



Microsoft Windows® SharePoint® Services Microsoft Dynamics™ AX Integration Scenarios



Microsoft





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Introduction

In an effort to help companies improve efficiencies through enhanced communication and collaboration, Microsoft recently developed 30 applications for Microsoft Windows® SharePoint® Services. These applications were tailored to address the requirements of specific business processes (the link to these applications can be found in the "Relevant Resources" section). In addition, the applications served as a starting point for partners and developers to build deeper Microsoft Windows SharePoint Services solutions. This white paper, which is presented as a follow up to the 30 applications for Microsoft Windows SharePoint Services, details three different scenarios showcasing how a company could benefit from integrating these applications with back-end Microsoft Dynamics AX data. Each scenario is further split into three distinct benefit categories: View Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services, Update Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services, and Collaborate in Microsoft Windows SharePoint Services then Upload Data to Microsoft Dynamics AX. An overview of each scenario is presented below. The companies described in these scenarios are purely fictional. The functionality showcased is also fictional and is intended to illustrate potential application capabilities.

Scenario	RFP Management	Absence Request and Vacation Schedule Management	Expense Reporting
Reduced Process Cycle Time	<ul style="list-style-type: none"> Speed up process of locating qualified vendors Easily filter vendors by assigned vendor score Store responses in a centralized document library 	<ul style="list-style-type: none"> Supervisor is immediately notified via email when time off is requested Employee is immediately notified when time off is approved or denied Employees can easily view accurate vacation information for all other employees in company, increasing chances that their request will be approved the first time around 	<ul style="list-style-type: none"> The submitter and approver of expense reports are notified immediately when the status of a report changes Data elements such as name, title, address, and manager are brought in from Microsoft Dynamics AX, thereby improving efficiencies and reducing errors
Reduced Process Errors/ Iterations	<ul style="list-style-type: none"> Reduce chance of selecting unqualified vendors Easily track vendor RFP responses 	<ul style="list-style-type: none"> Vacation dates do not have to be posted to numerous locations Employee enters data directly into form thereby reducing possibility that incorrect dates will be requested 	<ul style="list-style-type: none"> Data accuracy is improved because expense report rules are enforced in the application Employee can view all outstanding expense reports, reducing possibility that duplicate expense reports will be submitted
Improved Team & Organizational Collaboration	<ul style="list-style-type: none"> Gather feedback from employees through discussion boards Determine employee reactions to vendor responses through surveys Easily access vendor responses by clicking link on Quick Launch bar 	<ul style="list-style-type: none"> Supervisor can easily pull up a list of all pending requests Once time off is approved by a supervisor, time off can be viewed in calendar Employees store their project materials on dedicated employee workspace, making it easier for a substitute to cover while employee is out 	<ul style="list-style-type: none"> Discussion boards facilitate communications about expense reporting policies and other topics Announcements enable employees to stay up-to-date on policy changes
Access & Update Enterprise System Data	<ul style="list-style-type: none"> Vendor data entered through Windows SharePoint Services site is automatically pushed back to Microsoft Dynamics AX Easily maintain vendor data 	<ul style="list-style-type: none"> Approved time off is automatically marked as vacation time in Microsoft Dynamics AX Once time off is approved, the vacation balance is automatically updated in Microsoft Dynamics AX 	<ul style="list-style-type: none"> An approved expense report is automatically submitted as an Accounts Payable item in Microsoft Dynamics AX



Introduction

RFP Management

Adventure Works, a manufacturer of consumer electronics, has struggled with inefficiencies in managing the Request for Proposal (RFP) process. Adventure Works recently implemented a Microsoft Windows SharePoint Services site that is tightly integrated with Microsoft Dynamics AX, Adventure Works' back-end business management solution. The application has greatly improved the efficiency with which RFPs are submitted and reviewed. The Operations Manager who is responsible for RFPs has easy access to a Vendor List stored in Microsoft Dynamics AX containing vendor scores. The Manager then sends an RFP to those vendors with the highest score. The vendor record is updated as needed and these edits saved back to Microsoft Dynamics AX. An employee is able to complete all these operations without any knowledge of Microsoft Dynamics AX because changes made in the Microsoft Windows SharePoint Services application are automatically fed to Microsoft Dynamics AX. Finally, the Manager posts RFP responses to a centralized location and solicits feedback via discussions and surveys.

Absence Request and Vacation Schedule Management

Managing vacation leave has traditionally been a tedious and inefficient process at Northwind Traders. Requests for vacation time were submitted to the manager through a variety of different channels ranging from email to unplanned interactions with employees. The process lacked any defined structure. After implementing the Absence Request and Vacation Schedule Management Microsoft Windows SharePoint Services application, employees submit their requests through the site and the manager is automatically notified of the request. The employee is then automatically notified of the manager's decision at the time the decision is made, and the vacation time is posted to the calendar. The end result for the manager is less time spent dealing with absence requests, and more time spent working on value added projects. Employees also benefit from the added convenience provided by not having to post vacation time to numerous locations.

Expense Reporting

Managing expense reports can be a daunting task in any organization. Contoso, Ltd. has recently implemented the Expense Report Microsoft Windows SharePoint Services Application to manage the expense reporting process. Expense reports are now submitted and stored directly through the site. The manager is immediately notified when an employee submits a report. The employee is then notified the moment the manager approves or denies the report. Finally, the data on the expense report is automatically routed to Microsoft Dynamics AX where it is recorded as an Accounts Payable item. This streamlined process helps reduce status notification time, data errors, and data reentry, thereby reducing process cycle time and administrative cost per expense report.



Scenario 1: RFP Management - Description

Background

As part of its ongoing business operations, Adventure Works submits numerous RFPs to a variety of vendors and consulting firms. Managing the RFP process has been a challenge in terms of selecting the right vendors and managing vendor responses. The recent launch of a Microsoft Windows SharePoint Services site that is tightly integrated with Microsoft Dynamics AX, Adventure Works' back-end data management system, has streamlined vendor selection and improved management of RFP responses.

Business Value

Many business management solutions (where vendor information is typically stored) require extensive training for a user to comfortably find the information they need. As a result, even with access to the back-end system or business management solution, occasional users of the application must often ask the Information Technology (IT) department for assistance in extracting information. By integrating the Microsoft Windows SharePoint Services application with an organization's business management solution, even complex supply chain related data can be viewed and updated via the Microsoft Windows SharePoint Services application.

In this scenario, an Operations Manager wants to submit an RFP to vendors that have transacted business with his company in the past. Thanks to the integrated Microsoft Windows SharePoint Services site, the manager can find the information he needs without accessing the business management solution. This allows him to quickly find vendor candidates and allows his team members to collaborate on reviewing RFP responses.

View Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services

Jeff Hay is the Operations Manager at Adventure Works. He has been unhappy with the vendor that currently supplies mini light bulbs used in almost all the products that Adventure Works manufactures. He has decided to review other vendors that the company has transacted business with in the past and wants to submit a request for proposal (RFP) to five of these vendors. Adventure Works has always kept a vendor scorecard in Microsoft Dynamics AX to rate vendor performance. The scorecard is represented by a field added to the vendor record as part of Microsoft Dynamics AX customization.

Although Jeff has access to Microsoft Dynamics AX, he is not a power user of the software and does not regularly access it. His primary work environment is a collaboration site based on Microsoft Windows SharePoint Services. Jeff would benefit from accessing Microsoft Dynamics AX information through this easy-to-use collaboration site, rather than being forced to learn a complex ERP package. This would also eliminate the need to "application hop" between two different applications to accomplish one task.

The screenshot in Figure 1 below shows the home page of the recently launched Microsoft Windows SharePoint Services site for RFP Management.

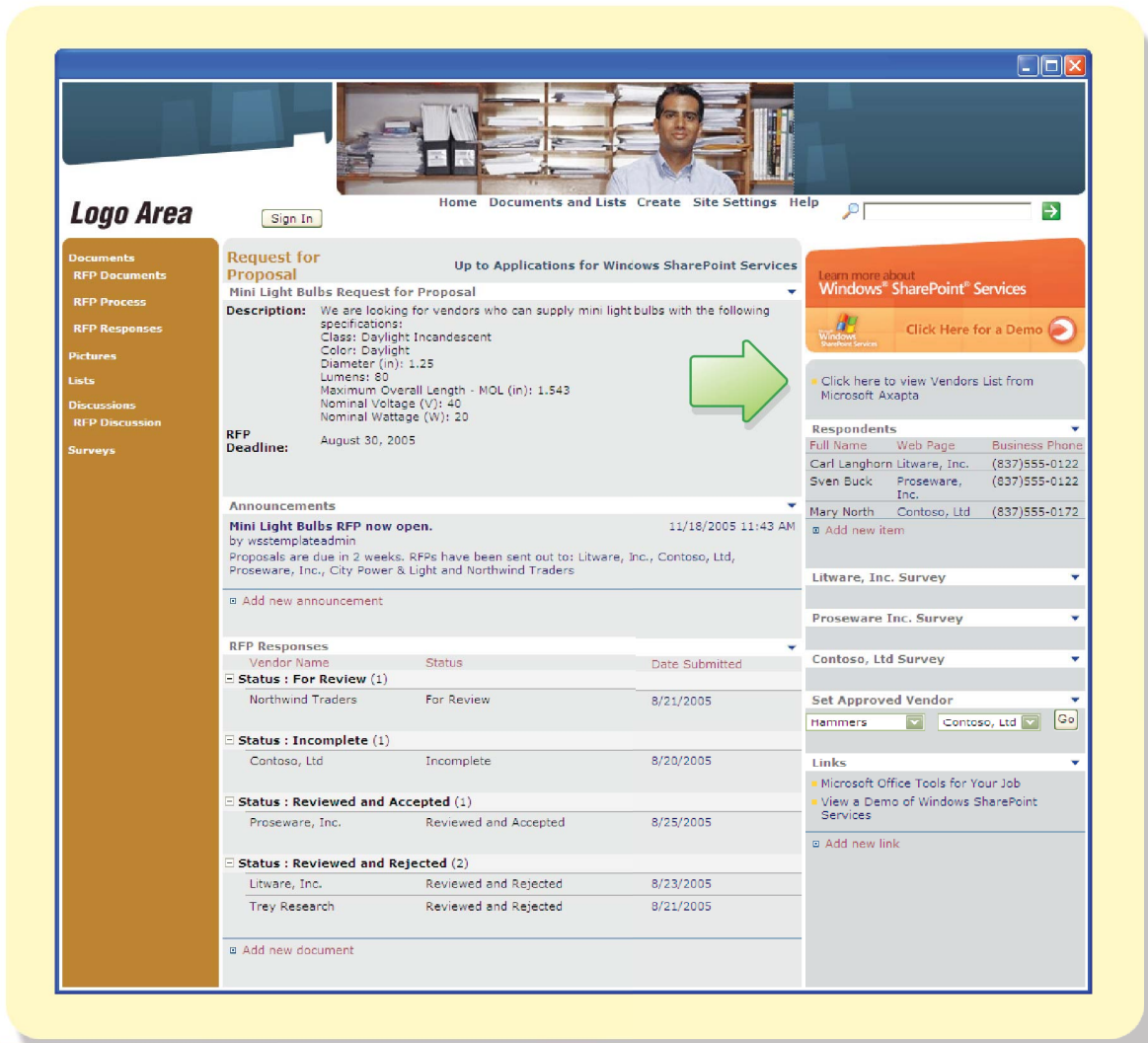


Figure 1: RFP Management Home Page

View Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services

Jeff can easily view the Vendors List stored in Microsoft Dynamics AX through the Microsoft Windows SharePoint Services site by clicking the “Click here to view Vendors List from Microsoft Dynamics AX” link located on the right hand side of the home page.



Company	Buyer Group	Active	Score	One-time supplier	Axapta Vendor ID
Litware, Inc.	Light Bulb Suppliers	Yes	98	No	2,000
Fabrikam, Inc.	Instrumentation Tools	Yes	82	No	5,000
Contoso, Ltd	Light Bulb Suppliers	Yes	78	No	3,000
Proseware, Inc.	Light Bulb Suppliers	Yes	78	No	1,000
Trey Research	Light Bulb Suppliers	Yes	77	No	9,000
Graphic Design Institute	Stationary	No	67	Yes	4,000
Northwind Traders	Light Bulb Suppliers	Yes	64	No	7,000
City Power & Light	Light Bulb Suppliers	Yes	48	No	6,000
Fourth Coffee	Light Bulb Suppliers	No	43	No	8,000

Add new item

Figure 2: Vendors List

After clicking on the link, a page appears (displayed in Figure 2) listing details about each vendor stored in Microsoft Dynamics AX. These details include:

- Company name
- Buyer Group
- Active status
- Vendor Score from Scorecard
- One-time supplier indicator
- Microsoft Dynamics AX Vendor ID

Using this page, Jeff can easily search for a group of vendors (e.g., light bulb suppliers) by vendor group by selecting the group in the "Filter by Buyer Group" dropdown and clicking "Go". He can then further sort the results by vendor scores by clicking on the column heading "Score." The result of these sort operations is shown in Figure 3 below.

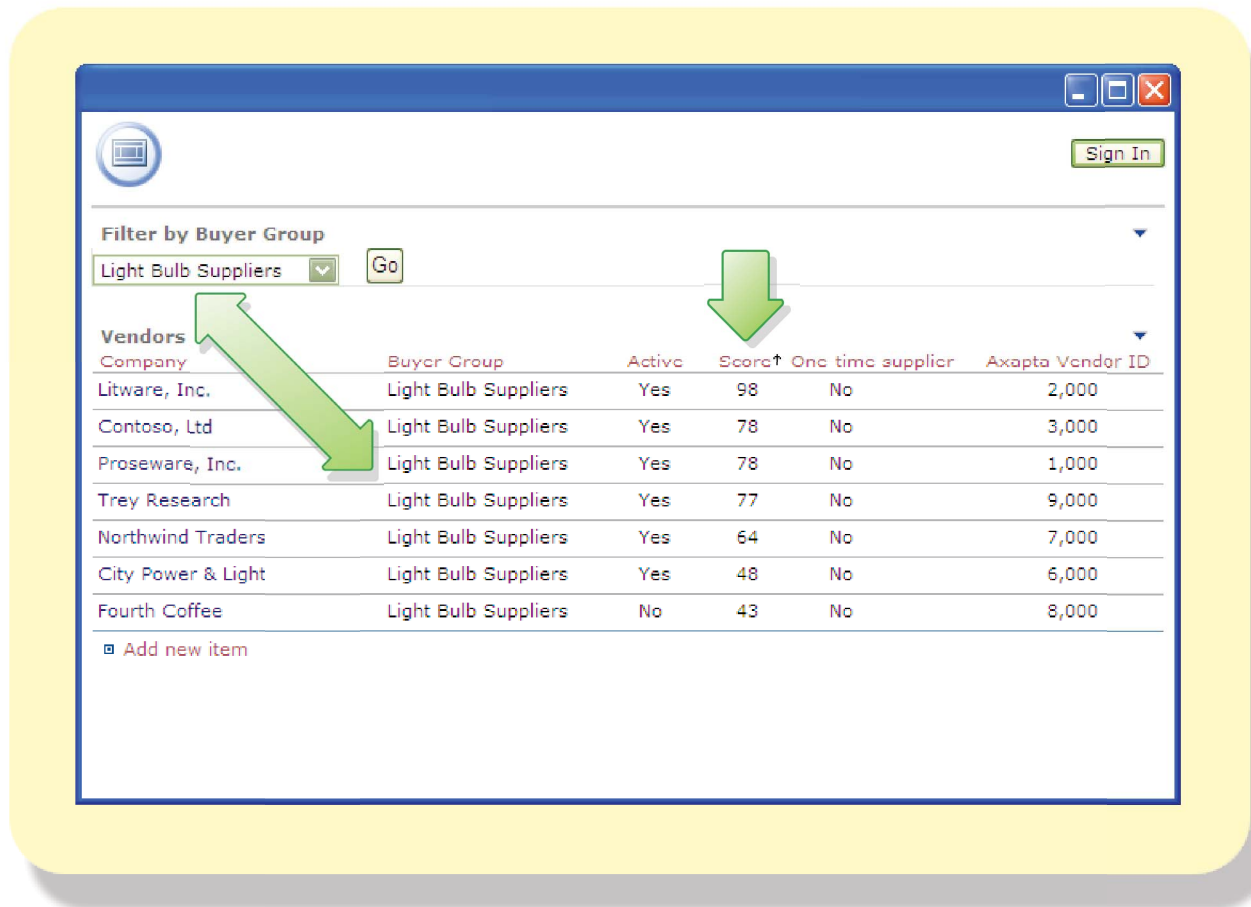
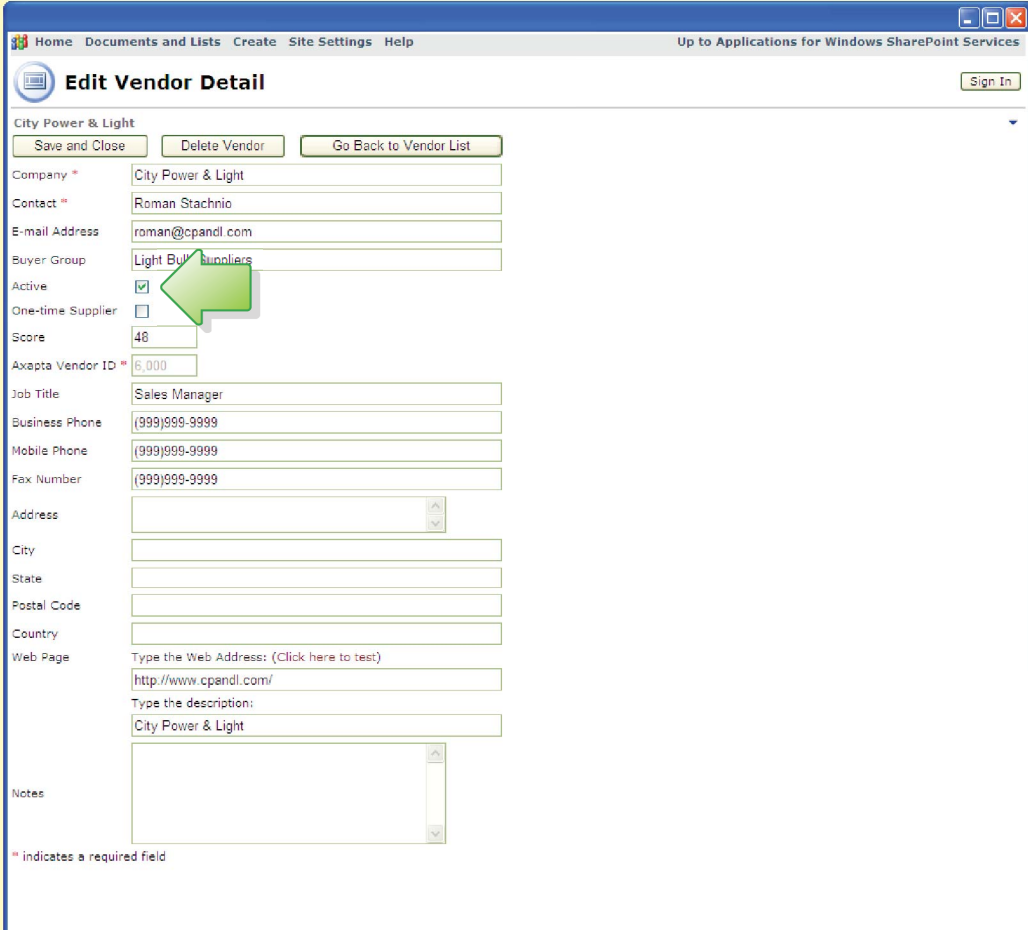


Figure 3: Vendors List Filtered by Buyer Group and Sorted by Score

Jeff is now presented with a list of light bulb suppliers ranked based on their performance scores stored in Microsoft Dynamics AX. Jeff can use this information presented through the Microsoft Windows SharePoint Services site to determine which vendors should receive an RFP.

Update Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services

After reviewing the list of vendors based on the specified criteria, Jeff notices that some of the scores need to be updated. By clicking on a company name, Jeff accesses an edit page where information about a vendor can be edited and saved back to Microsoft Dynamics AX. Figure 4 shows the screenshot of this edit page.



Home Documents and Lists Create Site Settings Help Up to Applications for Windows SharePoint Services

Edit Vendor Detail

City Power & Light


Save and Close Delete Vendor Go Back to Vendor List

Company * City Power & Light

Contact * Roman Stachnio

E-mail Address roman@cpandl.com

Buyer Group Light Bulb Suppliers

Active 

One-time Supplier

Score 48

Axapta Vendor ID * 6,000

Job Title Sales Manager

Business Phone (999)999-9999

Mobile Phone (999)999-9999

Fax Number (999)999-9999

Address

City

State

Postal Code

Country

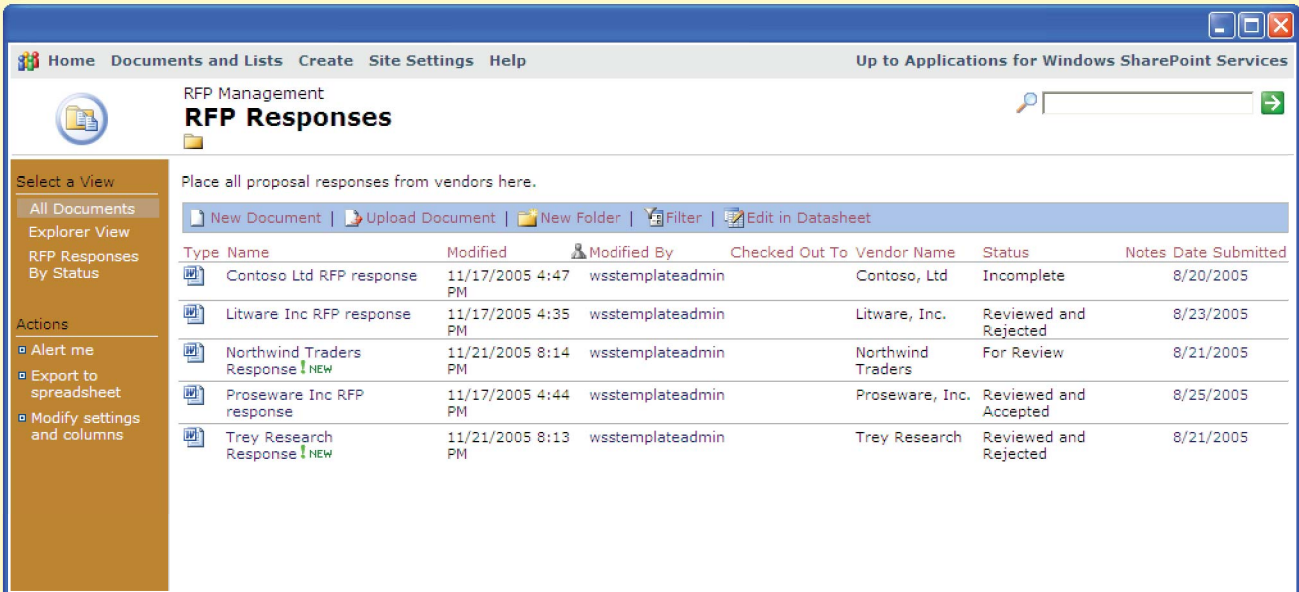
Web Page Type the Web Address: (Click here to test)
http://www.cpandl.com/
Type the description:
City Power & Light

Notes

* indicates a required field

Figure 4: Vendor Detail Edit Page

Using this page, Jeff proceeds to update the vendor scores. Jeff also noticed several vendors on the list who are no longer in business. Again, Jeff can use the edit page to mark these vendors as "Inactive" by de-selecting the "Active" checkbox and then clicking "Save and Close". Jeff does not need to update Microsoft Dynamics AX separately as these changes will automatically be pushed to Microsoft Dynamics AX.



The screenshot shows a SharePoint document library titled "RFP Responses" under "RFP Management". The library contains five documents, each with a status and a date submitted. The table below represents the data shown in the screenshot.

Type	Name	Modified	Modified By	Checked Out To	Vendor Name	Status	Notes	Date Submitted
Word Document	Contoso Ltd RFP response	11/17/2005 4:47 PM	wsstemplateadmin		Contoso, Ltd	Incomplete		8/20/2005
Word Document	Litware, Inc RFP response	11/17/2005 4:35 PM	wsstemplateadmin		Litware, Inc.	Reviewed and Rejected		8/23/2005
Word Document	Northwind Traders Response NEW	11/21/2005 8:14 PM	wsstemplateadmin		Northwind Traders	For Review		8/21/2005
Word Document	Proseware Inc RFP response	11/17/2005 4:44 PM	wsstemplateadmin		Proseware, Inc.	Reviewed and Accepted		8/25/2005
Word Document	Trey Research Response NEW	11/21/2005 8:13 PM	wsstemplateadmin		Trey Research	Reviewed and Rejected		8/21/2005

Figure 5: RFP Responses

Collaborate in Microsoft Windows SharePoint Services then Upload Data to Microsoft Dynamics AX

As Jeff receives RFP responses from all five vendors, he posts their responses on the Microsoft Windows SharePoint Services site. Figure 5 displays the contents of the "RFP Responses" document library where Jeff has uploaded all five responses. This page can be viewed by clicking on "RFP Responses" on the Quick Launch bar on the left hand side of the RFP Management home page (Figure 1).

Jeff wants to provide other members of the operations team with an opportunity to discuss the five responses. He enables a discussion board for his team to post questions and comments.

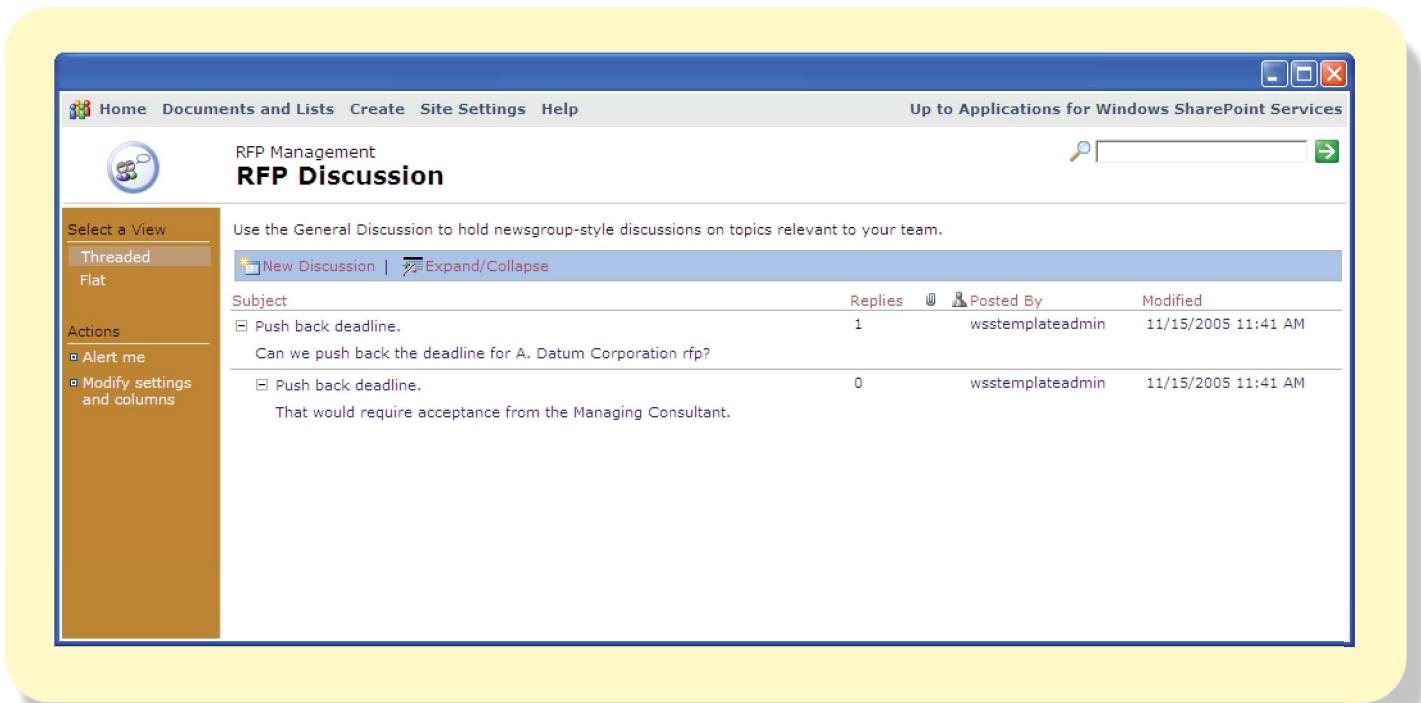


Figure 6: RFP Discussion Board

Figure 6 displays the discussion board that Jeff opened up for his staff. A week later, Jeff creates a survey where his team can rate each of the vendors. Jeff created a separate survey for each vendor that responded to the RFP.

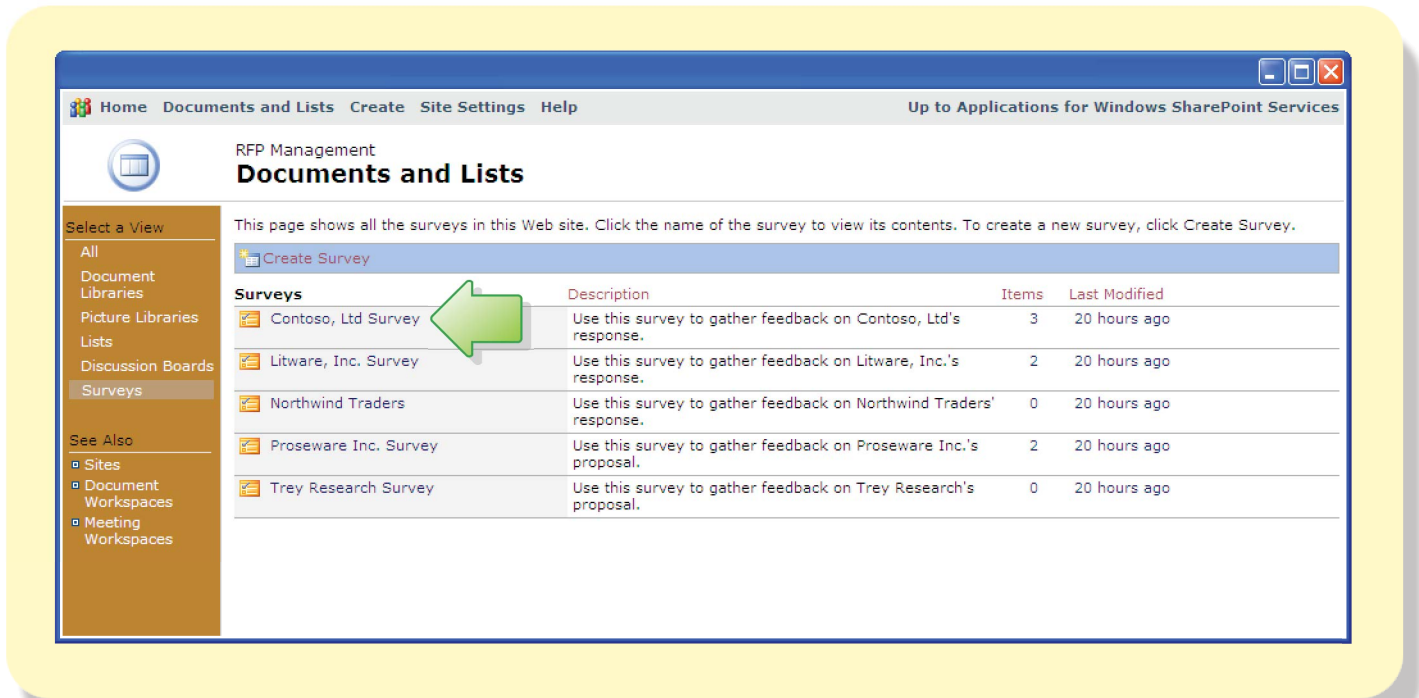


Figure 7: List of all Surveys

Figure 7 shows the list of all the surveys he created. Jeff can click on a vendor name to access that vendor's survey.

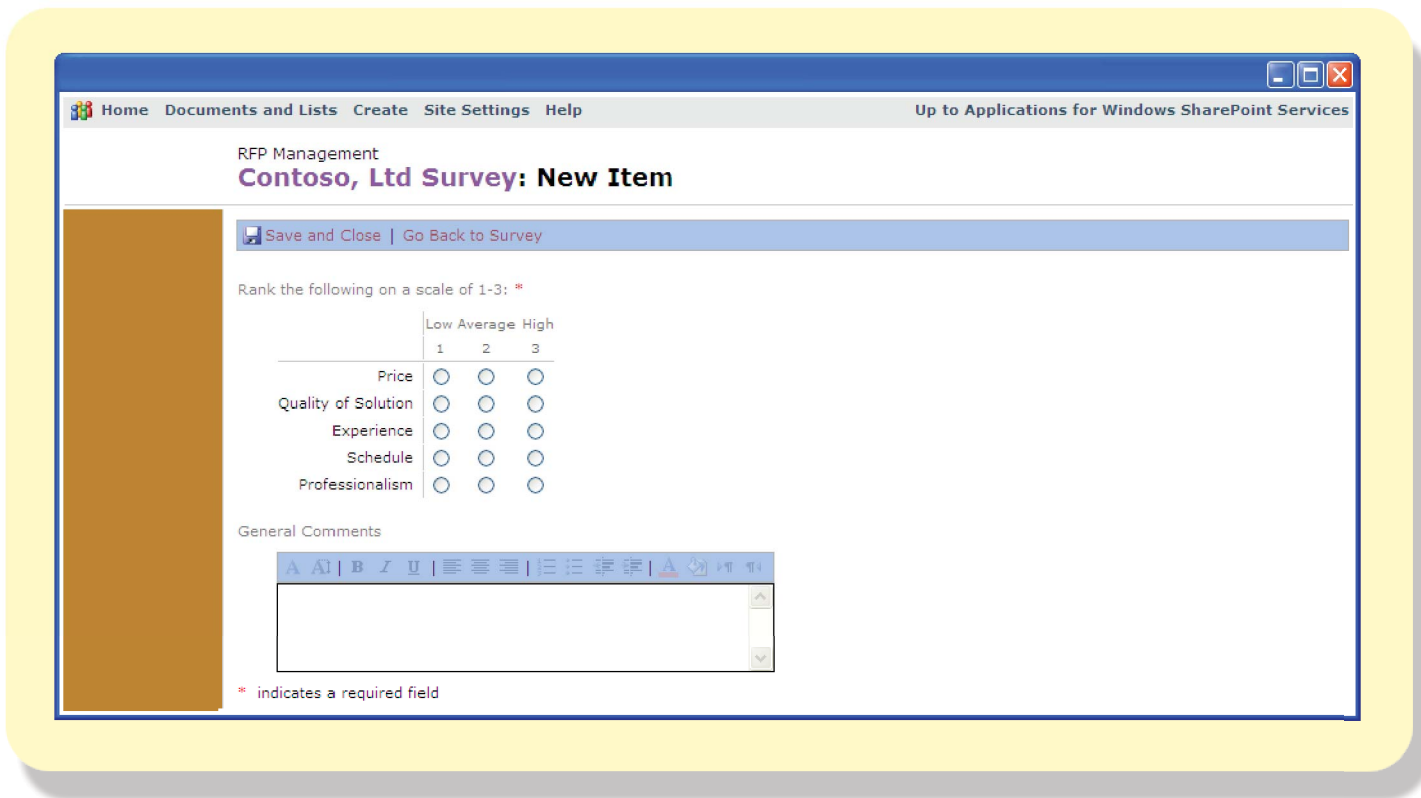


Figure 8: New Response for the Contoso, Ltd Survey

Figure 8 shows the page that is displayed when Jeff clicks on "Contoso, Ltd Survey." It is also possible to view a graphical summary of the responses to each survey (Figure 9).

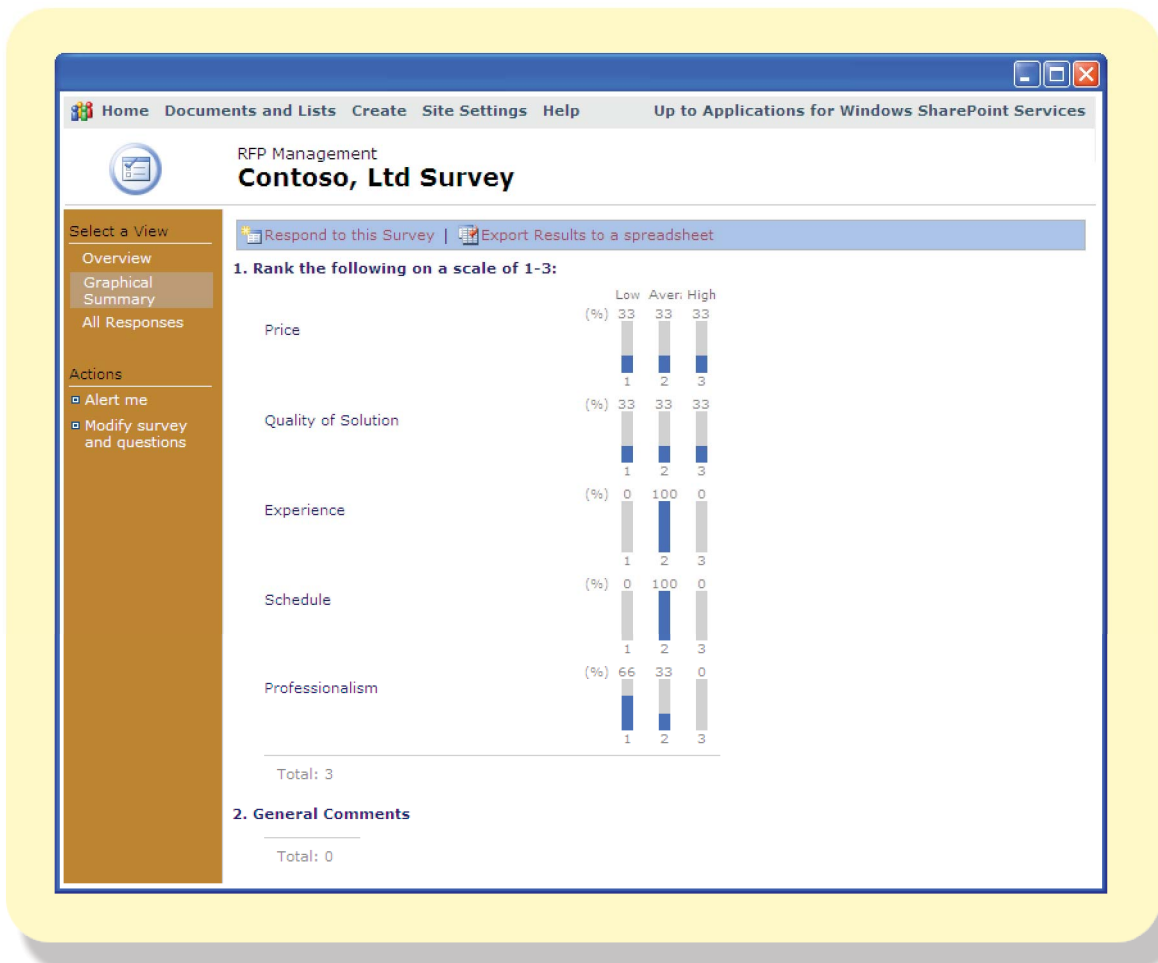


Figure 9: Graphical View for the Contoso, Ltd Survey

After reviewing all comments and survey results, Jeff decides to select Litware, Inc. as Adventure Works' new vendor for mini light bulbs. He wants this change to take effect immediately by marking Litware, Inc. as the default vendor for mini light bulbs in Microsoft Dynamics AX via the Microsoft Windows SharePoint Services site.

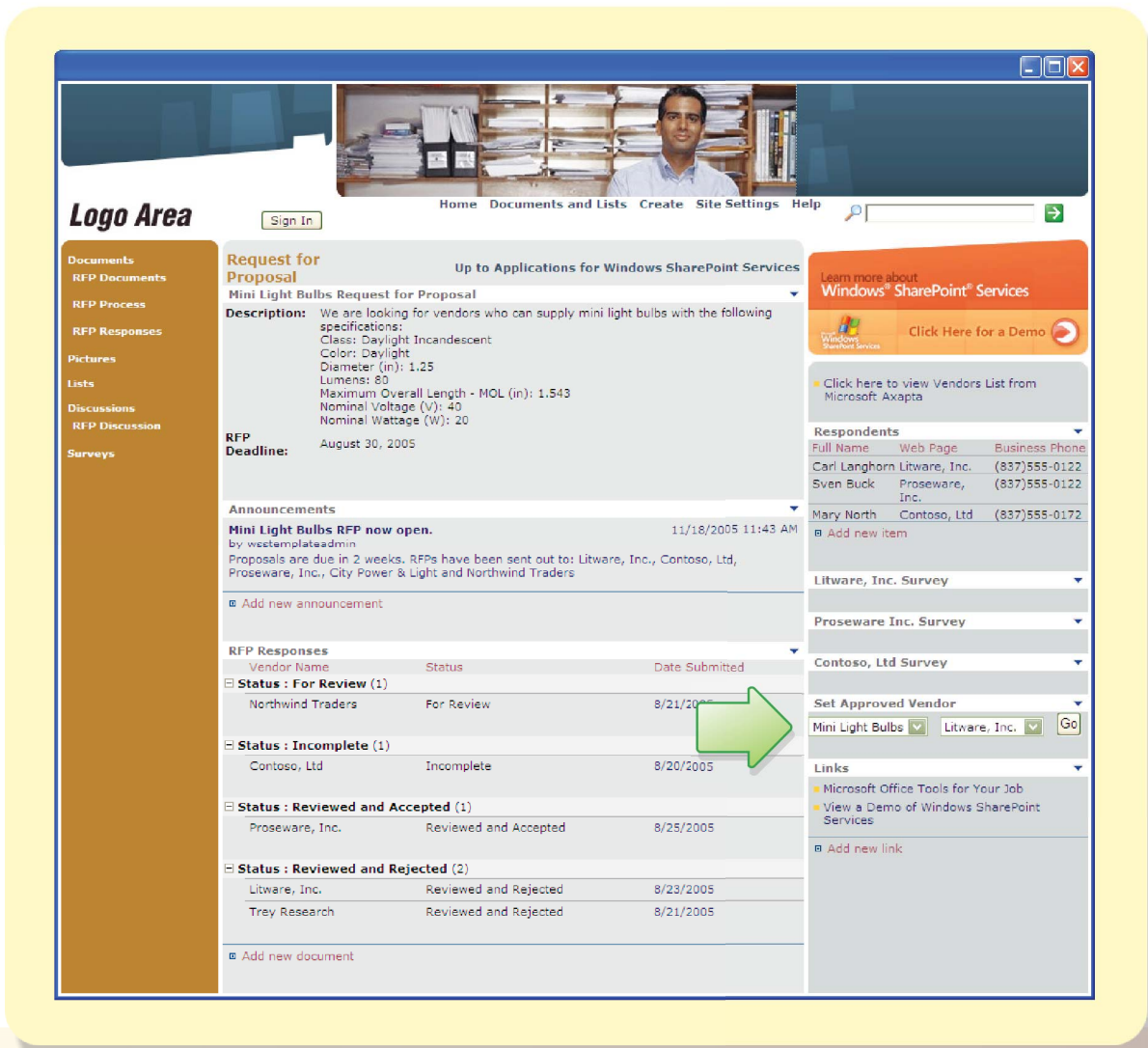


Figure 10: Set Approved Vendor

This is accomplished by using the “Set Approved Vendor” Web Part on the home page (Figure 10). Jeff selects the product “Mini Light Bulbs” and the vendor “Litware, Inc.” from the appropriate dropdowns and then clicks “Go” to update the recommended vendor field in Microsoft Dynamics AX for “Mini Light Bulbs”.

From now on, when a buyer selects the “Mini Light Bulbs” item during the purchase order process in Microsoft Dynamics AX, Litware, Inc. will come up as the default and recommended vendor. Thus, Jeff is able to seamlessly update the vendor information in Microsoft Dynamics AX right from the collaborative application as part of the RFP scenario.



Scenario 2: Absence Request and Vacation Schedule Management - Description

Background

Lisa Miller, an employee with Northwind Traders, is planning her next vacation. As part of the planning process, she must create a vacation request using Northwind's recently implemented Absence Request and Vacation Schedule Management Microsoft Windows SharePoint Services application.

Prior to using the Absence Request and Vacation Schedule Management in Microsoft Windows SharePoint Services application, Lisa's supervisor, Wendy Kahn, struggled to keep up with the inflow of absence requests from her team members. Requests arrived through email, voice mail, and impromptu one-on-one conversations. By using the Absence Request and Vacation Schedule Management in Microsoft Windows SharePoint Services application, Wendy can spend less time dealing with these absence requests, and more time on value added projects. Furthermore, since the requests are all organized into one common medium, they are no longer lost or forgotten, thereby providing Wendy with a more accurate view of staffing requirements at any given point in time.

Business Value

This scenario, when implemented, will provide the following business benefits to both employees (submitting absence requests) and managers (approving absence requests):

Managers: Managers today are burdened with many responsibilities that force them to spend long hours juggling and organizing their schedules and tasks. As a result, some managers have difficulty responding to their employee's vacation (or absence) requests in a timely manner. In addition, because many organizations do not have a standard medium for employees to submit their vacation requests, managers have to continuously check their emails, phone messages, and calendars to remind themselves of the tasks that need to be completed. As depicted in this scenario, by leveraging the Absence Request and Vacation Schedule Management in Microsoft Windows SharePoint Services application, managers can rely on the application to manage the approval tasks for them. This reduces the amount of time spent managing non-strategic tasks and allows managers to focus on more value added projects.

Employees: A key benefit of implementing the Absence Request and Vacation Schedule Management in Microsoft Windows SharePoint Services application is providing employees with the ability to view accurate vacation schedules for all other employees in the company. This increases the chance that a vacation request will be approved the first time around which reduces the time spent collaborating on vacation requests that are not feasible for the organization. The Microsoft Windows SharePoint Services application also eliminates the need for employees to go through multiple steps to get a vacation approved. Once a request is approved, employees no longer have to post the dates in numerous locations (e.g., personal calendar, team calendar, timesheet, business management solution, etc.). By leveraging the Microsoft Windows SharePoint Services application integrated with the business management solution, employees can instead rely on the application to post vacation status to the appropriate data sources and systems (such as timesheets and email calendars). Finally, employees will be notified immediately when requests are rejected by the manager which speeds up the process of resubmitting the request.

View Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services

To create her vacation request, Lisa navigates to the Absence Request and Vacation Schedule Management site within the Northwind Microsoft Windows SharePoint Services collaboration site. The home page of the application is presented below.

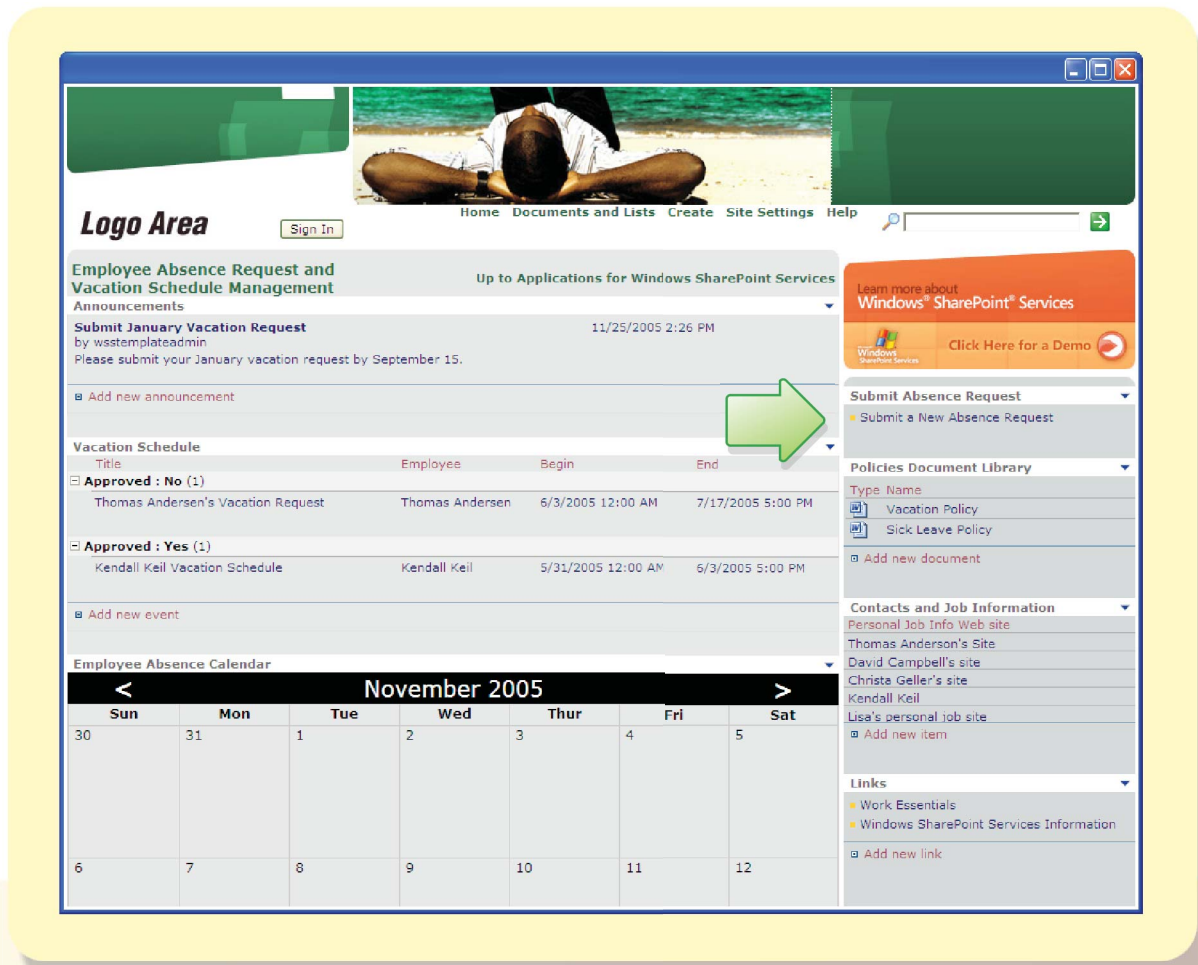


Figure 11: Absence Request and Vacation Schedule Management Home Page

When Lisa clicks on the link "Submit a New Absence Request", she is taken to the "Absence Request Form library," displayed in Figure 12 below.

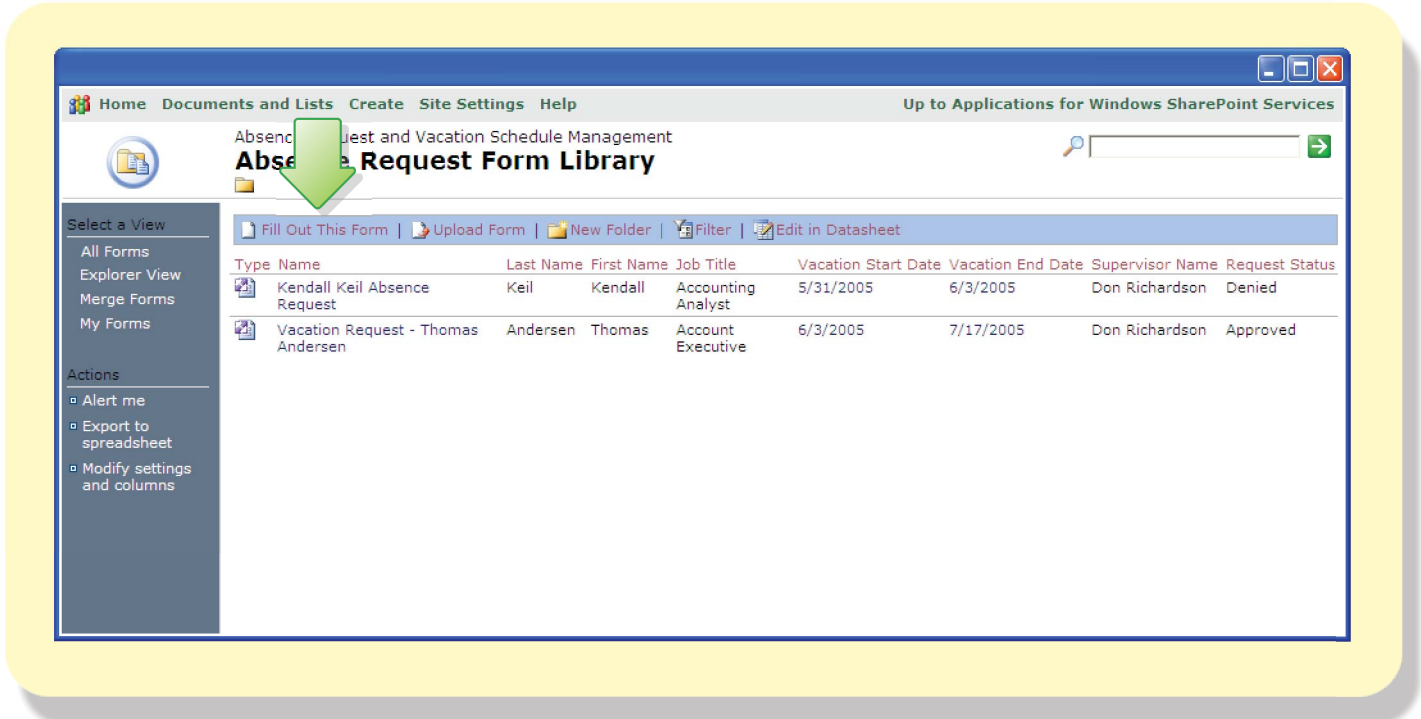
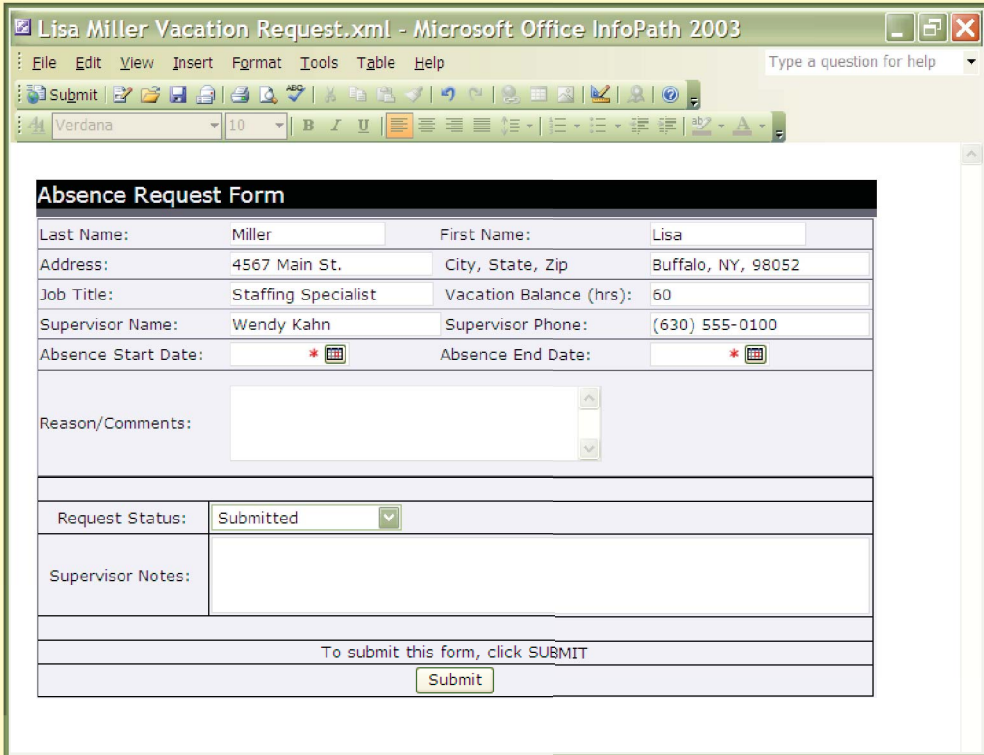


Figure 12: Absence Request Form library

Clicking on the “Fill Out This Form” link directs Lisa to the Request form (Figure 13). Some of the fields on this form are pre-populated with information from the Microsoft Dynamics AX business management solution. This information includes name, contact information, job title, available vacation balance, supervisor name and supervisor contact information.



Absence Request Form

Last Name:	Miller	First Name:	Lisa
Address:	4567 Main St.	City, State, Zip	Buffalo, NY, 98052
Job Title:	Staffing Specialist	Vacation Balance (hrs):	60
Supervisor Name:	Wendy Kahn	Supervisor Phone:	(630) 555-0100
Absence Start Date:	<input type="text"/>	Absence End Date:	<input type="text"/>
Reason/Comments:	<input type="text"/>		
Request Status:	Submitted		
Supervisor Notes:	<input type="text"/>		

To submit this form, click SUBMIT

Figure 13: Absence / Vacation Request Form

Wendy, Lisa's supervisor, has already set up email alerts for this form library that notify her via email when a new request is submitted, or when the status of a form changes. So when Lisa fills out the form and clicks "Submit", Wendy is automatically alerted that Lisa has submitted a request.

Using the Microsoft Windows SharePoint Services application, Wendy can review a list of absence requests from all employees under her supervision. As with any standard Microsoft Windows SharePoint Services list, she can sort the list, filter the list, and generate subtotals in order to compare it to other requests for the same or similar time periods, and quickly make a decision to approve or deny the request. Lisa can also set up alerts in the form library so that she is notified when her supervisor changes the status of the request to approved or denied.



Update Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services

Once Wendy approves and saves Lisa’s request, it is stored in the library along with other requests, and two other actions are automatically initiated. Lisa’s timesheet for the requested vacation days is marked as vacation time in Microsoft Dynamics AX, and her available vacation balance is updated. An event is also added to the “Vacation Schedule” event list (Figure 14) in the Microsoft Windows SharePoint Services application.

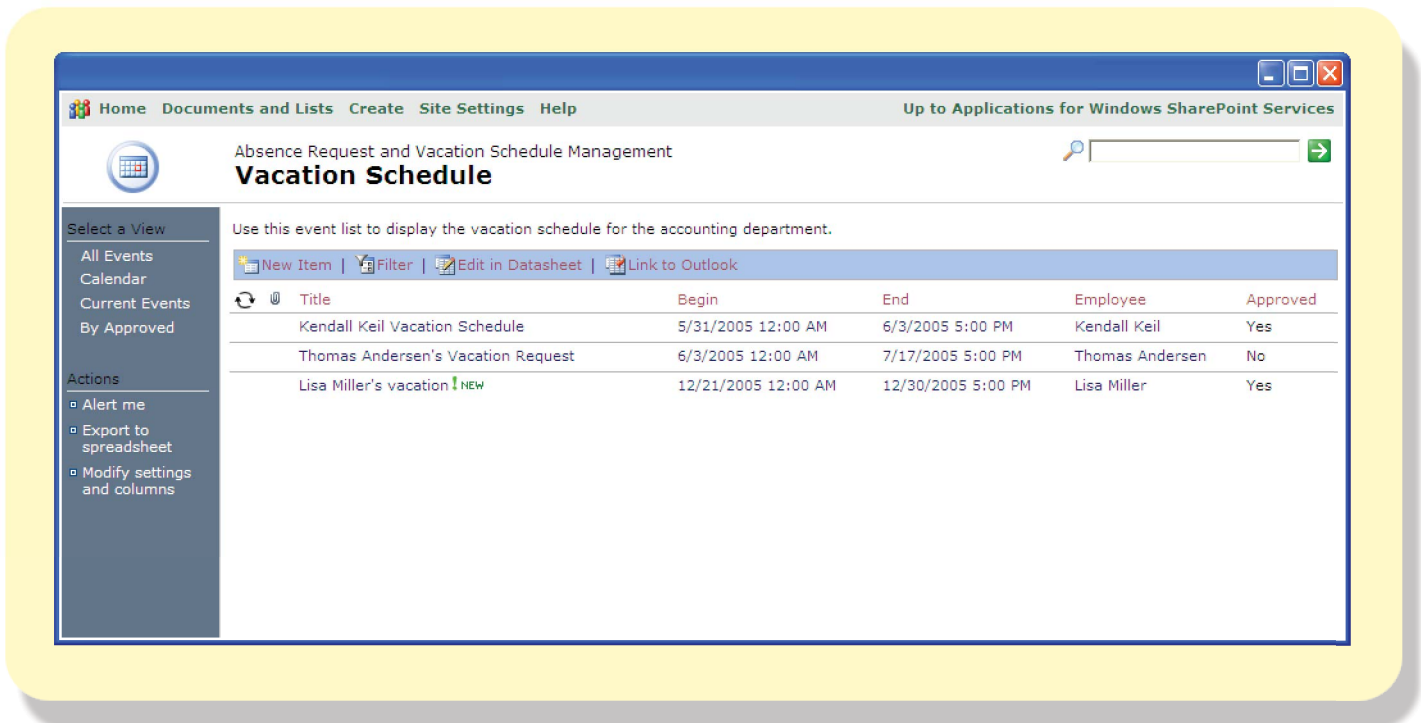


Figure 14: Vacation Schedule Event List

With such an event list, all employees with access to this site can view any employee’s approved vacation time in a calendar view. This calendar view is also part of the home page.

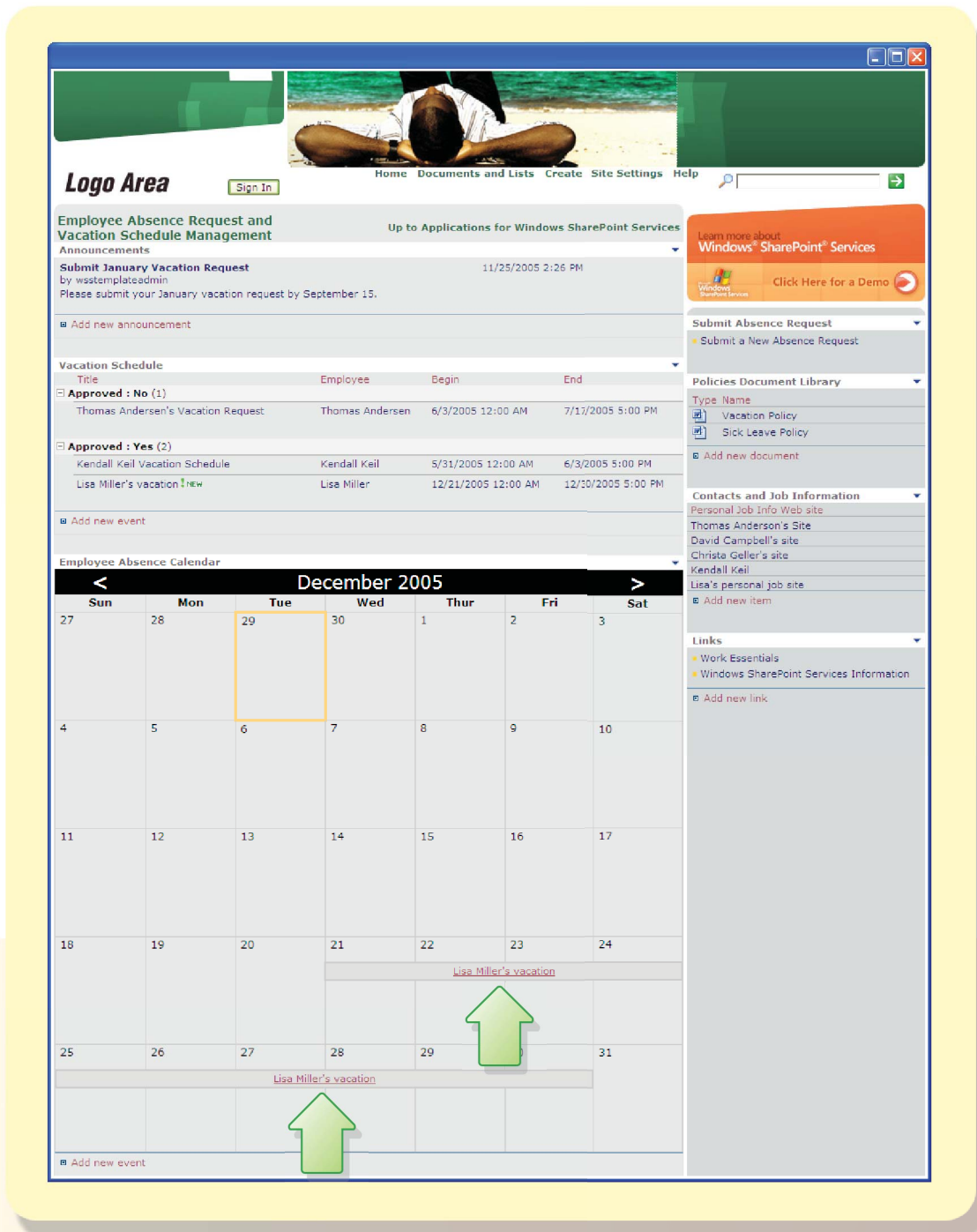


Figure 15: Home Page showing December Calendar

The screenshot in Figure 15 displays Lisa’s approved vacation on the Employee Absence Calendar Web Part.



Collaborate in Microsoft Windows SharePoint Services then Upload Data to Microsoft Dynamics AX

While Lisa is on vacation, her colleagues, James and Carole, are responsible for performing some of her duties. To facilitate this process, Lisa posted links to her workspace in the “Contacts and Job Information” Web Part. This list is available from the home page (Figure 16).

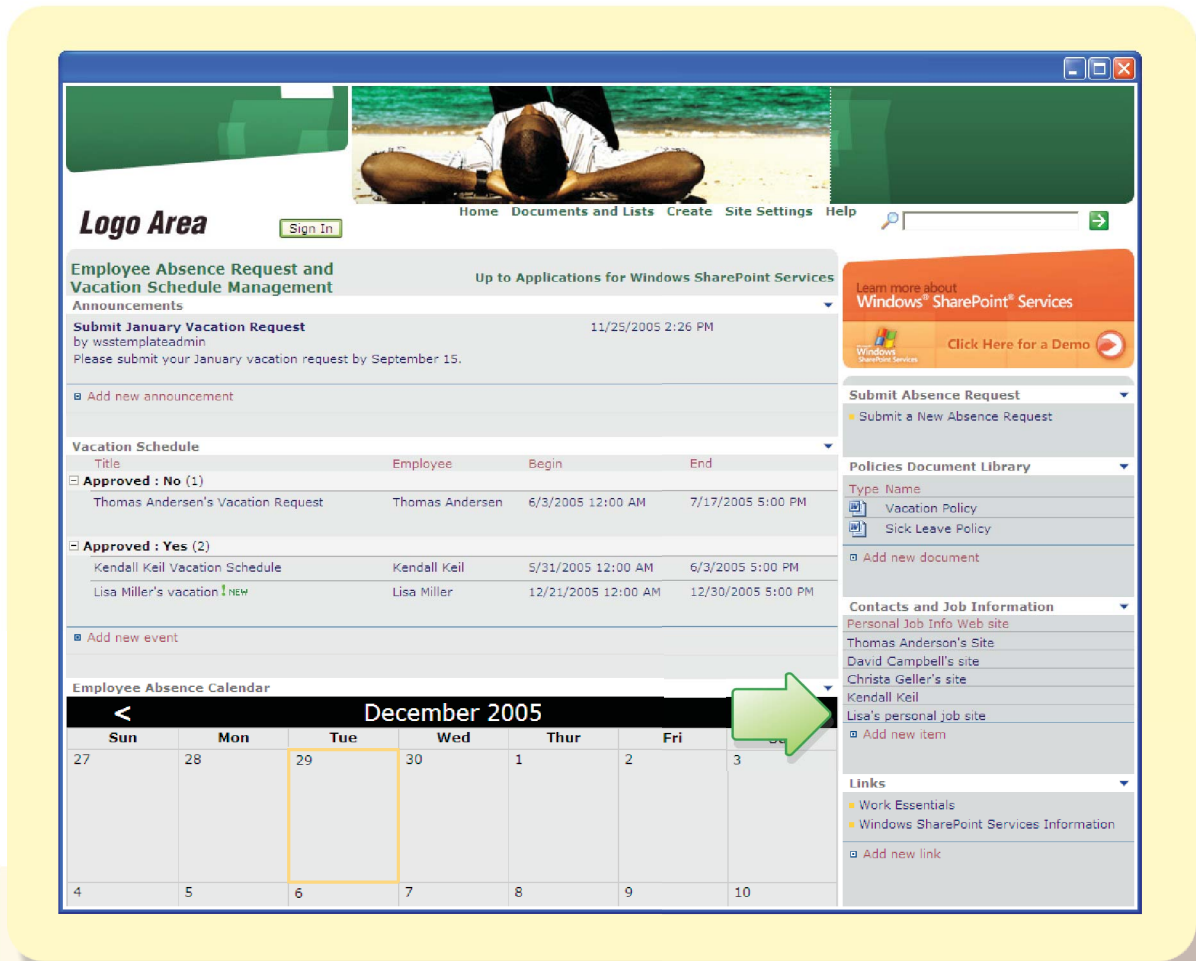


Figure 16: Home Page showing the list

Clicking on the link “Lisa’s personal job site” will display Lisa’s workspace.

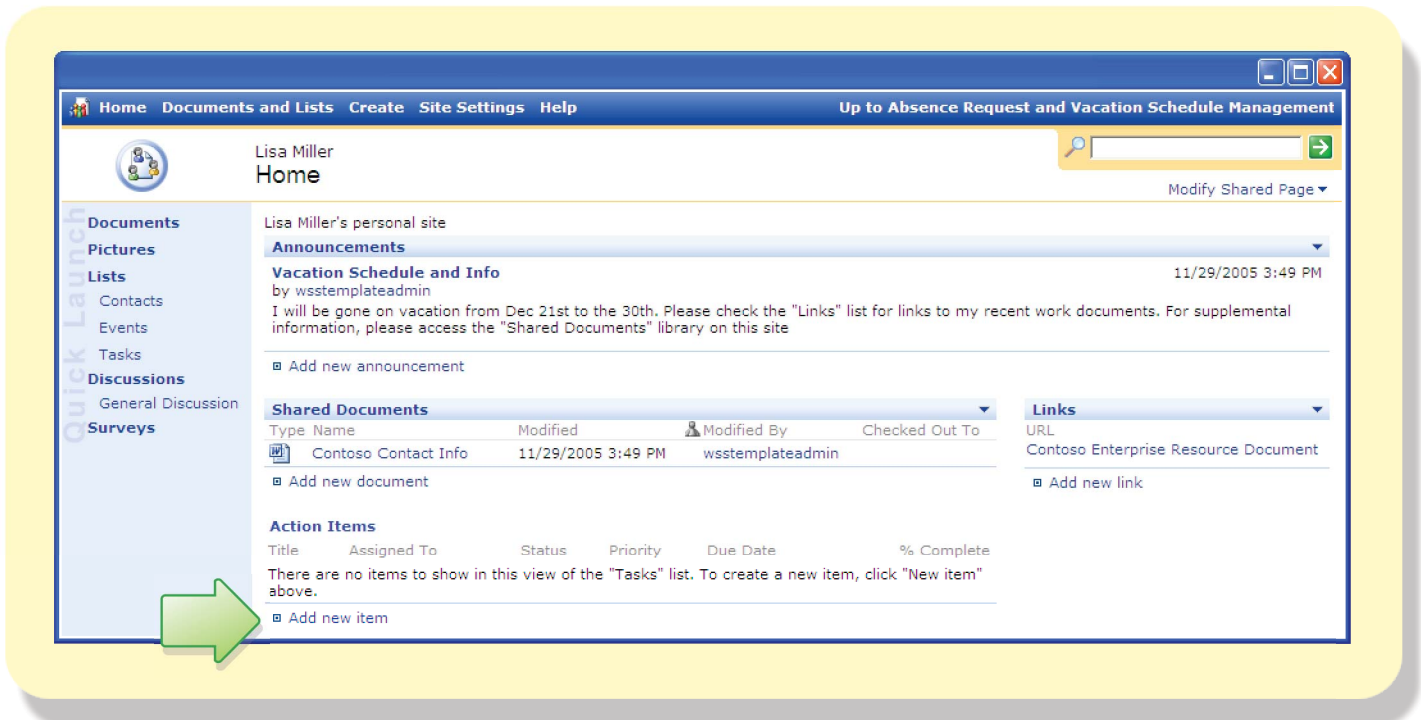


Figure 17: Lisa's workspace Home Page

Lisa has posted notes on her personal workspace that will help James and Carole find the necessary information (Figure 17). Because the information is in a predictable place and is easy to find, James and Carole are able to pick up right where Lisa left off prior to her vacation.

While standing in for Lisa, James communicated with one of her customers, Andy, at Contoso, Ltd. James then associated Lisa's follow up tasks with Andy and created a new action item and assigned it to Lisa. He achieves this by clicking on the "Add new item" link under the "Action Items" Web Part on Lisa's home page. Adding a new item creates an "Action" item in Microsoft Dynamics AX with the data entered in Microsoft Windows SharePoint Services, and it can be managed as a regular "Action" in Microsoft Dynamics AX.

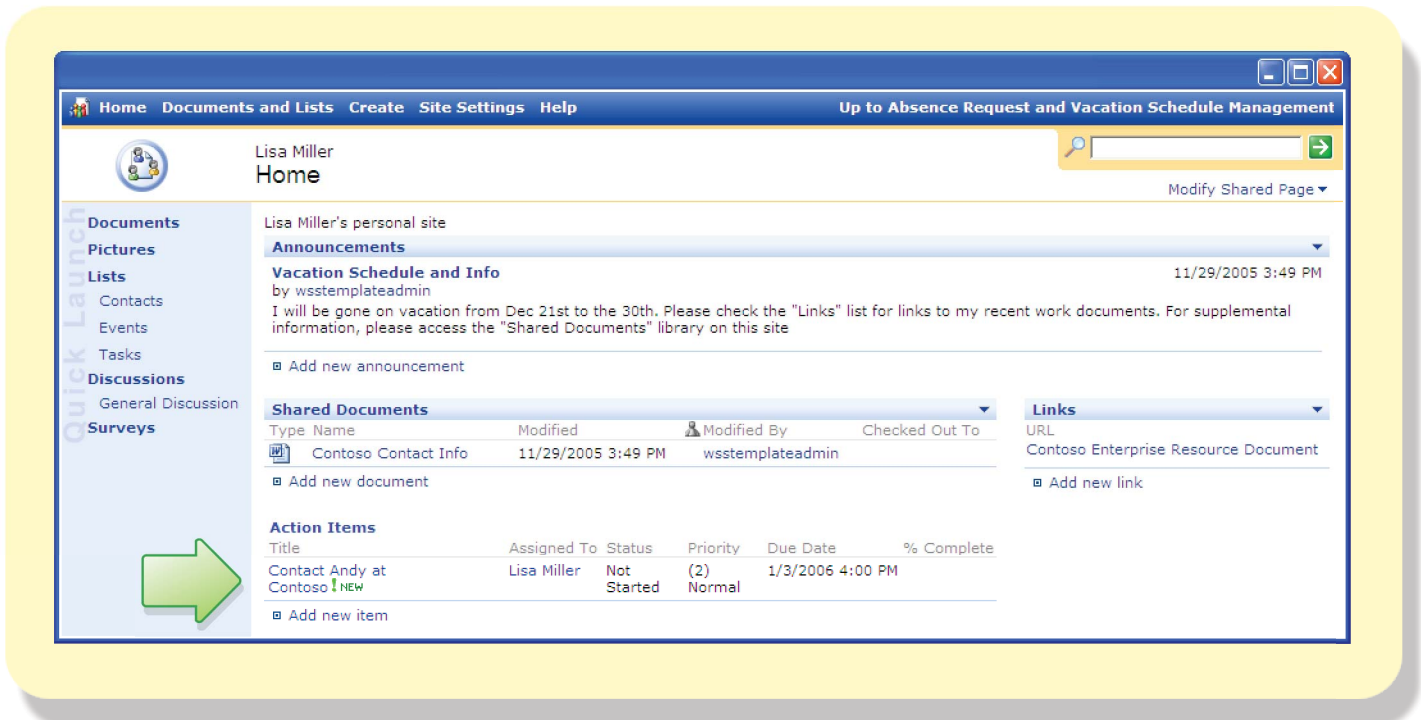


Figure 18: Lisa's home page showing an action item assigned to her

Figure 18 shows the action item that James assigned to Lisa.



Scenario 3: Expense Reporting - Description

Background

Andy Carothers is an employee with Contoso, Ltd. He is returning from a business trip where he incurred reimbursable expenses. Andy uses the Expense Report module in Microsoft Windows SharePoint Services Application to file his expense report. Andy and Kim Akers in the Accounts Payable department have been able to significantly increase their productivity since the deployment of the Microsoft Windows SharePoint Services application.

Business Value

This scenario, when implemented, will provide the following business benefits:

Data Accuracy: Expense reports are often submitted with key information missing. As a result, these expense reports must be routed back and forth between the submitter and the approver. By enforcing expense report rules and regulations, many of these types of mistakes can be avoided.

Expense Report History and Accountability: By integrating the Microsoft Windows SharePoint Services application with the business management solution, employees (many of whom lack direct access to the business management solution) can view their expense report history via the Microsoft Windows SharePoint Services application. Any employee can view the transactional history of an expense report, thus creating accountability for everyone involved in the process.

Reduced Process Cycle Time: As expense reports are submitted and the status of each is modified, both the submitter and approver can receive alerts via email. The use of alerts speeds up collaboration and benefits everyone in the process by reducing the process cycle time.

Integration: Microsoft Windows SharePoint Services is an easy-to-use, web-based, interoperable collaboration platform that allows for integration with systems like Microsoft Dynamics AX. By integrating the Microsoft Windows SharePoint Services application with the business management solution, expense reports are consistently managed while the need to manually transfer data is eliminated.

View Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services

To create his expense report, Andy navigates to the Expense Report module in the Microsoft Windows SharePoint Services application. The Home Page of this application is displayed in Figure 19.

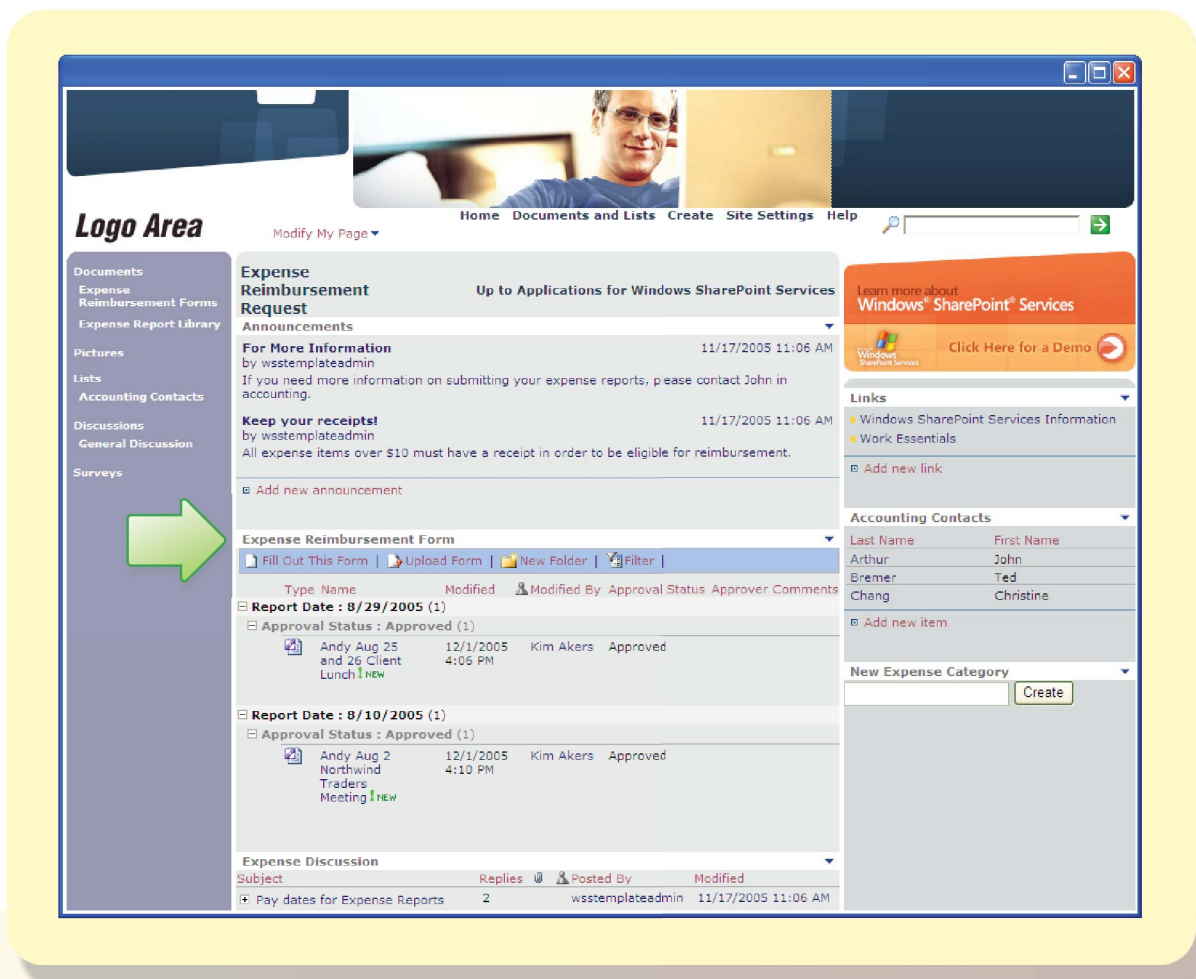


Figure 19: Expense Reimbursement Request Microsoft Windows SharePoint Services Application Home Page

The application presents, among other things, Andy's previously submitted expense reports in a list that he can sort and filter. The Web Part named "Expense Reimbursement Form" on the Home Page in Figure 19 displays his previous submissions grouped by the date the expenses were reported. This helps Andy ensure that each expense is submitted only once. Andy can also click on "Expense Reimbursement Forms" to go to the form library where he has many more views available (Figure 20).

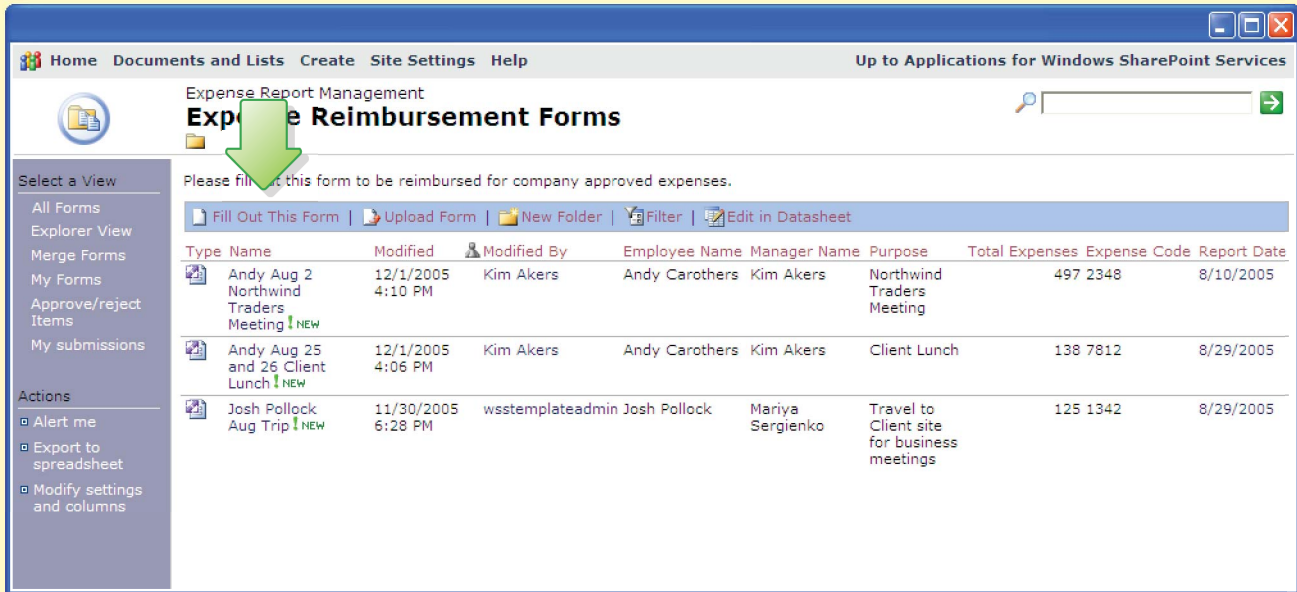
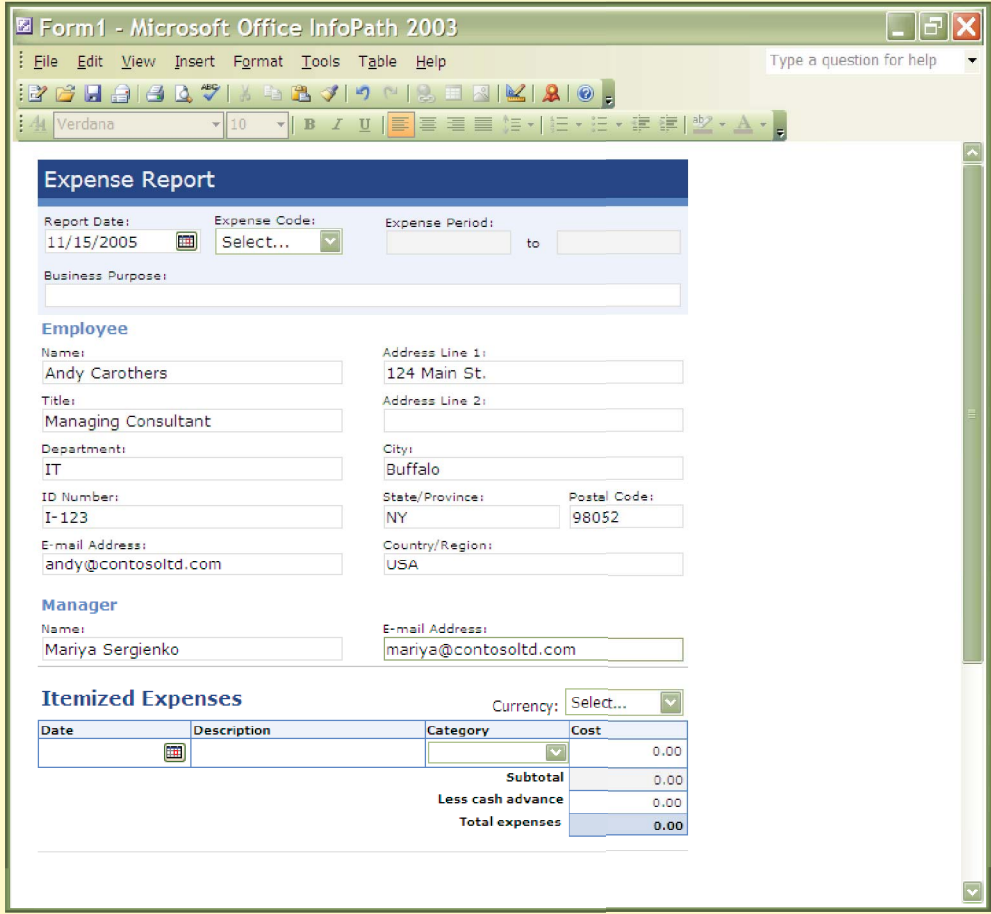


Figure 20: Expense Reimbursement Forms Library

Once Andy has reviewed his previous expense reports to ensure an existing expense report is not duplicated, he can click on the “Fill Out This Form” link in the form library to create a new expense report (displayed in Figure 21). The expense report form has several data elements which are brought in from the back-end Microsoft Dynamics AX system, including Andy’s name, title, address, manager name and email address, the valid projects to which the expenses can be charged, and the valid currencies in which expenses can be charged.



Expense Report

Report Date: 11/15/2005 Expense Code: Select... Expense Period: to

Business Purpose:

Employee

Name: Andy Carothers Address Line 1: 124 Main St.
 Title: Managing Consultant Address Line 2:
 Department: IT City: Buffalo
 ID Number: I-123 State/Province: NY Postal Code: 98052
 E-mail Address: andy@contosold.com Country/Region: USA

Manager

Name: Mariya Sergienko E-mail Address: mariya@contosold.com

Itemized Expenses Currency: Select...

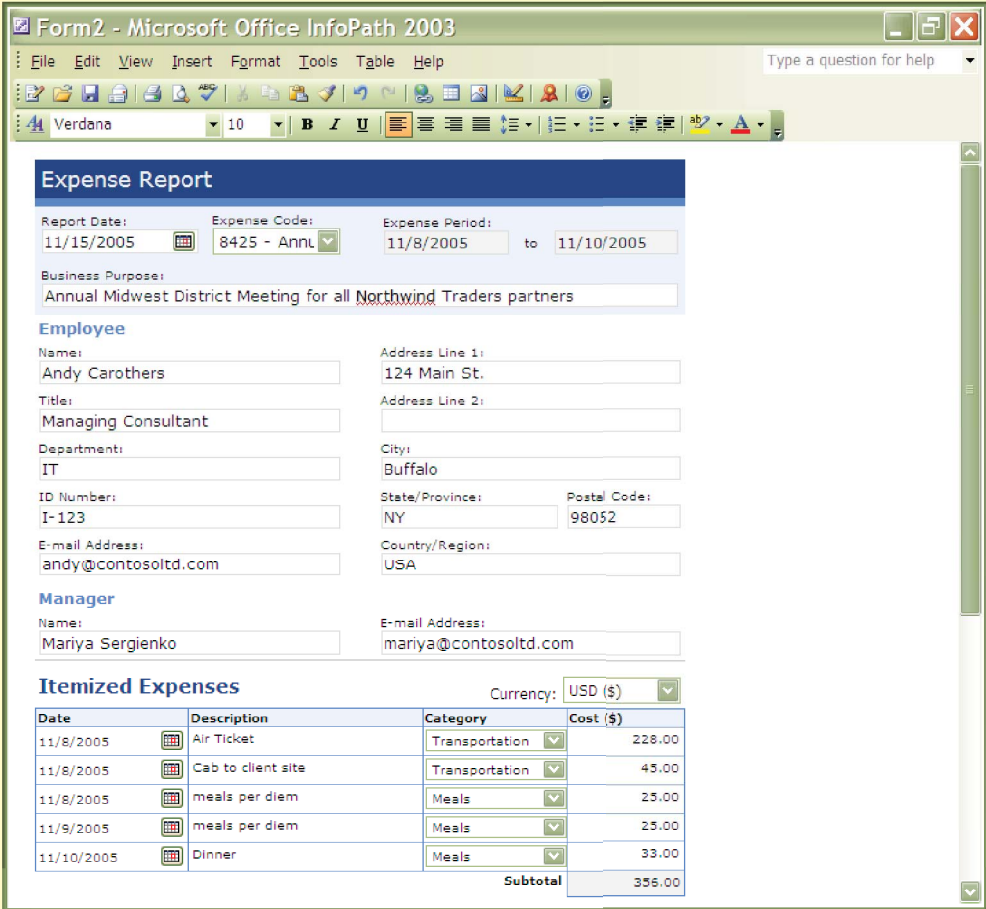
Date	Description	Category	Cost
			0.00
Subtotal			0.00
Less cash advance			0.00
Total expenses			0.00

Figure 21: Expense Reimbursement InfoPath Form

The InfoPath form also applies data validation and business rules. For example, data entered in the date fields must be valid dates and the "Report Date" field cannot be earlier than the Itemized Expenses Dates. By helping to ensure data accuracy, the Expense Report application reduces the amount of time needed to fill out an expense report.

Collaborate in Microsoft Windows SharePoint Services then Upload Data to Microsoft Dynamics AX

Kim, Andy's supervisor, can set up email alerts in the Expense Reimbursement Form library so that she is notified when an expense report is submitted. When Andy submits his expense report, Kim receives an email alerting her that the report has been submitted. By clicking on the hyperlink in the alert, she is brought directly to relevant expense report InfoPath form (Figure 22).



Form2 - Microsoft Office InfoPath 2003

File Edit View Insert Format Tools Table Help Type a question for help

Verdana 10 B I U

Expense Report

Report Date: 11/15/2005 Expense Code: 8425 - Annu Expense Period: 11/8/2005 to 11/10/2005

Business Purpose: Annual Midwest District Meeting for all Northwind Traders partners

Employee

Name: Andy Carothers Address Line 1: 124 Main St.

Title: Managing Consultant Address Line 2:

Department: IT City: Buffalo

ID Number: I-123 State/Province: NY Postal Code: 98052

E-mail Address: andy@contosold.com Country/Region: USA

Manager

Name: Mariya Sergienko E-mail Address: mariya@contosold.com

Itemized Expenses Currency: USD (\$)

Date	Description	Category	Cost (\$)
11/8/2005	Air Ticket	Transportation	228.00
11/8/2005	Cab to client site	Transportation	45.00
11/8/2005	meals per diem	Meals	25.00
11/9/2005	meals per diem	Meals	25.00
11/10/2005	Dinner	Meals	33.00
Subtotal			356.00

Figure 22: Expense Report to be Reviewed by Kim Akers

Andy can also setup alerts on the form library so that he is notified when his expense report is approved or rejected. If Kim denied his expense report, Andy would instantly receive an email alert and he would know that he must modify and resubmit the report. Utilizing the email alerts built into the expense report application dramatically reduces the amount of time it takes to get an expense report approved.

Clarification on expense report categories was sought by the employees, so Kim enabled a discussion board to let all the employees participate in the discussion. The outcome was a decision to add a new expense category called "Air Tickets".



Figure 23: Home Page showing the discussion and the New Expense Category Web Part

Kim can add the new expense report category into Microsoft Dynamics AX (so that it shows up on the Expense report form) by using the "New Expense Category" Web Part on the Microsoft Windows SharePoint Services site home page. Figure 23 shows the new discussion and the Web Part used to create a new expense category.



Update Microsoft Dynamics AX Data via Microsoft Windows SharePoint Services

One of Kim's responsibilities is to quickly and efficiently reimburse valid requests. Kim can navigate to the Expense Reimbursement form library from the home page and click on the "Approve / Reject Items" view to get a list of all the requests with a status of "Pending." Figure 24 shows this view of the form library.

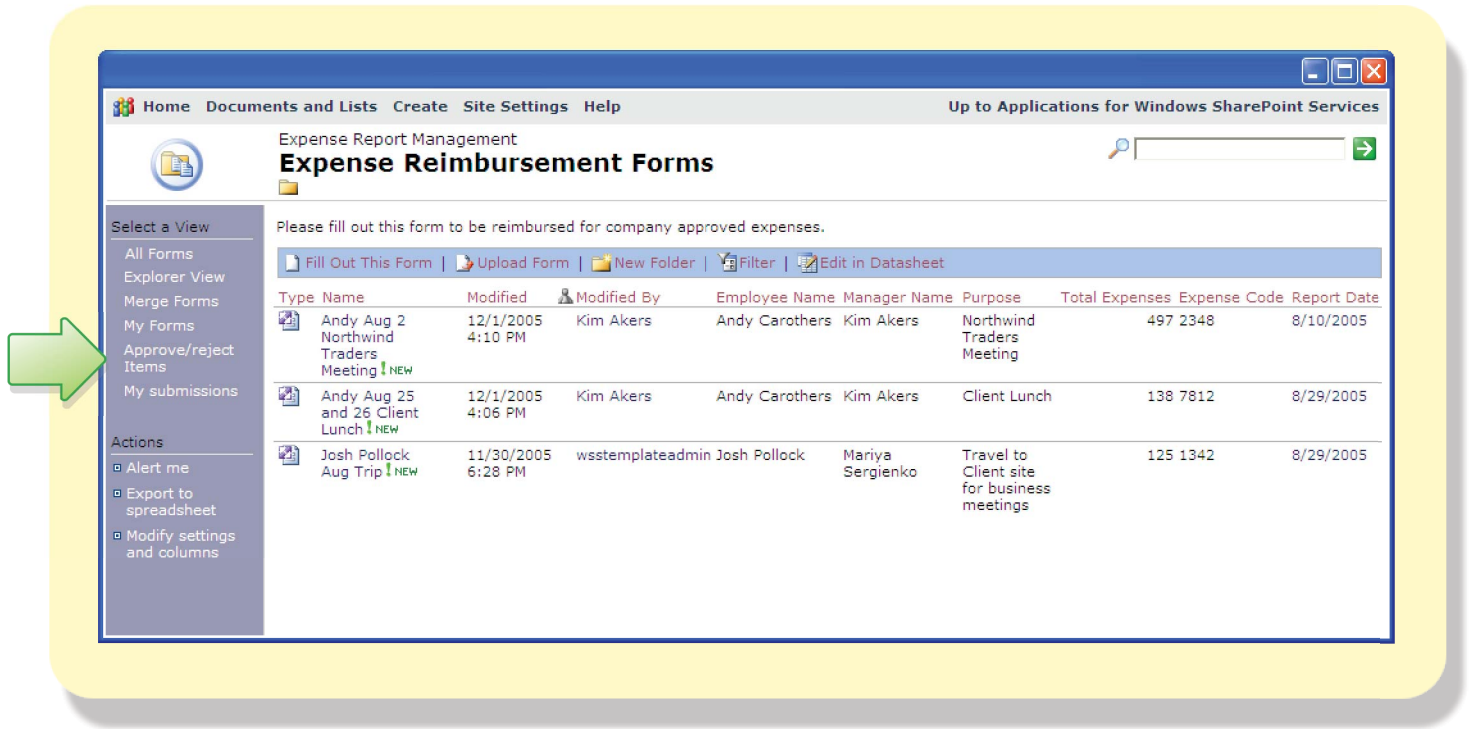


Figure 24: Approve / Reject Items view of the Expense Reimbursement Form library

When Kim approves Andy's expense report in the Expense Report application, the expense report is submitted to Microsoft Dynamics AX as an Accounts Payable item directed towards Andy. By reducing errors, data reentry, and status notification time, the Expense Report application reduces the process cycle time and the administrative cost per expense report.



Deployment Considerations

There are two general technical options for building and deploying the integration between Microsoft Windows SharePoint Services and Microsoft Dynamics AX that are described in this white paper.

Data View Web Parts:

When data from Microsoft Dynamics AX needs to be displayed as read only, implementing Data View Web Parts is recommended. Data View Web Parts can be used to create custom views of data contained in custom data sources like Microsoft Dynamics AX. Though Data View Web Parts can be used to create custom views of data, filter data, and provide information that is not available by default in Microsoft Windows SharePoint Services, it is important to note that the Data View Web Part is available only when working with a Microsoft Windows SharePoint Services collaboration site within FrontPage 2003.

Custom Web Parts:

Custom Web Parts provide an effective way to expose data from external data stores in a Microsoft Windows SharePoint Services collaboration site. This allows you to interact with custom data sources through the Microsoft Windows SharePoint Services site. Custom Web Parts can display information ranging from a custom view of a data list that is already within Microsoft Windows SharePoint Services to the latest data from web services hosted around the world. Custom Web Part pages even allow for Web Part personalization, ensuring each user sees only the most relevant information. Building Custom Web Parts is recommended when data needs to be pulled from Microsoft Dynamics AX and updates have to be written back to Microsoft Dynamics AX.



Relevant Resources

Applications for Microsoft Windows SharePoint Services

<http://www.microsoft.com/technet/prodtechnol/sppt/wssapps/default.aspx>

Working with Data View Web Parts

http://www.sharepointcustomization.com/resources/whitepapers/webpartdocs/dataview_wp.doc

SharePoint, Data View Web Parts and functions in the ddwrt namespace

<http://weblogs.asp.net/soever/archive/2005/01/03/345535.aspx>

Customizing the Data View Web Part in FrontPage 2003

http://msdn.microsoft.com/library/default.asp?url=/library/en-us/odc_fp2003_ta/html/OfficeFrontPageCustomizing-DataViewWebPart.asp

Creating a basic Web Part:

http://msdn.microsoft.com/library/default.asp?url=/library/en-us/spptsdk/html/CreateABasicWP_SV01003709.asp

Developing Web Parts for SharePoint Portal Server 2003 in .NET

<http://www.devx.com/dotnet/Article/17518/0/page/1>

Installing and Using the Custom Web Parts .NET Assembly

http://msdn.microsoft.com/library/default.asp?url=/library/en-us/pjsdk/html/pjsdkWebpUsingCustomAssemblyInstall_HV01105351.asp

To learn more about Microsoft Dynamics AX:

<http://www.microsoft.com/dynamics/ax/default.aspx>

<http://www.microsoft.com/dynamics/default.aspx>



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