

Business Intelligence (BI) Dashboard with SharePoint

TIMPO Case Study

Client – Tri-Service Infrastructure Management Program Office (TIMPO), Military Health System and its seven constituent directorates.

Objectives

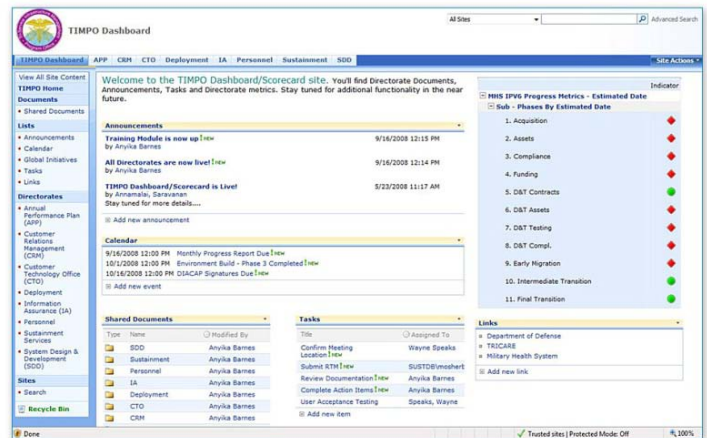
TIMPO's mission is to provide secure communications and computing infrastructure products necessary to support information technology systems deployed throughout the Department of Defense's (DoD) Military Health System (MHS).

TIMPO needed a secure, Web-based, dashboard to enable staff to define, monitor, and analyze business performance through Key Performance Indicators (KPIs). A KPI is a numerical metric used to help an organization define and measure progress toward its goals. TIMPO's KPIs are diverse; ranging from Network Operations metrics to Personnel Training Status to Project Plans.

Existing manual processes used to collect and report these KPIs were labor intensive, and did not provide sufficient data to accurately track all organizational KPIs. TIMPO required a solution that meets the needs of business users while providing the enterprise with a high level of customization, 24/7 reliability, scalability, and compliance with DoD security requirements. TIMPO also required an integrated collaboration mechanism for sharing documents.

BI Dashboard Design

LCG Systems was tasked with creating a solution for the complex KPI monitoring and tracking needs of TIMPO. Working closely with TIMPO's key stakeholders and members of their user community, the LCG Systems project team performed a comprehensive analysis of the functional requirements, identifying KPI data types and locations, site look and feel, and security constraints.



TIMPO Homepage with KPIs

Finally, the solution needed to fulfill the TIMPO's collaboration requirements by providing document repository functionality.

Based on the analysis the team developed a dashboard solution based on:

- Microsoft Office SharePoint Server 2007(MOSS)
- Microsoft Business Scorecard Manager 2005(BSM)
- Microsoft SQL Server 2005

Key Performance Indicators

The team implemented the Business Intelligence dashboard solution which aggregated data from multiple sources and provided numerous dashboard and scorecard views. Views were designed such that related KPIs and reports were co-located on the same page. This design facilitated a quick view and easy access to analysis tools such as drill down analysis, trending over time, and core data behind the KPIs.

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Business Intelligence (BI) Dashboard with SharePoint

The dashboard provided TIMPO with the ability to:

- Use a rich graphical user interface to monitor KPIs from multiple data sources
- View summary KPIs as well as drill-down to detailed KPIs
- Compare KPI values to defined goals
- View KPI trending across time
- View supporting reports and documents
- Perform interactive analysis on data

System Architecture

A robust, high-availability system architecture was built to ensure compliance with TIMPO's 24/7 availability requirements. The architecture successfully integrated a three-tier environment (Web, application, and database) with server and application redundancy at each tier. The architecture also supported the stringent security requirements of the DoD STIG (Security Technical Implementation Guides) process.

DoD Security Challenge

The conventional method for aggregating data for KPIs is to directly access the data sources, usually consisting of databases, spreadsheets, and documents. DoD security constraints prevented this approach, so the team devised an innovative "push" system to import and load data into the system's SQL data repository. This overcame the security challenges by pushing raw KPI data into the repository from email attachments. Upon the email's arrival, file attachments were harvested and loaded into the repository via an ETL (Extraction, Translation, and Load) process. Attachment file types included .csv, .doc, .mpp, and .xls files.

Authentication and Access Control

One of TIMPO's most important requirements was to incorporate HSPD-12 compliant CAC-based authentication into



Project Status Scorecards

the system. The team designed this PKI-based authentication mechanism into the system so that the SharePoint environment could only be accessed via the appropriate users. Users could also customize their KPI dashboard view to meet their specific needs.

Business Value

LCG Systems planned, designed and implemented the business intelligence dashboard to provide TIMPO managers and senior executives with:

- A system that presents actionable data through a robust KPI reporting and analysis platform
- A comprehensive view of KPIs within departments and across the organization
- A customizable interface with indicators and layout for tailored to individual job function
- An efficient, automated process for refreshing KPI data
- A secure collaboration environment