

An Overview of FlexMI™

Introduction

The FlexMI™ platform has been used throughout one of our major clients as a toolkit to fulfill common planning requirements and for the collection, control and analysis of data since 2002. It is an extensible platform to fulfill planning and reporting requirements organization wide. Globally it has been used for financial planning, production tracking, reserves reporting and many other departmental requirements.

The FlexMI™ platform is built from a number of components, including a web portal, workflow engine, document store and reporting platform. As such, it lends itself extremely well to a wide variety of requirements. Developed specifically as a multipurpose platform, all components are common, 'off-the-shelf' and widely adopted within most companies.

The platform acts as an accelerator that enables us to quickly deploy solutions by applying configuration changes and only developing new, custom functionality where absolutely necessary. This approach gives the business a robust, proven tool that is customized to their needs and deployed far quicker than is usually possible. Some of the benefits of using a FlexMI™ based system include:

- Solution designed and managed by the business, but meets IT control and governance needs;
- Uses existing skills and a tool users are already familiar with;
- Unlimited flexibility and rapid response to change;
- Provides structure and management;
- Disposable workbooks with master templates to simplify maintenance;
- Can support any business-driven solutions currently implemented in spreadsheets;
- Low support costs – managed by the business.

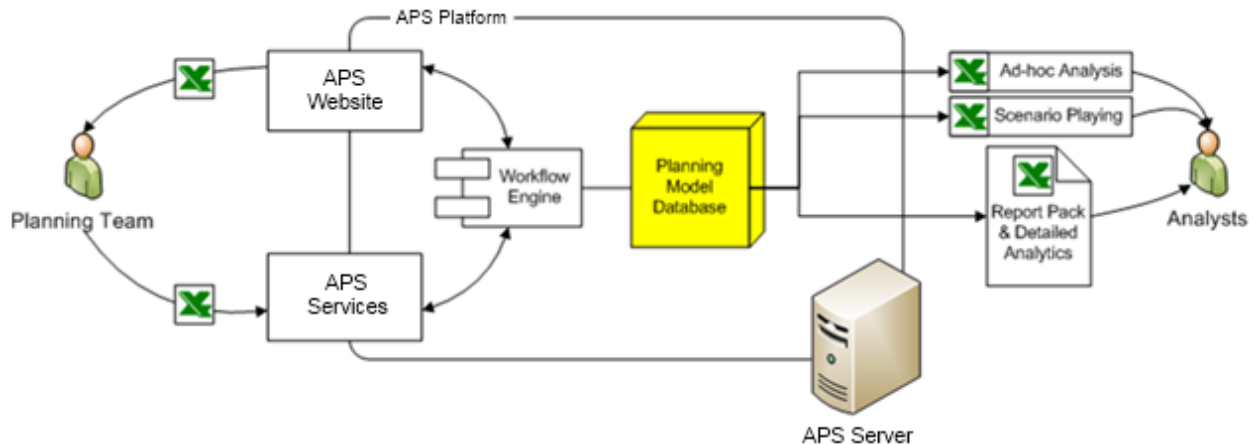
Altius Consulting Background

Altius is a unique collection of Business Intelligence (BI) experts focused on delivering solutions to key energy industry challenges. Founded in 1993 and with the experience of over 500 project implementations; we have established ourselves as a leader for BI in the oil, gas and energy industry. Altius has offices in Houston, Alaska, and the UK giving us a true global presence and reach. We are a Microsoft Gold Certified Partner and take great pride in our selection as a 2009 Partner of the Year Finalist.



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What is FlexMI™?



Core Components

A core set of components underpin the FlexMI™ platform and nearly all utilize standard Microsoft products. In addition, the platform has been architected so that individual components can be swapped out for either custom or third party tools.

User Interface

Current FlexMI™ implementations use a Microsoft .NET web portal with master pages and different configurable tabs to separate the site content. Very limited new code is required to setup the structure of a new FlexMI™ implementation; instead, only a broad set of configuration files must be modified. The custom pages that are required to support each implementation's unique requirements are then created and the configurable navigation updated. Page content is managed by appointed 'super users' and even lists of data used within pages can be maintained by the client. This approach allows for rapid and robust deployments that build on the success of previous efforts.

Development efforts have continued to progress with each new rollout and the latest versions make use of many user friendly and client side Ajax technologies. Also, Microsoft Silverlight can be used as a rich and highly interactive interface where appropriate.

SharePoint portal sites with integrated InfoPath input forms have recently been identified as the front end of choice for future implementations and is fully supported.

Data Input

Where Excel templates are used to support a manual business process or a large amount of financial data is required to be captured, Excel with web services is typically used to feed data to the system. First, a suitable template is designed with the business and then it is 'FlexMI™ enabled' by defining grids of data and the multi-dimensional keys that data relates to using an Excel add-in. This is not a complex process and many of the client's business analysts currently support this process themselves – ensuring the business can continue to evolve the solution to meet changing requirements.

Some projects do not require complex data analysis or just do not have the data volumes to require a cube

and Excel-based input templates. In these cases, custom web forms are used to capture data. InfoPath forms hosted on SharePoint are also supported.

Storage

Depending on the project, FlexMI™ can use both a relational database and a multi-dimensional cube. The relational database supports custom data capture from web forms to support the website while the cubes enable centralized storage and instant 'roll-up' of data & 'slice & dice' analysis.

Reporting

Reporting requirements are very specific to the project but available options include Excel, Reporting Services, the web, exposure in SharePoint or emailed to users as PDFs.

Web Services

FlexMI™ utilizes ASP.NET web services to expose data submission and retrieval services to remote systems and components, e.g. FlexMI™ workbooks. To enable working offline, users can download their workbooks and refresh them while online. After the initial refresh, the workbooks are configured and populated with the latest data. Users can then work with the Excel file offline and later submit the data via the web services when they have access to the company network again.

External applications could also be permitted / designed to hook into these services to submit and retrieve data accordingly. Additional components within the APS framework have the internal code 'stubs' to enable them to be exposed as web services. These have not yet been required and are as such disabled.

Workflow

FlexMI™ can use either Microsoft Workflow Foundation or a custom workflow engine that supports very complex processes including multiple, separate or parallel paths and stages. The workflow is designed in a component model to enable substitution for another workflow engine as required, e.g. a SharePoint workflow or a third-party engine such as K2 BlackPearl. FlexMI™ allows the modeling of advanced workflows with sequential and parallel activities and notifications. This also provides the ability for advanced control over things such as; the order data is submitted, permissions who can submit what components of the data and the approvals and sign-off process.

Security

FlexMI™ uses role based security and requires no privileged accounts except to enable initial deployment and support. Security is managed by the delegated system administrators themselves. Roles are defined in the design stage and can be assigned to users at differing levels of hierarchies. This enables local administrators to manage their areas of concern. The hosting is usually on the internal network and security is usually handled using the Windows login, so standard security policies and procedures are adhered to.

Software and Hardware Requirements

The following software applications and versions are required or supported to build, host and support a new FlexMI™ implementation but they will vary slightly depending on the client requirements:

Solution Hosting

- Microsoft SharePoint 2003/2007/2010
- SQL Server 2005/2008, including SSIS/SSAS/SSRS – 32bit/64bit
- Minimum of Microsoft Windows Server 2003 and IIS 6.0 / Windows Server 2008 and IIS 7

Client Tools

- Microsoft Excel 2003/2007/2010
- Microsoft Silverlight 2.0/3.0
- Microsoft.NET Framework 3.5/4.0

Feature Set

The features identified below are available in any configuration as standard. All projects contain custom features and those that are generic enough to be utilized by other implementations are made standard, this approach allows for continued development and improvement of the platform.

Cost & Support

- No initial or on-going per-user license costs
- Fully supported - remote or local on-site availability
- Automated solution monitoring for pro-active response
- Uses common, widely adopted technology
- Deployments can be managed by the business themselves

User Interface

- Versatile to meet differing requirements
 - Utilize Excel for saving financial data
 - SharePoint or web forms for custom applications
- Download Excel workbooks from a custom web based/SharePoint front-end

Data Input

- Allows data to be refreshed and saved directly from Excel
 - All complexity is hidden from the users
 - Utilizes common tool and requires limited user training
 - Re-use existing workbooks to save time
 - Use all of Excel's built-in functions
- Save text or numeric data and Excel formulas
 - Save text commentary from Excel comments or in-cell content
 - Save complex formulas to prevent against accidental overwrite or deletion
- Dynamically configured workbooks allow for a variable number of columns and rows
 - Workbooks are generated on first load
 - Maintain only one master Excel model per unique workbook type
- Save new master-data from within Excel workbooks
- Display reference data from other systems and data-sources within Excel
- Workbooks can be managed, maintained and modified by trained business power-users

Storage

- SQL Server allows for the immediate aggregation of data
- Model your data using multiple hierarchies including point-in-time analysis
 - Easy modeling tool provided so business can model their own hierarchies
- Multi-dimensional reporting allows for super fast information retrieval and 'slice & dice' capabilities
 - Allows for quick response for future unknown reporting requirements
- Auto-load data from flat-files or other databases (Microsoft/SAP/Oracle/XML/CSV)

Workflow

- Model advanced workflows with sequential and parallel activities and notifications
- Allows for advanced control over:
 - The order data is submitted
 - Permissions who can submit what components of the data

- Approvals and sign-off process
- Provides a 'dashboard' to easily monitor the status of all active workflow items
Analyze data utilizing in-Excel analysis tools
 - Drill-down on data within Excel
- Develop dynamic parameter driven reports that can be hosted on websites or in SharePoint
 - Enable the business to create their own reports if required
- Have reports automatically emailed on a schedule in multiple formats such as Excel, Reporting Services, PDF, etc.
- Multiple visualization and advanced charting options

Security

- Secure the application with Windows integration
 - No additional user login/password required
- Use custom roles that suit your requirements
- Secure users across single or multiple hierarchies, as granular as needed

Example Implementations of the FlexMI[™] platform

The use of FlexMI[™] is varied and numerous; to date over 20 implementations have been rolled out to fulfill many different requirements. Listed below are details of some of those implementations, further information on any project is available on request.

Long Term Planning (LTP)

Using FlexMI[™] for LTP allows an evergreen view of the organization at an activity or FM decision level. Data from the LTP automatically flows into a more focused near term view, where the numbers can be worked and compared with actuals from SAP and Hyperion. Once inputs are confirmed, a modular group financial planning process kicks off, allowing well understood and business developed models to calculate additional information such as Depreciation, Depletion and Amortization (DD&A), intercompany accounting and tax liability. A group financial planning modeling process that once spanned hundreds of Excel files has been consolidated to a handful of validated models, each of which is both easily understandable and interchangeable.

Overheads Tracking

Our client's overhead tracking process was a laborious, manual process managing data across many linked Excel spreadsheets enabling the collection and reporting of overhead data for the business unit. FlexMI[™] was used to streamline the process by improving the data collection and reporting system. By implementing a specifically designed overhead tracking cube, security and control processes efficiency was significantly enhanced with minimal overhead.

Financial Planning

The group financial planning process is a fundamental 'in year' planning process within the organization; enabling the business to anticipate and manage any deviations from plan in advance of them occurring. Its existing group financial planning process was very spreadsheet-dependent and labor-intensive to prepare each month. With the FlexMI[™] solution the business can turn information around in a few hours rather than days.

Field Planning and Economics

This application allows our client's planning team to track the life of their deep water fields via a long term plan that is also integrated with a field plan economic model. This allows the team to change various scenarios and 'what-if' situations and apply many different options to the data to understand field viability and whether to invest in various

well improvement projects or to extend the field life. FlexMI™ helps a large number of users to simultaneously download, track and submit their plan data in hours. Data aggregation occurs immediately and reporting is available at all times allowing the team more time for data analysis and less time on administration.

Financial Memorandum (FM) Tracking

Our client chose the FlexMI™ platform to deliver a solution to manage the process of rising and approving FMs in an auditable, controlled and secure fashion. The tool delivers functionality to manage the approval process, track related documents, signature sheets, supporting economics and to analyze and report the financial data for FMs across the business unit.

Production Tracking

The solution enables our client to track their oil and gas production. Technical field operatives submit daily production figures and environmental data (e.g. temperature), which is processed by the system and used to produce reports automatically.

This system has enabled detailed analysis of production data, enabling users to accurately determine profitability. The work involved the installation and customization of Altius-developed FlexMI™ workflow management platform in use throughout the organization for forecasting and planning.

Authorization for Expenditure (AFE) Approval Tracking

After an acquisition of a competitor, Altius was commissioned to perform an implementation of the FlexMI™ platform to help their land teams capture, process and track incoming AFEs.

The delivered system allows the capture of the AFE data, a workflow approval process and reporting to track expenditure. The application integrates with another FM tracking application to ensure AFE spend is valid.

Compliance Reporting

The purpose for this application is to give our client the ability to track all identified Supplier Performance Issues (SPRs). Each identified SPR is raised, captured and tracked to resolution using a custom workflow and role based security model. Reporting is then possible by organizational unit, responsible supplier or any number of other combinations.

Procurement Tracking/Supply Chain Management

This implementation for the North American division of our client replaced a labor intensive process for managing and assessing bids provided by suppliers through manual Excel-based load processes. The previous process had a number of productivity drawbacks, resulting in large amounts of custom development per template. There were also issues around on-going maintenance, including large amounts of rework if the templates need to be changed.

The project produced a job model and job builder built on the FlexMI™ platform that could analyze competitive bids and a number of contract resources were released when the solution went live and our client managed to reduce their costs by up to 40%.

Price Book Management

Our client had a labor intensive process for collecting, managing and publishing the price book provided by suppliers through a manual Excel/flat file based process. This process had a number of drawbacks, both in terms of actual productivity and also the security and data integrity issues associated with flat files. This made it difficult to update the price books and find the cost of any given item in a timely manner. In order to drive efficiencies in

this process, ensure consistency and enhance the ease and availability of pricing information, a system for MRO price book management was required.

The solution Altius delivered contained: a customized FlexMI[™] system to load price book data; a website with comprehensive price catalogue search, query and reporting capability; functionality to support the loading of existing product lines and pricing data.

Reserves Reporting

This solution manages all proven reserves in order to file reserves positions with the SEC (Securities and Exchange Commission). Technical field operatives submit proven reserves data, which is processed, approved and used to produce reports automatically. The process is audited and controlled in accordance with Sarbanes-Oxley (SOx) requirements.

This realizes a significant time and cost saving over a manual process and allows more time to be spent on analysis and more effective decision-making. The solution also tracks non-proven reserves movements as they evolve to become proved – ensuring goes beyond the simple regulatory requirements and has the foundation for further information capture.