



IT Initiatives Workflow Automation Solution



Windows SharePoint Services / Biztalk Server - Case Study

The Summary

The Business Solutions Group (BSG) of the bank's information technology division acts as an interface between the IT infrastructure and development team and the internal business users of IT solutions. When business users feel the need for modifying or creating an IT system, there is a specific process followed by BSG to collect and finalize the requirements before formally handing the project over to the IT team or external vendor. The above process was tedious and involved manual intervention at various stages of the process. The client therefore approached AG Technologies to automate this process. The objective was achieved using Microsoft technologies, including Office 2003, WSS & BizTalk 2004, thereby reducing the time required to carry out the entire process.

The Client

The client is one of the largest global banks dealing with Housing Development Finance

The Business Requirement

The Systems automates and streamline the entire workflow process of IT Initiatives using Microsoft technologies, it manages following processes which are broadly classified below

- Capture an Idea or a Concept in form of Discussions.
- Allow Other Users to participate in those Concept Discussions
- Business User Admin can Tag the discussion based on (Group, Category, Application, Type)
- Close the Discussion - Move the Discussion or to Archive the Discussion
- Ability for Business User Administrator to create Concept Note Site
- Assign various Users to the Site (Author, Reviewer, Approver), Authentication through ADS
- Allow Author to create the CN/RD, Reviewer will review the Document, and Approver will approve the same. Ability to manage the Reverse Flow, if the reviewer or approval rejects the document.

Project Summary

Industry: Banking

Client Profile: The client is one of the largest global banks dealing with Housing Development Finance

Business Requirements: Development of a Corporate Communication and Collaborative Intranet Portal solution for new IT Initiatives Management.

Solution:

The solution was developed using Microsoft technologies, including Office 2003, WSS & BizTalk 2004 which automated the entire process and provided status of projects that have been incubated from their concept notes, in a customized Digital Dashboard

Solution Benefits

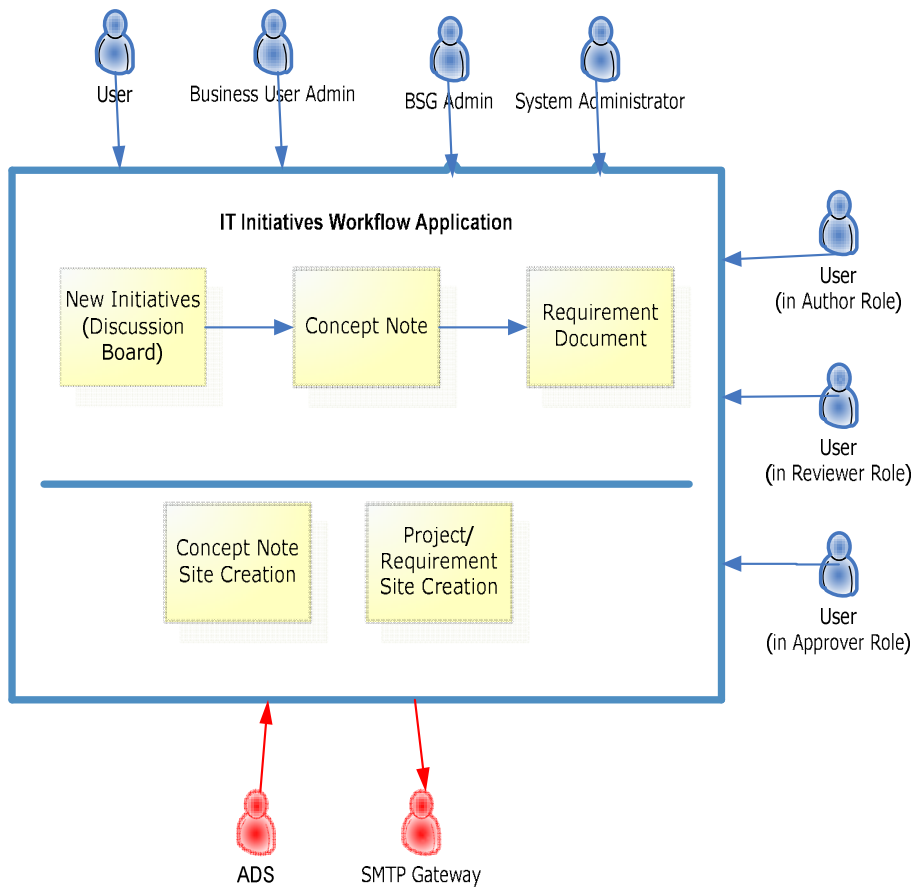
- Central repository for all the documents & artifacts
- Enable the BSG team ability to create a workflow & comprehensively track the progress and artifacts
- The CIO (with a few clicks) able to get a dashboard view of any initiative at any stage.



AG Technologies

- Ability for Business User Group Leader to Create Requirement/Project Site
- Notification to Users via mails
- Ability to Drop the Concept Note/Requirements Document
- Ability to move the Discussion Board to CN Site, and further to RD site
- View all Current and Archive Discussions/CN/RD
- Provide Alerts for escalation with color pattern
- Establish basic Collaborative Artifact management, on a Dashboard.
- Ability to provide a workflow trail.

The Context Diagram





The Solution

The architecture of the system was as follows:

- Windows SharePoint Services was used as the central point of this project. Users can visit a SharePoint-enabled web site, where they can view the status of their currently raised Concept notes, and the status of projects that have been incubated from their concept notes, in a customized Digital Dashboard. They can also start a new concept note from here. Users in relevant roles will be able to approve/reject concept notes from here as well.
- When a user chooses to create a new concept note or view/edit/annotate an existing one, Smart Document technology will be used to provide a rich editing experience. Some examples:
 - A search facility was provided in the document itself, enabling users to search for and reference similar concept notes.
 - A Requirements document can be automatically generated from an approved Concept Note.
 - Statutory parts of the Concept Note and Requirement Document templates could be automatically filled in by the Smart Document. Alternatively, interactive methods of fetching and filling this data from enterprise systems could be provided.
- Communication between the Smart Document being edited by a user, and back-end systems providing data to it, was via Web Services.
- Primary BizTalk role in IIWA is to manage the Concept Note and Project workflow. BizTalk monitors the workflow state and on the state change, it decides the next logical state (based on the maintained path). For certain states, where multiple user inputs are required, BizTalk waits for all user inputs and upon submission of the last user request, concludes one of the following result.
 - Positive – All users have accepted the document
 - Negative – In case any user has rejected the document
 - Drop – In case Concept Note or Projects needs to be dropped
- Based on the concluded result, next workflow state is decided and BizTalk waits for the next workflow state to change. In case of drop request, BizTalk terminates the workflow.
- BizTalk also manages cases when workflow states are skipped. For example, after author document submission, users in approver role approve the document by skipping the review process. BizTalk manages this condition based on skipping permission maintained for the state.
- BizTalk also manages the forced submission in cases where user is not able to submit document. Forced submission is done by user in administer role.



Email Alerts

Upon workflow state change, BizTalk sends email alerts to the users pertaining to next workflow state informing them about the state change and requesting them to initiate the work on the next workflow state. BizTalk also sends email alerts to all users who participated in the workflow state when milestones are achieved for example, when Concept Note is converted into Projects, milestone alerts will be sent to users in Author, Reviewer, Approver, Administrator role and also to the users who participated in the initial discussion (SharePoint discussion board).

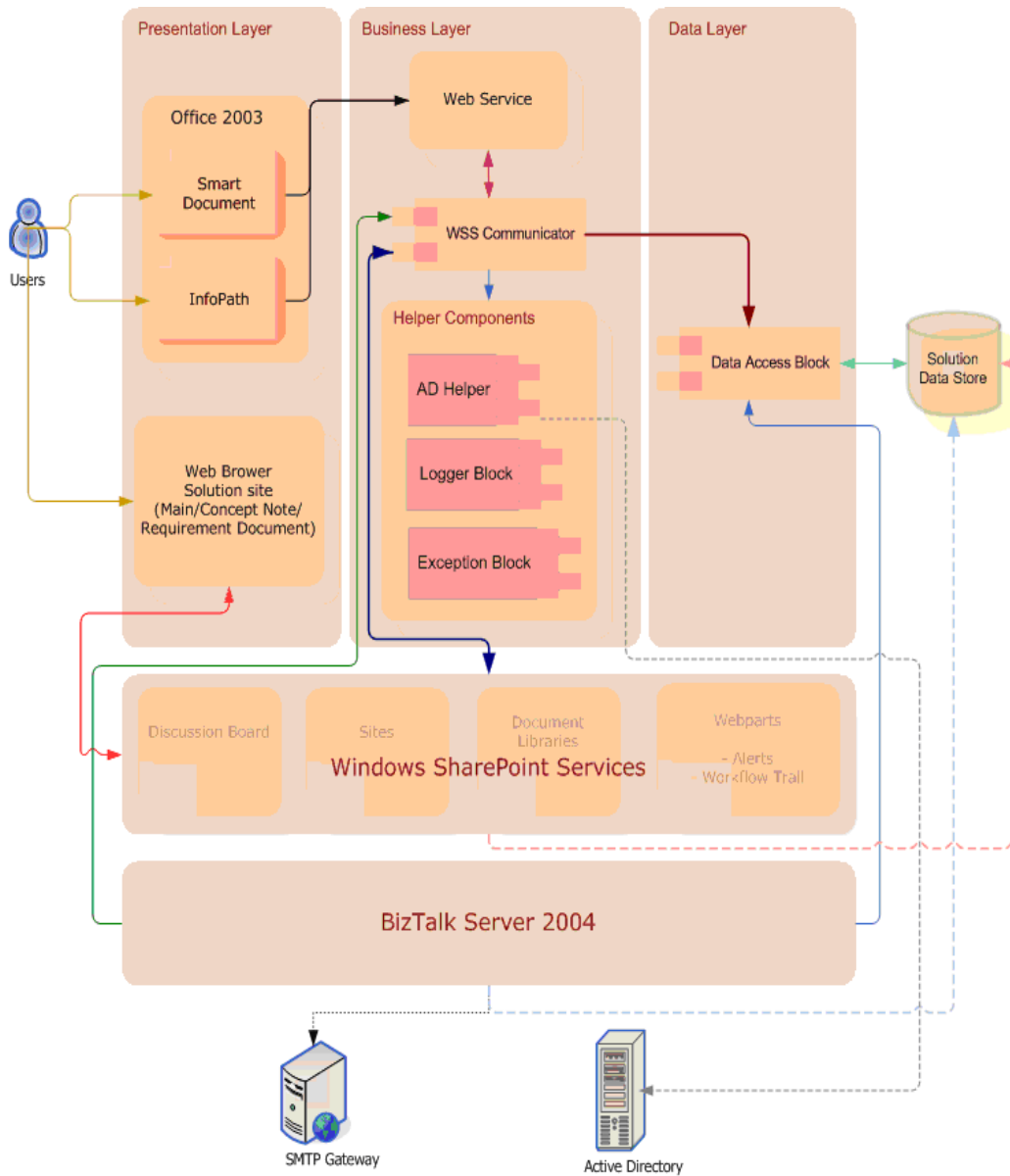
Crash Recovery

In case, BizTalk is failed sending email alert due to SMTP gateway failure or failed setting SharePoint user roles due to connection failure, BizTalk allows administrator to fix the technical problem and resume the workflow from the point of failure. This functionality is built on top of the out of the box crash recovery feature present in BizTalk.

- All meta-data regarding a concept note or a requirements document, including who submitted it, what stage of workflow it is at, how long has it remained in each stage, which department is it relevant to, and so on, was available in a SQL Server database. Analytical reporting on the same was provided via SQL Reporting Services



The Solution Architecture





- Microsoft Visual Studio .NET 2003
- Visual Studio Tools for Office
- Microsoft SQL Server 2000 Enterprise Edition with Service

The Solution Benefit

- Central repository for all the documents & artifacts related to any initiative headed in the bank & reduced the flow of information happening through e-mails.
- Reduced TAT(turn-around-time) for RFP's to culminate into projects & increased overall efficiency & productivity using alerts & escalations at each & every stage of the workflow.
- Enable the BSG team ability to create a workflow & comprehensively track the progress and artifacts related to an IT initiative and provide Senior Management including the CIO visibility on status of various initiatives headed in the bank.
- Allow BSG to within a few minutes locate all artifacts related to a proposed initiative.
- Allow role based access to the various sections of the document using Smart Document technology.
- Enable stakeholders to discuss, raise issues, work on a RFP and compare responses in a highly visible and collaborative manner.
- The CIO (with a few clicks) able to get a dashboard view of any initiative at any stage.