial statements, press releases and updates regularly utilizing a simplified process and mechanism.
- Improved the functionality of search through contents that are published in PDF format.

## Solution Architecture

The Techlogix team designed and deployed the solution on a network of clustered Linux servers supporting load balancing and fault tolerance. A service oriented architecture (SOA) approach was used by TIBCO portal builder for the front end that called web services on the middle-tier developed using TIBCO Business Works. A separate charting server was set up on Windows due to the nature of the charting toolset. The messaging architecture was provided through the TIBCO AMS server and TIBCO enterprise message service bus (EMS). The persistence backend was supported by Oracle database server technology.



The solution also required interfacing with QE's Trading Engine system UTP, existing Display board system, statistical database and the MIGS gateway for payment processing through visa cards for buying of account statements by investors and also an e-mail server was setup to provide e-mail alerts to relevant stakeholders.

An overview of the technologies that the system uses in providing a SOA-based solution is given below:

- **TIBCO Portal Builder** – for interface building and content management.
- **TIBCO Business Works** – for building new services, and build middleware integration layer for communication among different systems involved including UTP trading engine XDP feed, charting servers, dashboard application etc.
- **TIBCO Administrator** – for managing different business work services and their deployments.
- **TIBCO AJAX Message Server** – for streaming real-time market data to browsers over HTTP networks.
- **TIBCO Enterprise Message Server** – used to develop middleware component to communicate among different processes using message bus message queues and topics.

- **TIBCO Hawk Agent** – for communicating with application and system services and processes, or external interfaces.

Other technologies utilized for the website's enhancement include:

- **Adobe Video Flash Media Server** – for video streaming
- **WordPress** – for blogging
- **amCharts** – for interactive financial charts
- **FlashStockCharts** – for interactive technical indicators chart

## Benefits

The new website provided the following critical value additions to QE's online presence:

- A user-friendly and interactive interface allows easier navigation for investors and visitors and has commercialized the website, making it accessible to a wider range of people.
- Blogs written by analysts and visitors and features such as video streaming are the added features which keep the user involved and interested in companies listed on QE.
- The 'investor corner' gives the updated statistical data of companies preventing the need to search other sites to get any company specific information.
- The interactive charts showing the connection between the market trends and the news stories for that specific day give the user an insight as to how the market trends are connected to these news stories.
- Investors and visitors can efficiently maintain portfolios and watch market trends on the website respectively.

## Application Development

[www.techlogix.com/Application-Services](http://www.techlogix.com/Application-Services)

Our application development and systems integration services help our customers in both custom application development and end-to-end systems integration. Our consultants define business requirements, write detailed functional specifications, and design, develop, and test applications utilizing software industry's best practices. We work with customers in flexible engagement models – from Full-cycle Application Development, where we take start-to-finish responsibility for the development and delivery of a project, to Staff Augmentation arrangements where our consultants work collaboratively with in-house IT professionals to develop new systems.

## Contact

For more information, contact [info@techlogix.com](mailto:info@techlogix.com)



## About Techlogix

Techlogix is an IT Services, Consulting and Business Solutions company that helps its global clientele achieve enterprise transformation by harmonizing people, process, and technology. Techlogix builds high performance solutions using practice-specific delivery methodologies that utilize its globally distributed development teams. Our people combine the spirit of engineering excellence with a strong commitment to end-to-end customer experience. Techlogix employs approximately 300 people in 5 delivery centers worldwide.

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