Microsoft Consulting Services

PerformancePoint Services for Project Server 2010

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Microsoft

Table of Contents

Overview

This document provides a detailed guide for Microsoft Project Server 2010 users who want to avail themselves of the Business Intelligence (BI) features and functionality provided in the host platform of Project Server, Microsoft SharePoint Server 2010 Enterprise Edition. Specifically, this document covers PerformancePoint Services, which is an inherent service on SharePoint Server 2010.

It is important to note that this document is about the mechanics specific to PerformancePoint Services in the context of Project Server data and not about providing sample EPM reports that are written in related BI tools like SQL Server Reporting Services and Excel Services. The use of reports in the document is entirely incidental and used simply to illustrate a PerformancePoint feature or functionality.

For sample EPM reports, browse the references near the end of this paper for available downloads and other white papers.

Dashboard Deployment Lifecycle

Figure 1 - Dashboard Deployment Lifecycle

PerformancePoint Services in Microsoft SharePoint Server 2010 is rich with features and functionalities – data sources, content, and a myriad ways to connect, filter and display information. Along with the richness and versatility comes the complexity of designing a dashboard that adds value -- What do we value? How do we measure what we value? Where do we start?

Project Server 2010 itself is full of project data that can help realize a valuable EPM dashboard – schedule and cost data, resource data, and program/portfolio attributes.

Integrating Project Server data with PerformancePoint tools is at once a fulfilling and challenging endeavor. While it is beyond the scope of this document to extol the virtues of planning and related activities beyond using PerformancePoint tools in the context of Project Server data, it deserves a good mention that understanding the lifecycle, planning and its place in the lifecycle are critical to building a truly valuable EPM dashboard.

Further detail reference about dashboard planning is provided at the end of this document. A brief on planning steps is provided in the next section.

Plan a Dashboard

When you create and deploy a PerformancePoint dashboard, you want it to display relevant, useful information. By carefully planning each dashboard before you deploy it, you are more likely to provide dashboard users with a valuable, time-saving tool that helps them get the information that they need.

Step 1: Identify the users and the kinds of information that they want to see

Consider your audience and the kind of information that you want to provide to your dashboard users. You can create simple or complex dashboards and display as much or as little detail as users need.

For example, suppose that you are creating a dashboard for IT management. You might want to consider a Scorecard/KPI report at the relevant level such as Cost, Schedule and Work Variance at a Department level.

As another example, suppose that you are creating a dashboard for a Program Manager. You might want to include a combination of scorecards and reports to show progress indicators at the program level with a sub-report that drills-through the project level.

Step 2: Make sure that the data is available

Once you know what kinds of information that dashboard users want to see, your next step is to make sure that data is available to you and your dashboard users. Contact the IT administrator and verify that the data exists and that it can be used with PerformancePoint Services.

Step 3: Select the kinds of scorecards and reports that you want to use

Select the kinds of scorecards and other reports that are best suited for the information that you want to display in your dashboard.

For example, suppose that you want to create a report that shows performance for a given metric over time. In this case, you might use an analytic chart. Now suppose that you want to show how actual results compare to target values. In this case, you might create a scorecard.

You can choose from various scorecards and reports in PerformancePoint Dashboard Designer. You can create some kinds of reports by using Dashboard Designer. You can also create PerformancePoint Web Parts to display reports that are stored on other servers, such as Microsoft SQL Server Reporting Services (SSRS) reports and Excel Services reports.

Step 4: Decide what kinds of filters that you want to include

Decide whether filters might be useful to your dashboard consumers. You can decide from filters that are individual dashboard items. Or you can connect items such as key performance indicators (KPIs) that are in a scorecard to other reports in your dashboard.

For example, suppose that you are creating a dashboard that shows forecast work for a worldwide resource management team. You might want to create a Geography filter and link it to the individual reports and scorecards on your dashboard. That way, when you deploy your dashboard, users can select a particular geographical location by using the filter. All scorecards and other reports that are linked to it will automatically be updated to display results that are specific to the selected region.

Step 5: Create a sketch or mockup of your dashboard

Create a sample dashboard to see whether it will meet your users' needs. You can either sketch your dashboard on paper or by using any software application that you want to use. Or you can create a sample dashboard by using Dashboard Designer. Then, you can ask your dashboard users if the information that you plan to display in your dashboards is useful. This enables you to make any needed changes before you actually deploy your live dashboards.

By taking time to plan your dashboards at the beginning, you can help ensure that they will be helpful to users.

Create an EPM Dashboard

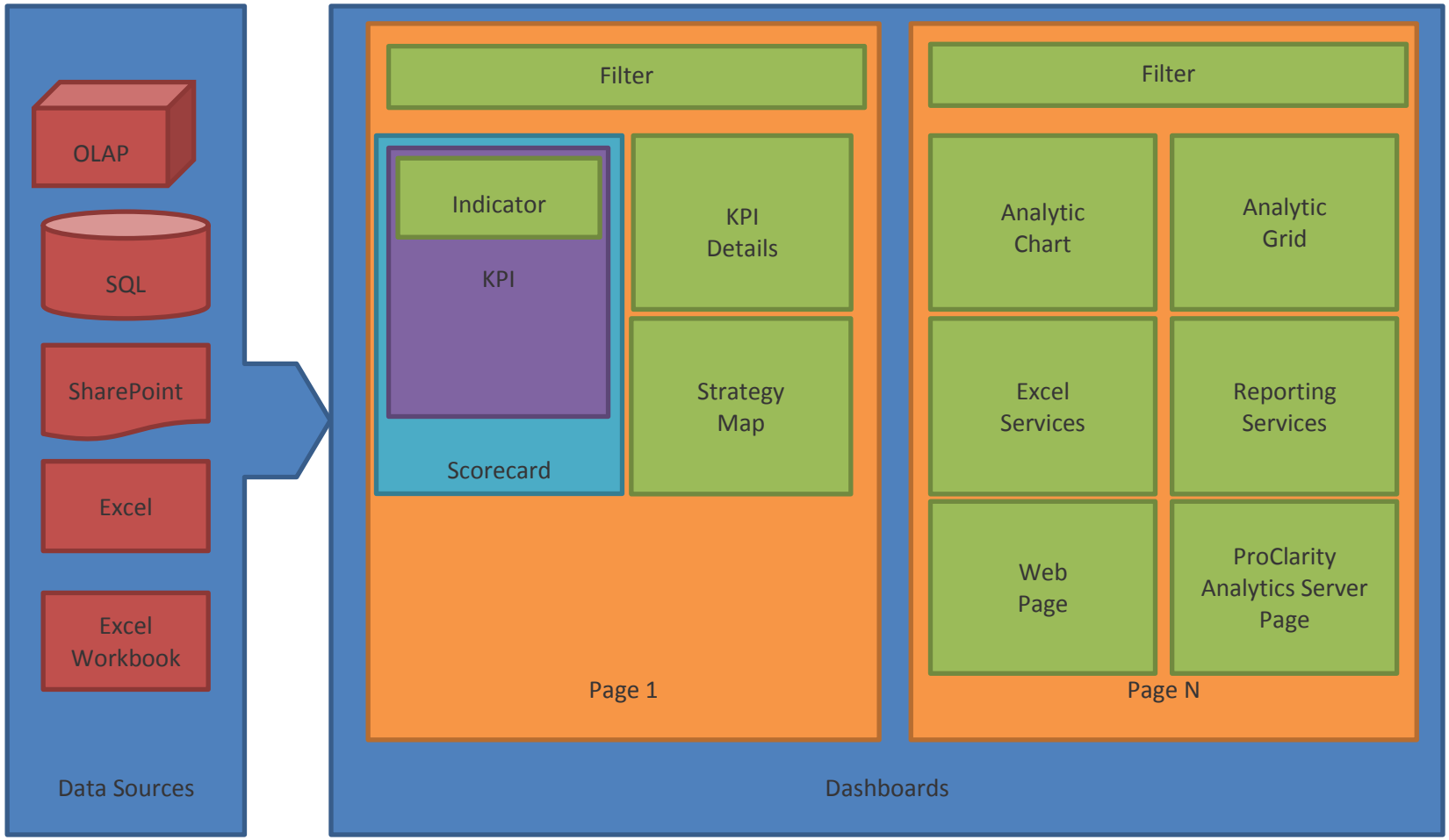
Figure 2 - Dashboard Creation Flow

The basic flow of creating an EPM dashboard can be grouped into three overarching activities:

1. Create an EPM data source – input data for the dashboard.
2. Create EPM content – applying PerformancePoint content and report types to the input data.
3. Create an EPM dashboard – putting it all together in a web-based presentation that contextualizes all the data, content and report types into a cohesive page or set of pages with navigation and filtering abilities that collectively compose a meaningful dashboard.

Model Overview

PerformancePoint offers an extensive array of data sourcing capability and a full complement of dashboarding features and functionality with which to consume it. Data sources provide input data while constituent parts can directly consume or be connected to them and other content types to create a cohesive dashboard.



Content Types and Data Type Compatibility

Not all data types are consumable by or can be connected to all content types. For example, a filter or a KPI can consume OLAP cubes and SQL table data but Analytic Charts and Grids can only consume OLAP cube data.

Table 1 - Content by Data Type Compatibility

	Filter	KPI	Scorecard	Strategy Map	Analytic Chart	Analytic Grid	Excel Services	Reporting Services	Web Page	ProClarity Analytics Server Page
OLAP	X	X	X[1]		X	X	X	X		
SQL	X	X	X[2]				X	X		
SharePoint List	X	X					X	X		
Excel Services	X	X					X			
Excel Workbook	X	X					X			
Indicator		X								
KPI			X							
Scorecard				X						
URLs									X	X

[1] Dimensions
[2] Dimensions

Table 2 - Data and Content Compatibility Details

Data Source[3]	KPI	Scorecard	Filter						Reports
			MDX Query	Custom Table	Member Selection	Name Set	Time Intelligence	Time Intelligence Connection Formula	Analytic Charts and Grids
Multidimensional									
1. SSAS	X	X	X		X	X	X	X	X
2. PowerPivot	X	X	X		X	X	X	X	X
Tabular									
3. Excel Services	X	X		X	X		X	X	
4. Excel	X	X		X	X		X	X	
5. SharePoint Lists	X	X		X	X		X	X	
6. SQL	X	X		X	X		X	X	

[3] Reference: Overview of PerformancePoint data connections

Target Dashboard

The following is provided as a visual aid of the completed EPM dashboard as a result of following the detail steps in the succeeding sections. The data being used is from the Project Server Demo v1.5 image. However, all the enterprise custom fields used in the dashboard are based on stock Project Server fields. Therefore, except for custom indicator icons that may not be available in your build, the PerformancePoint content and report types being built through this document are based on stock custom fields.

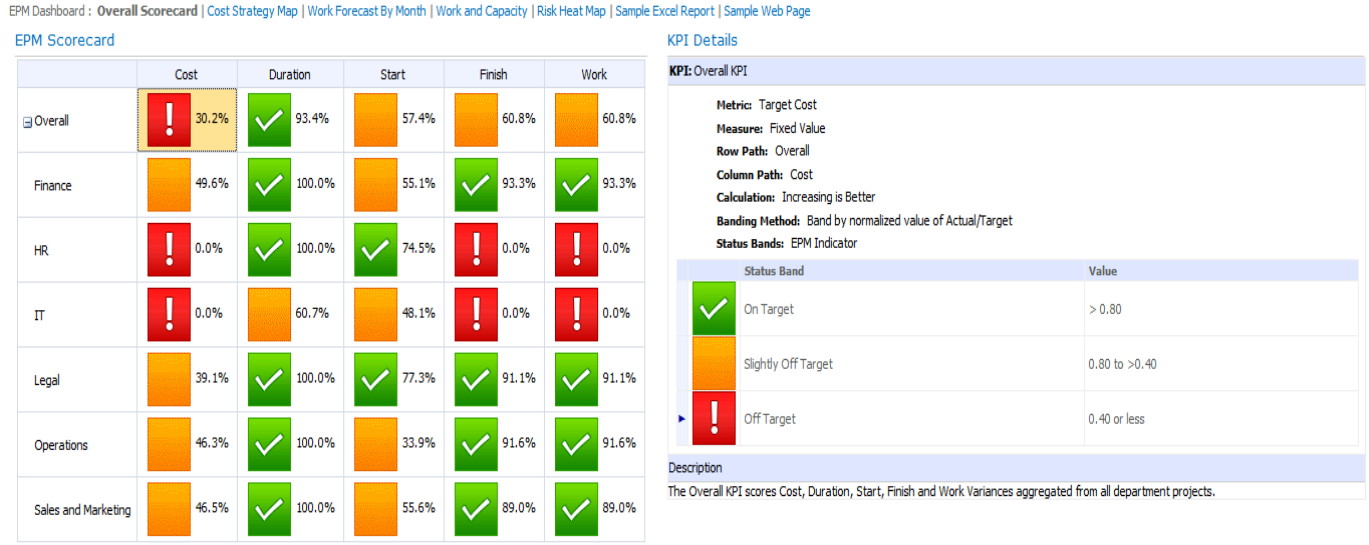
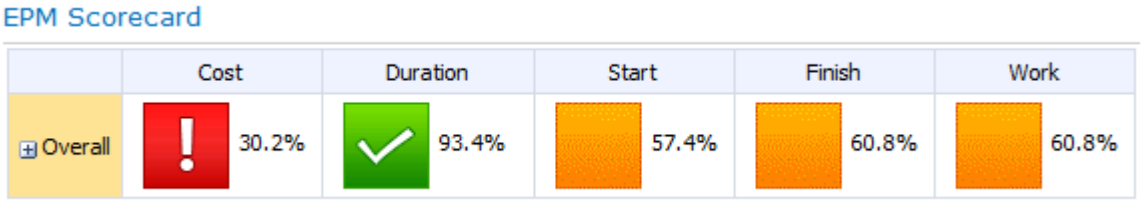
Page	Feature	Screenshot
1.	Navigation Scorecard KPIs with KPI Details Custom Indicators	
2.	Objective KPI	

Figure 4 – Scorecard, KPI and KPI Details Screenshot

Figure 5 - Object KPI Screenshot

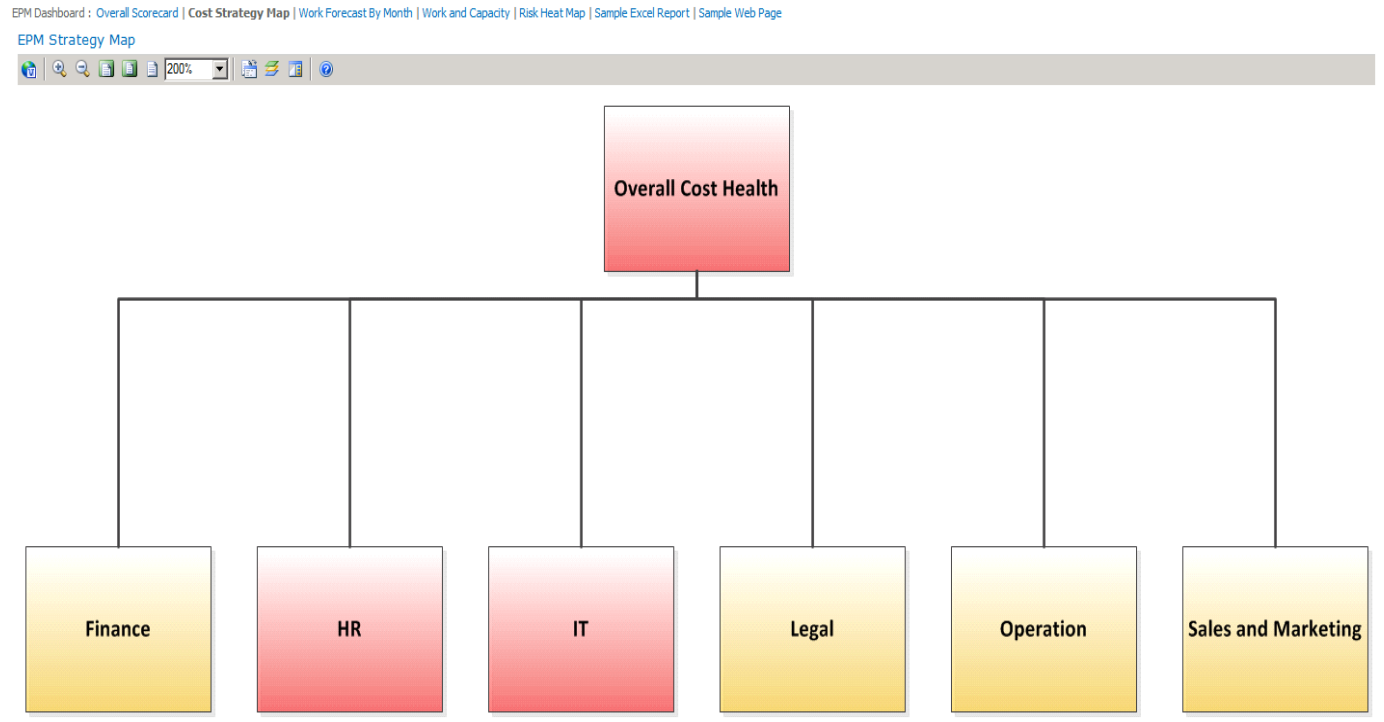
Page	Feature	Screenshot
3.	Strategy Maps linked to Scorecard	

Figure 6 - Strategy Map Screenshot

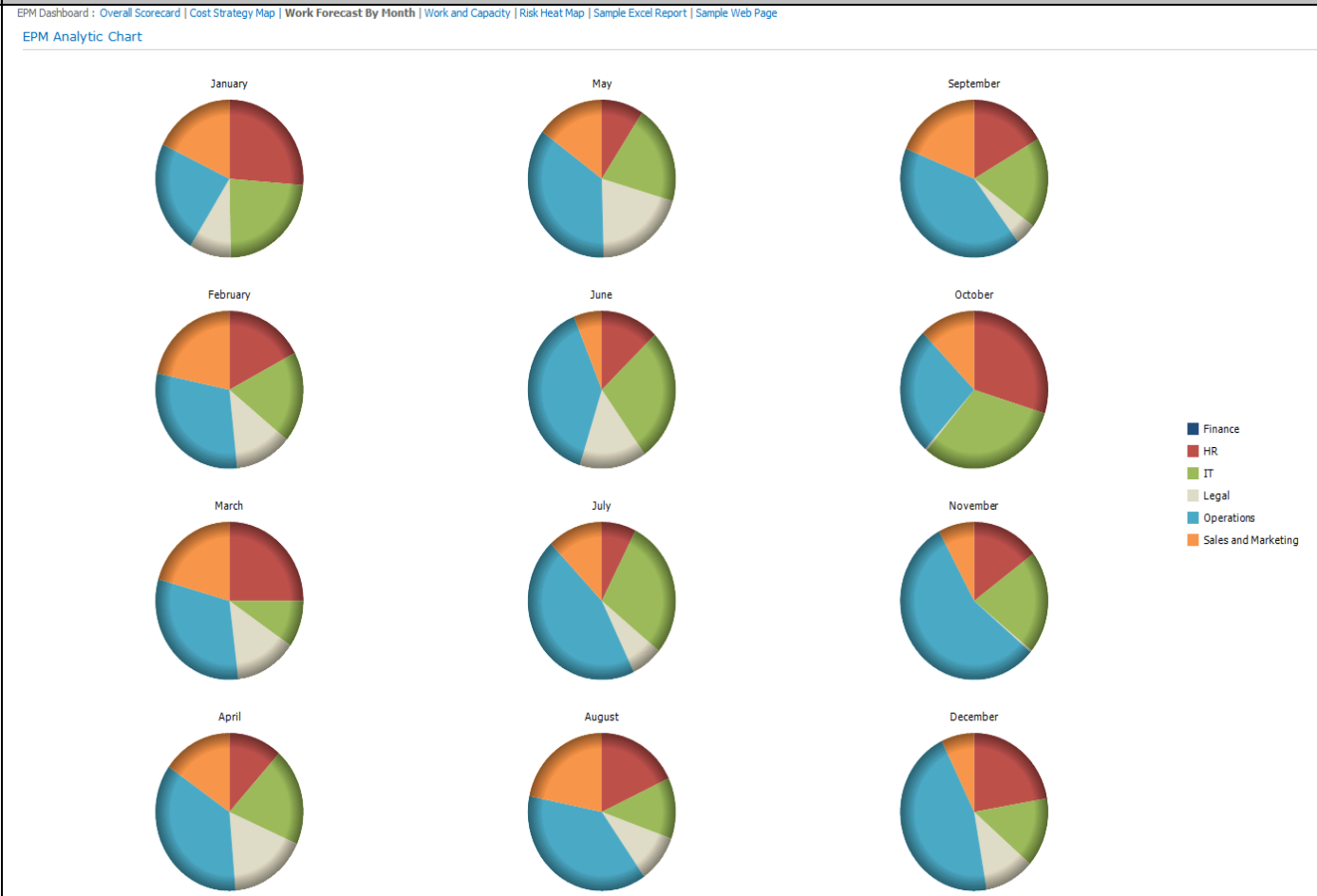
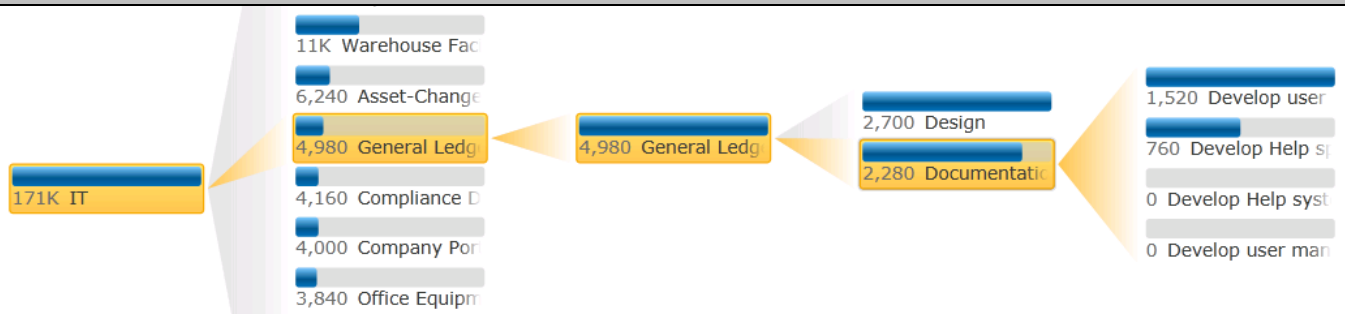
Page	Feature	Screenshot
4.	Analytic Chart	

Figure 7 - Analytic Chart Screenshot

Page	Feature	Screenshot
5.	Analytic Chart Decomposition Tree	 **Figure 8 - Decomposition Tree Screenshot**
6.	Analytic Grid Filters	EPM Dashboard : Overall Scorecard | Cost Strategy Map | Work Forecast By Month | **Work and Capacity** | Risk Heat Map | Sample Excel Report | Sample Web Page EPM Filter: **Finance, HR, IT, Legal, Operations, Sales ...** EPM Analytic Grid Project Departments_... | Work | Capacity Finance | 8,076 | 292,243 HR | 17,244 | 292,243 IT | 129,188 | 292,243 Legal | 10,630 | 292,243 Operations | 10,102 | 292,243 Sales and Marketing | 13,180 | 292,243 **Figure 9 - Analytic Grid Screenshot**

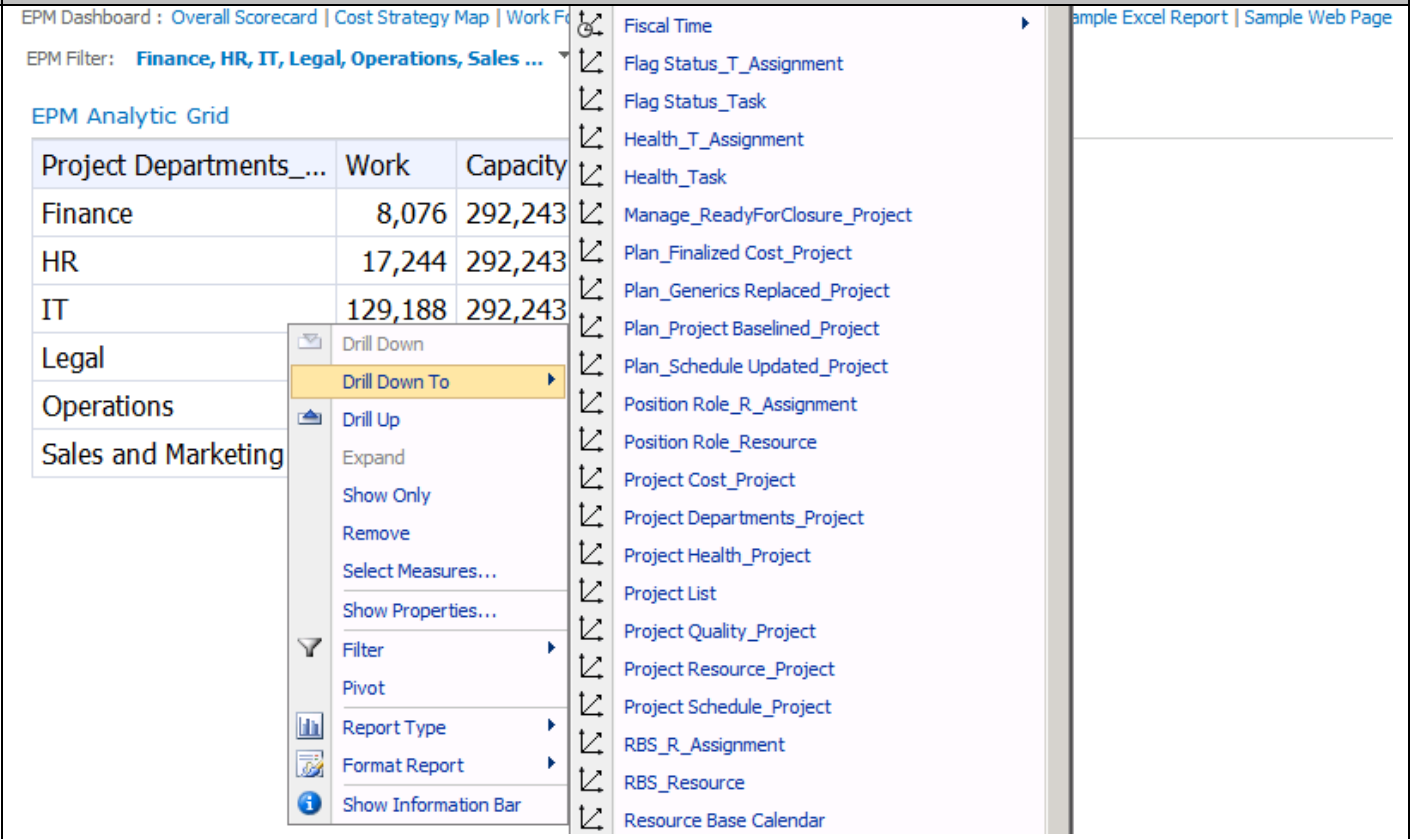
Page	Feature	Screenshot
7.	Analytic Grid Drilldown	

Figure 10 – Analytic Grid Drilldown Screenshot

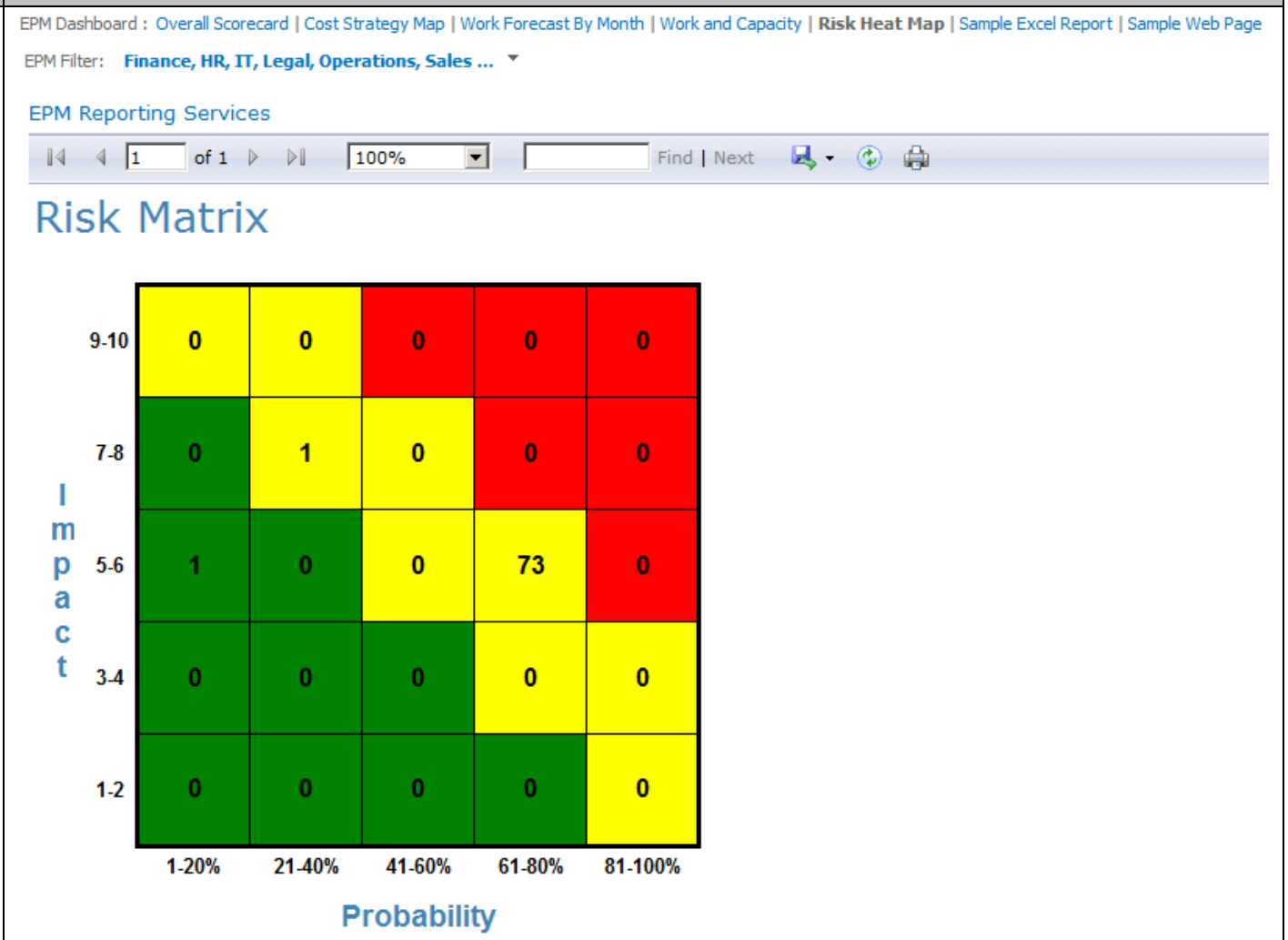
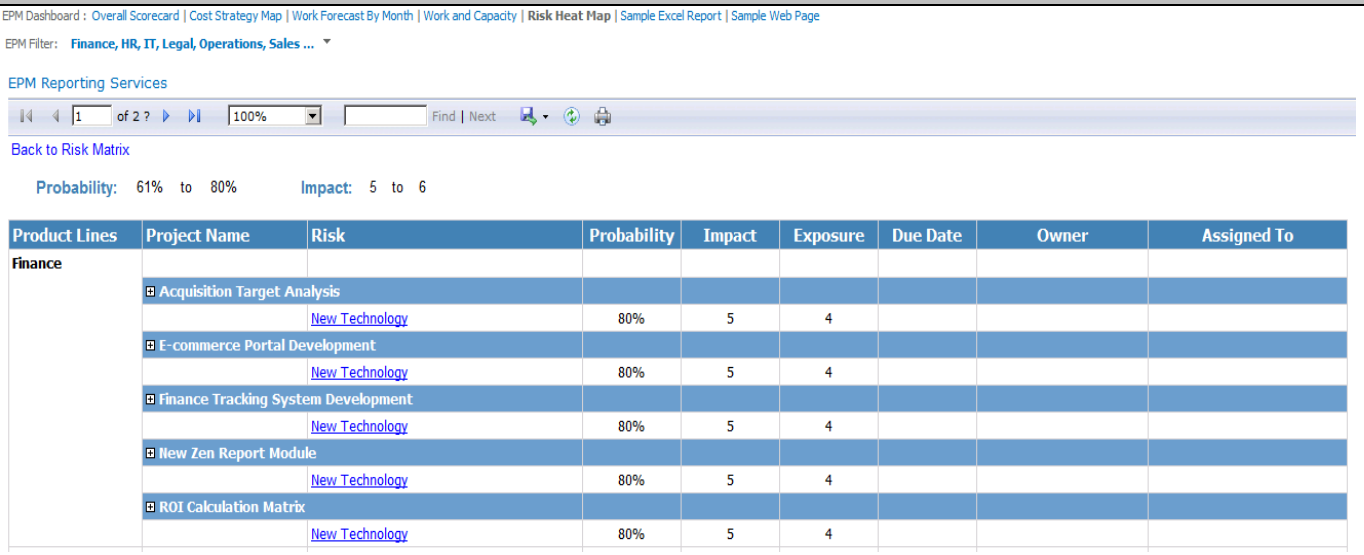
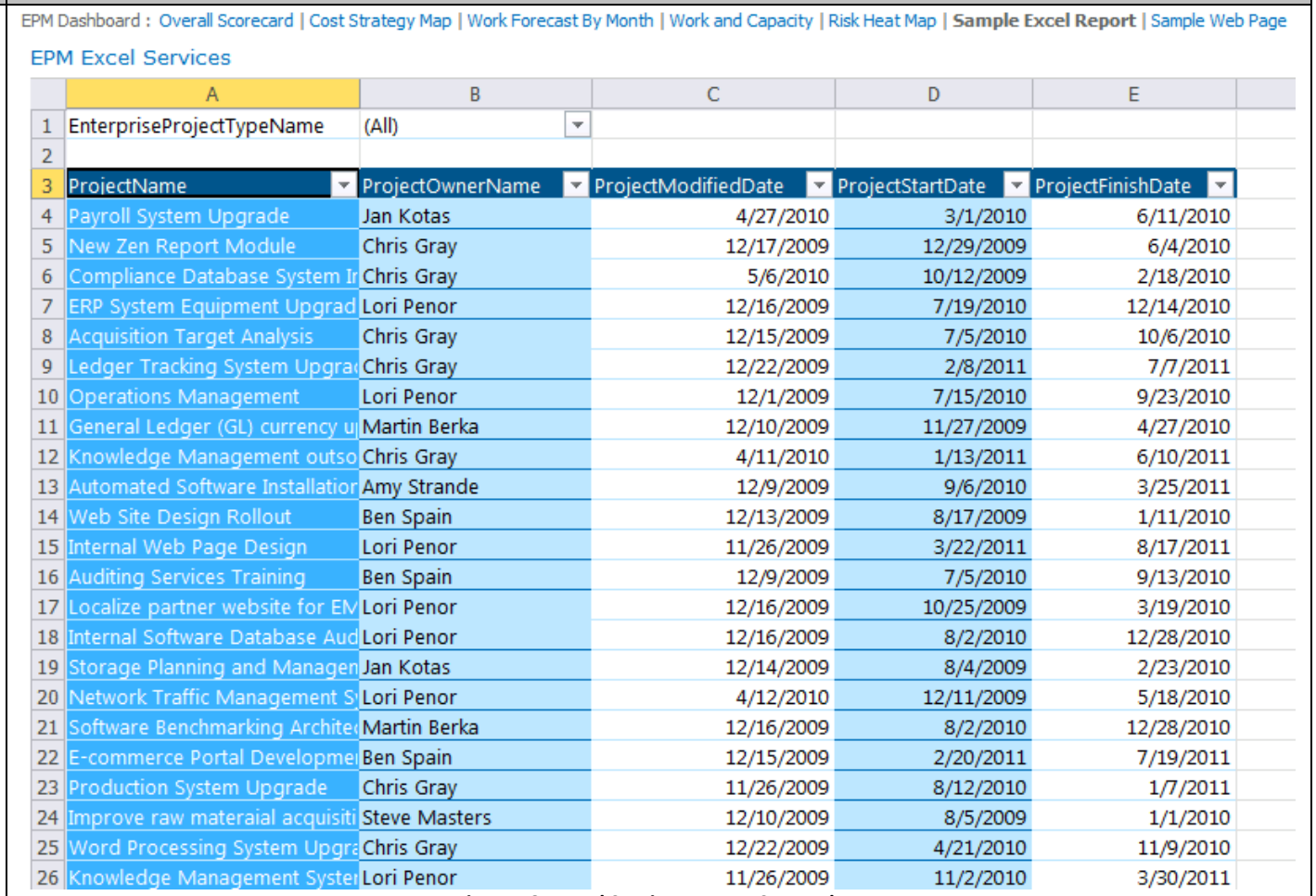
Page	Feature	Screenshot
8.	Reporting Services Report with Drill-down	

Figure 11 - Reporting Services Report Screenshot

Page	Feature	Screenshot
		

Product Lines	Project Name	Risk	Probability	Impact	Exposure	Due Date	Owner	Assigned To
Finance								
	Acquisition Target Analysis							
		New Technology	80%	5	4			
	E-commerce Portal Development							
		New Technology	80%	5	4			
	Finance Tracking System Development							
		New Technology	80%	5	4			
	New Zen Report Module							
		New Technology	80%	5	4			
	ROI Calculation Matrix							
		New Technology	80%	5	4			

Figure 12 - Reporting Services Report Drilldown Screenshot

Page	Feature	Screenshot
9.	Excel Services Report	

	A	B	C	D	E
1	EnterpriseProjectTypeName	(All)			
2					
3	ProjectName	ProjectOwnerName	ProjectModifiedDate	ProjectStartDate	ProjectFinishDate
4	Payroll System Upgrade	Jan Kotas	4/27/2010	3/1/2010	6/11/2010
5	New Zen Report Module	Chris Gray	12/17/2009	12/29/2009	6/4/2010
6	Compliance Database System Ir	Chris Gray	5/6/2010	10/12/2009	2/18/2010
7	ERP System Equipment Upgrad	Lori Penor	12/16/2009	7/19/2010	12/14/2010
8	Acquisition Target Analysis	Chris Gray	12/15/2009	7/5/2010	10/6/2010
9	Ledger Tracking System Upgra	Chris Gray	12/22/2009	2/8/2011	7/7/2011
10	Operations Management	Lori Penor	12/1/2009	7/15/2010	9/23/2010
11	General Ledger (GL) currency u	Martin Berka	12/10/2009	11/27/2009	4/27/2010
12	Knowledge Management outso	Chris Gray	4/11/2010	1/13/2011	6/10/2011
13	Automated Software Installatior	Amy Strande	12/9/2009	9/6/2010	3/25/2011
14	Web Site Design Rollout	Ben Spain	12/13/2009	8/17/2009	1/11/2010
15	Internal Web Page Design	Lori Penor	11/26/2009	3/22/2011	8/17/2011
16	Auditing Services Training	Ben Spain	12/9/2009	7/5/2010	9/13/2010
17	Localize partner website for EM	Lori Penor	12/16/2009	10/25/2009	3/19/2010
18	Internal Software Database Aud	Lori Penor	12/16/2009	8/2/2010	12/28/2010
19	Storage Planning and Managen	Jan Kotas	12/14/2009	8/4/2009	2/23/2010
20	Network Traffic Management S	Lori Penor	4/12/2010	12/11/2009	5/18/2010
21	Software Benchmarking Archite	Martin Berka	12/16/2009	8/2/2010	12/28/2010
22	E-commerce Portal Developme	Ben Spain	12/15/2009	2/20/2011	7/19/2011
23	Production System Upgrade	Chris Gray	11/26/2009	8/12/2010	1/7/2011
24	Improve raw materaial acquisiti	Steve Masters	12/10/2009	8/5/2009	1/1/2010
25	Word Processing System Upgra	Chris Gray	12/22/2009	4/21/2010	11/9/2010
26	Knowledge Management Syste	Lori Penor	11/26/2009	11/2/2010	3/30/2011

Figure 13 - Excel Services Report Screenshot

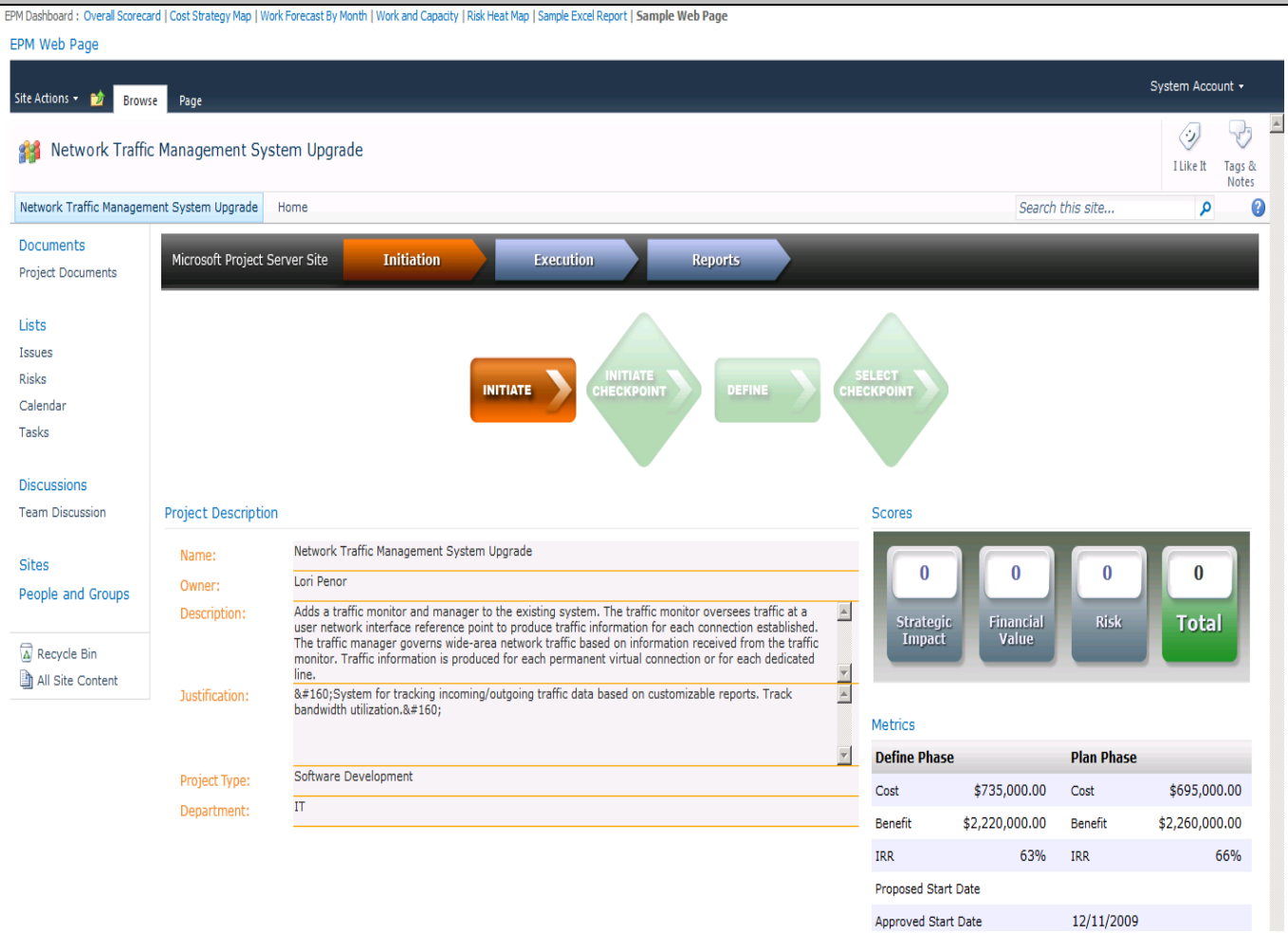
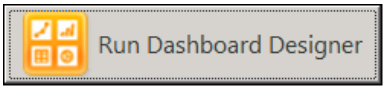
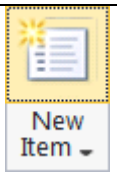
Page	Feature	Screenshot
10.	Web Page	

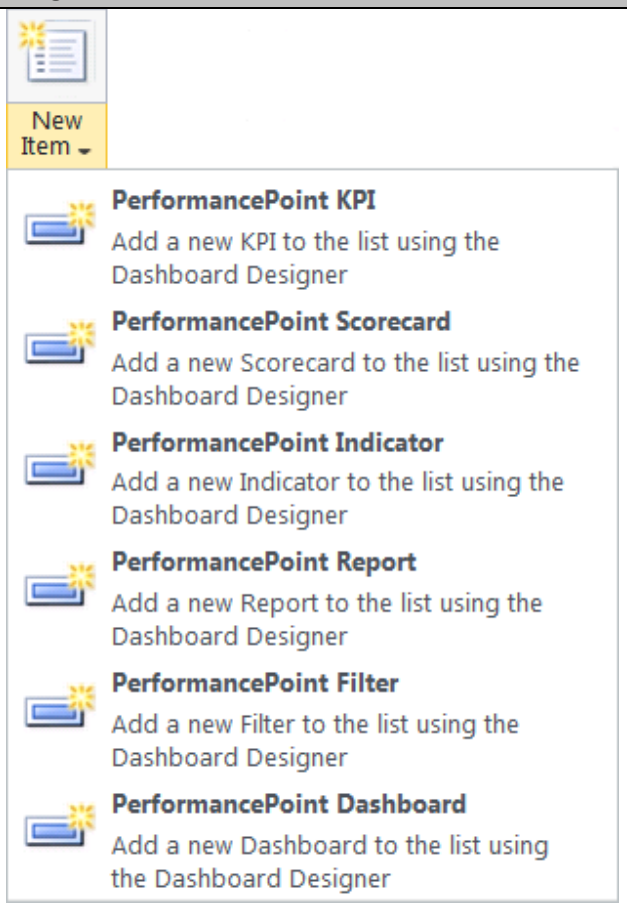
Figure 14 - Web Page Screenshot

Launch Dashboard Designer

All the steps in creating data sources and content start with launching the PerformancePoint authoring tool – PerformancePoint Dashboard Designer.

These steps are common when performing a single creation activity or a series of activities. Each of the activities assumes that Dashboard Designer has been launched previously.

Step	Action	Settings, Notes and Comments
1.	From PWA, click **Business Intelligence**, hover over **Monitor Key Performance** (or **Build and Share Reports** or **Create Dashboards**), and then click **Start using PerformancePoint Services**.	
2.	Click **Run Dashboard Designer.**	 Launching Application dialog should initiate at the end of which an Untitled – Dashboard Designer Workspace will appear
3.	(Alternative: From PWA, click **Business Intelligence**, click **PerformancePoint Content**. From **Item** tab, click **New** icon or **New Item**, and then click a PerformancePoint item)	 **Or**

Step	Action	Settings, Notes and Comments
		 Launching Application dialog should initiate at the end of which an Untitled – Dashboard Designer Workspace will appear

Create Data Sources

There are six (6) data source types.

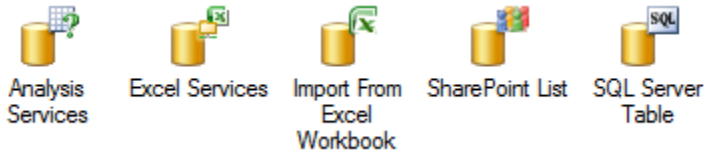


Figure 15 - Data Source Types

The two (2) data source types that are used primarily in Project Server 2010 are SQL Server Table (Project Server Reporting Database) and Analysis Services (Project Server OLAP Cube).

Create an OLAP Data Source

Project Server 2010 creates OLAP cubes via SQL Analysis Services. In previous versions, these OLAP cubes were directly consumed by a standard feature called Portfolio Analyzer. While there are Excel Services templates that can consume the Project Server 2010 OLAP cubes, PerformancePoint Services provide analytic reports as an alternative.

In certain ways, PerformancePoint provides a highly interactive means for navigating through the data similar to the previous Portfolio Analyzer with built-in drill-down and drill-up capability while it enables new insights as with the Decomposition Tree feature explained in this document.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer**, click the **Create** tab, and then click **Dashboard Items** | **Data Source**.	
2.	In **Select a Data Source Template | Category:** click **All** > **Multidimensional**, select **Analysis Services**, and then click **OK**.	
3.	From **Workspace Browser**, type the name of your data source.	Data Source Name: EPM Portfolio Analyzer

1	From the center pane | **Editor** tab, specify **Connection Settings** and **Data Source Settings.**	**Connection Settings** • Selected – **Use Standard Connection** **Server:** DEMO2010A **Database:** ProjectServerDemo **Roles:** • Unselected – **Use the following connection** **Connection String:** **Cube:** MSP Portfolio Analyzer **Data Source Settings** **Authentication:** • Selected – **Unattended Service Account** • Unselected – **Unattended Service Account and add authenticated user name in connection string** • Unselected – **Per-user Identity** **Formatting Dimension:** Measures **Cache Lifetime:** 10 **minutes** *Notes:* *Cache Lifetime is the update interval for data from this data source.* *Formatting Dimension (usually "Measures") is the dimension that numeric formatting is applied to. Some cubes use a Scenario dimension that is more desirable for numeric formatting.*
4.	From the center pane | **Editor** tab, click **Test Connection** to confirm that the connection is configured correctly. From Test Connection, click **Close**.	Test Connection should launch and result in "Connection successful!"
5.	From the **Workspace Browser**, right-click the data source, and then click **Save.**	

Create a SQL Server Data Source

The primary database devoted to reporting Project Server data is the Project Server Reporting Database which is one of the four core databases created when Project Server is installed. This is a suitable SQL Server data source that can be used to develop PerformancePoint dashboard reports.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer**, click the **Create** tab, and then click **Dashboard Items** | **Data Source**.	
2.	In **Select a Data Source Template | Category:** click **All** > **Tabular List**, select **SQL Server Table**, and then click **OK**.	*Note: In SQL nomenclature SQL Server Table applies to both SQL tables and views*
3.	From **Workspace Browser**, type the name of your data source.	Data Source Name: EPM Project UserView
4.	From the center pane | **Editor** tab, specify **Connection Settings** and **Data Source Settings.**	**Connection Settings** • Selected – **Use Standard Connection** **Server:** DEMO2010A **Database:** PWA_Reporting • Unselected – **Use the following connection** **Connection String:** **Table:** dbo.MSP_EPMProject_UserView **Data Source Settings** **Authentication:** • Selected – **Unattended Service Account** • Unselected – **Per-user Identity** **Refresh Interval:** 10 **minutes** *Note:* *Refresh Interval is the update interval for data from this data source.*
5.	From the center pane | **Editor** tab, click **Test Connection** to confirm that the connection is configured correctly. From Test Connection, click **Close**.	Test Connection should launch and result in "Connection successful!"
6.	From the **Workspace Browser**, right-click the data source, and	

Step	Action	Settings, Notes and Comments
	then click **Save.**	

Create a SharePoint List Data Source

SharePoint Lists are relevant data sources in Project Server insofar as project sites contain relevant data elements in the form of issues and risks that are kept in SharePoint lists.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer**, click the **Create** tab, and then click **Dashboard Items** | **Data Source**.	
2.	In **Select a Data Source Template | Category:** click **All** > **Tabular List**, select **SharePoint List**, and then click **OK**.	
3.	From **Workspace Browser**, type the name of your data source.	Data Source Name: EPM Issues List
4.	From the center pane | **Editor** tab, specify **Connection Settings** and **Data Source Settings.**	**Connection Settings** **SharePoint Site:** http://project.contoso.com/PWA/Network Traffic Management System Upgrade/ **SharePoint Site List:** All Lists **List:** Issues **Data Source Settings** **Authentication:** • Selected – **Unattended Service Account** • Unselected – **Per-user Identity** **Cache Lifetime:** 10 **minutes** *Notes:* *Cache Lifetime is the update interval for data from this data source.*
5.	From the center pane | **Editor** tab, click **Test Connection** to confirm that the connection is configured correctly. From Test Connection, click **Close**.	Test Connection should launch and result in "Connection successful!"
6.	From the **Workspace Browser**, right-click the data source, and then click **Save.**	

Create an Excel Services Data Source

Excel Services reports and templates are available out-of-box from Project Server data. The example provided takes the SimpleProjectsList.xslx report as a PerformancePoint data source.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer**, click the **Create** tab, and then click **Dashboard Items** | **Data Source**.	
2.	In **Select a Data Source Template | Category:** click **All** > **Tabular List**, select **Excel Services**, and then click **OK**.	
3.	From **Workspace Browser**, type the name of your data source.	Data Source Name: EPM Simple Project List
4.	From the center pane | **Editor** tab, specify **Connection Settings** and **Data Source Settings.**	**Connection Settings** **SharePoint Site:** http://project.contoso.com/PWA/ProjectBICenter/ **Document Library:** Sample Reports **Excel Workbook:** English (United States)/SimpleProjectsList.xslx **Item Name:** **Workbook Parameters** **Parameter Name:** **Value:** **Data Source Settings** **Authentication:** • Selected – **Unattended Service Account** • Unselected – **Per-user Identity** **Refresh Interval:** 10 **minutes** *Notes:* *The **Item Name** is not used in this case however if opted, select a **Named Range** or **Table**. Only one Named Range or Table is supported per Excel Services data source. If you connect to a Microsoft Office Excel 2007 workbook as a data source, you must type the **Item Name**; it will not appear in the drop-down list. Your selected Named Range or Table can be later seen on the **View** tab. A column from that **Item** can be set as a **Time***

Step	Action	Settings, Notes and Comments
		Dimension *and configured from the* ***Time*** *tab.* *Refresh Interval is the update interval for data from this data source.*
5.	From the center pane | **Editor** tab, click **Test Connection** to confirm that the connection is configured correctly. From Test Connection, click **Close**.	Test Connection should launch and result in "Connection successful!"
6.	From the **Workspace Browser**, right-click the data source, and then click **Save.**	

Create Content

PerformancePoint content can be categorized into two major areas: Content Types and Report Types.

There are five (5) Content Types.

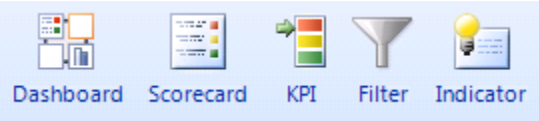


Figure 16 - Content Types

There are eight (8) Report Types. The KPI Details Report Type is arguably a Content Type to the extent that it is linked to a KPI and provides metadata about the KPI and not the underlying business data.

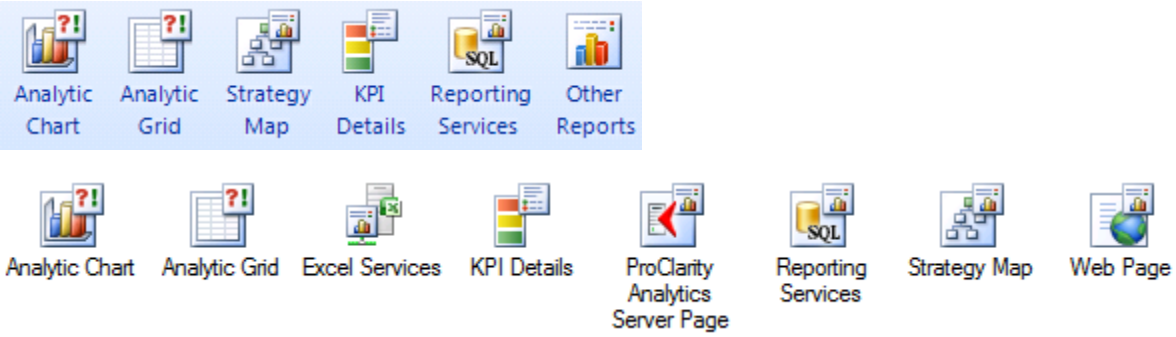


Figure 17 - Report and Other Report Types

Table 3 - Report Type Definitions

Reports[4]	Description	Native to PerformancePoint
Analytic charts and grids	Analytic charts and grids are used to display information in highly interactive charts and tables (known as grids). These reports enable dashboard users to quickly and easily explore complex data without having to write queries.	X
Excel Services reports	Excel Services reports are used to display Excel spreadsheets or items that are in an	

[4] Reference: PerformancePoint report types

Reports[4]	Description	Native to PerformancePoint
	Excel workbook, such as PivotTable reports, PivotChart reports, or a section in a worksheet.	
SQL Server Reporting Services reports	SQL Server Reporting Services reports are reports that have been published to Reporting Services. Reporting Services reports can resemble tables or charts, and they can include their own filters, which are sometimes called parameters.	
ProClarity Server reports	ProClarity Analytics Server Page reports, also called ProClarity Server reports, are reports that were created by using ProClarity Professional and then published to ProClarity Analytics Server.	
Web Page reports	Web Page reports are fully functional internal or external Web sites that are displayed in SharePoint Web Parts next to your other dashboard items. Web Page reports are useful for viewing publicly available information alongside other internal reports in a single dashboard.	
Scorecards	Scorecards are a kind of report that shows performance by comparing actual results to target values with graphical icons that are called indicators.	X
Strategy Map	Strategy Maps are Microsoft Visio diagrams that are linked to scorecards to display various performance measures in an organization at a glance. A strategy map uses shapes in a Visio diagram to show the relationships between objectives. The shapes are connected to key performance indicators (KPIs) that are in a PerformancePoint scorecard, and colors to show how each objective is performing according to the scorecard KPIs.	

Reports[4]	Description	Native to PerformancePoint
KPI Details reports	KPI Details reports are used in conjunction with scorecards in a dashboard. KPI Details reports are used to show additional information about the KPIs and other items that are in a scorecard. When you click a cell in a scorecard, the KPI Details refreshes to display information, such as the calculation and banding methods that are used for each KPI. KPI Details reports are useful for understanding how performance is measured and what kinds of indicators are used in a scorecard.	X

The Analytic Chart can be further classified into six (6) Chart Types.

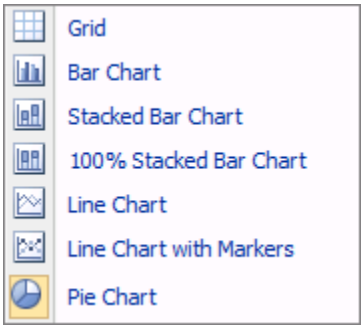


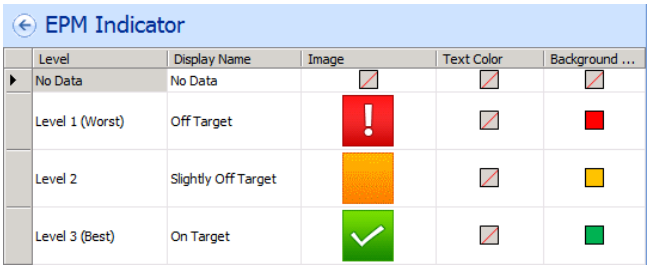
Figure 18 - Analytic Grid and Charts

Create an Indicator

An indicator is a set of graphics, text, and colors for defining different levels of performance when comparing an actual value and a target value within a KPI. It is important to make that distinction between an indicator and a KPI that uses the indicator as one of its constituent elements.

There are several built-in indicators to choose from (including red-yellow-green indicators, trend arrows, various gauges). The steps below provide an example of adding custom indicators which are used for developing the sample KPIs that follow.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Dashboard Items** | **Indicator.**	
3.	In **Select an Indicator Template** | **Category**, click **All** > **Blank Indicator** then from **Template** select **Blank Indicator** and click **OK.**	
4.	From **Workspace Browser**, type the name of your **New Indicator**.	Indicator Name: EPM Indicator
5.	From the center pane | **Editor** tab, specify **Level** settings. Double-click **Image** cell to browse and open a suitable image file.	**Level:** No Data **Display Name:** No data **Image:** <unspecified **Text Color:** <unspecified> **Background Color:** <unspecified> **Level:** Level 1 (Worst) **Display Name:** Off Target **Image:** RED.GIF **Text Color:** <unspecified> **Background Color:** red **Level:** Level 2 **Display Name:** Off Target **Image:** YELLOW.GIF **Text Color:** <unspecified> **Background Color:** yellow **Level:** Level 3 (Best)

Step	Action	Settings, Notes and Comments
		Display Name: On Target **Image:** GREEN.GIF **Text Color:** <unspecified> **Background Color:** green  **Figure 19 - EPM Indicator** *Note: Background Color is used as a Fill Color for shapes in a Strategy Map*
6.	From the **Workspace Browser**, right-click the data source, and then click **Save**.	

Create a Filter

PerformancePoint Dashboard Designer supports the creation of many kinds of dashboard filters. Filters enable you to display particular information in a dashboard. Filters can be used as stand-alone dashboard items that can be reused across multiple dashboards or across multiple pages in a dashboard. These kinds of filters enable users to view more specific information of interest.

- Cascading filters
- Custom data table used to create a dashboard filter
- Dashboard filter that uses a custom Multidimensional Expressions (MDX) query
- Dashboard filter using dimension members stored in SQL Server Analysis Services or a tabular data source
- Dashboard filter from a set of members defined in Analysis Services
- Dynamic time filter for a dashboard that remains up to date automatically
    - A filter that uses a list of time periods, such as Year to Date or Last Six Months
    - A filter that uses a calendar control

The steps that follow describe how to create a filter from dimensions in a SQL Server Analysis Services OLAP cube created from project data.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Dashboard Items** | **Filter.**	
3.	In **Select a Filter Template** | **Template,** click **Member Selection**, and then click **OK.**	
4.	From **Create a Filter** | **Select a data source** dialog | **Workspace** tab, find and click **Data Connection** for the intended **Data Source**, and then click **Next**.	**Data Source**: EPM Project UserView
5.	From **Create a Filter** | **Select Members**, select **Filter Dimension**, **Filter Members**, and then click **Next**.	Click **Select Dimension…** to select a filter dimension **Filter Dimension**: Project Departments Click **Select Members…** to select members **Filter Members**: Finance, HR, IT, Legal, Operations, Sales and Marketing

Step	Action	Settings, Notes and Comments
		Default member selection: <unspecified>
6.	From **Create a Filter** | **Select Display Method**, click **Multi-Select Tree**, and then click **Finish**.	**Display Method**: Multi-Select Tree Choices: • **List** – a drop-down list from which a single item can be selected • **Tree** – a tree from which a single item can be selected • **Multi-Select Tree** – a tree from which multiple items can be selected
7.	From **Workspace Browser**, type the name of your **New Filter**.	**Filter Name**: EPM Filter
8.	From the **Workspace Browser**, right-click the data source, and then click **Save.**	

Create a KPI

A key performance indicator (KPI) is a scorecard element that shows at a glance whether performance is on- or off-target for a particular metric. KPIs can vary greatly in their appearance and complexity, but KPIs typically calculate how actual values compare to target values and indicate performance by using a graphical indicator.

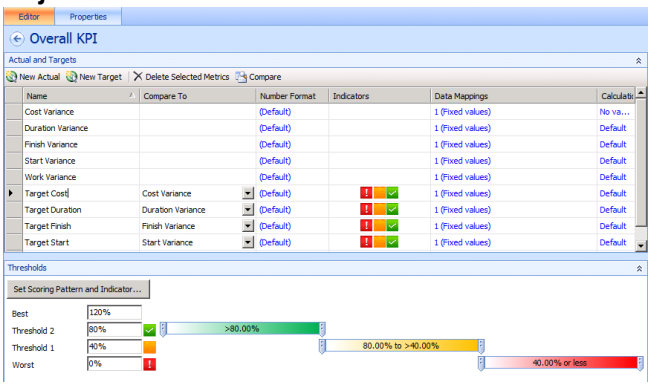
The following steps are divided into two sets: one for an Objective KPI that creates the Overall Summary to roll-up all departmental KPIs, and one Blank KPI per department that creates each individual Department KPI.

The main difference between the two KPI templates is in their default calculation method. By default, an **Objective KPI** uses no calculation, and a **Blank KPI** uses a normalized weighted score calculation. However, you can specify the calculation method that is used by the KPI, regardless of which template is selected.

Create an Objective KPI

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Dashboard Items** | **KPI.**	
3.	In **Select a KPI Template** | **Template,** click **Objective KPI**, and then click **OK.**	
4.	From **Workspace Browser**, type the name of your **New KPI**.	**KPI Name**: Overall KPI
5.	From the **Editor** tab | **Actuals and Targets** under **Name**, click **Actual,** and then change its name.	**Actual Name**: Cost Variance *Note: the Actual name specified must exactly match across Overall and Department KPI Actual names specified in order to align columns correctly in the EPM Scorecard*
6.	From the **Editor** tab | **Actuals and Targets** under **Name**, click **Target**, and then change its name.	**Target Name**: Target Cost *Note: the Target name specified must exactly match across Overall and Department KPI Target names specified in order to align columns correctly in the EPM Scorecard*
7.	From the **Editor** tab | **Actuals and Targets** | **Target** row under **Compare To**, find and select the associated	Target Row **Compare To**: Cost Variance

Step	Action	Settings, Notes and Comments
	Actual.	
8.	From the **Editor** tab | **Actuals and Targets** | **Target** row under **Calculation**, click **No value**.	
9.	From **Calculation** dialog, click **Default** and clear **Use calculated values of actual and target to compute score**, and then click **OK**.	Target Row **Calculation**: Default Choices: • **Default** – Use the normalized weighted average score of all child KPI's as the input value for this KPI. • **No value** – Do not use data input from another source for this KPI. • **Data value** – Do not use data input from another source for this KPI. • **Text value** – Use a text value from an external source as an input value for this KPI. • **Average of children** – Take the corresponding target score for each of the child KPIs immediately below this KPI and use the average as the input value for this KPI. • **Sum of children** – Take the corresponding target score for each of the child KPIs immediately below this KPI and use the sum for this KPI's input value • **Max of children** – Use the highest KPI target score from the set of all child KPIs immediately below this KPI as the input value for this KPI. • **Min of children** – Use the lowest KPI target score from the set of all child KPIs immediately below this KPI as the input value for this KPI Unchecked – Use calculated values of actual and target to compute score.
10.	From **Editor** tab | **Actuals and Targets** click **New Actual** and **New Target**, alternately in sequence to create the following actuals and targets: • Duration Variance • Target Duration	**Actual Name**: Duration Variance **Target Name**: Target Duration Target Row **Compare To**: Duration Variance Target Row **Calculation**: Default **Actual Name**: Start Variance **Target Name**: Target Start Target Row **Compare To**: Start Variance

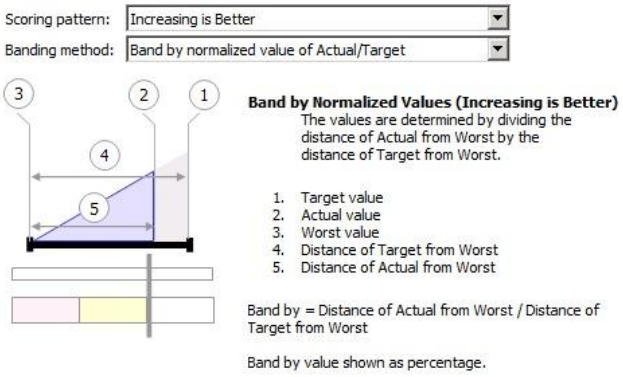
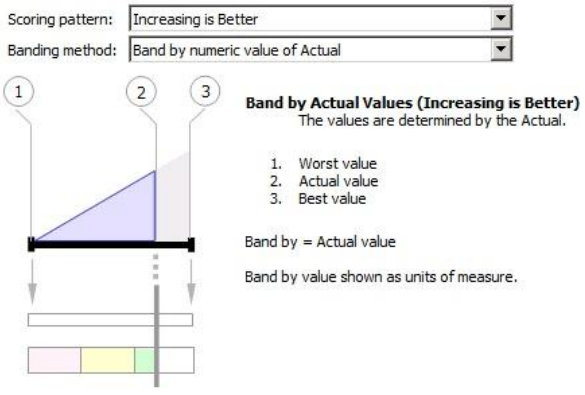
Step	Action	Settings, Notes and Comments
	• Start Variance • Target Start • Finish Variance • Target Finish • Work Variance • Target Work Repeat steps 5-10 to create each Actual and Target pair based on specifications provided on the right.	Target Row **Calculation**: Default **Actual Name**: Finish Variance **Target Name**: Target Finish Target Row **Compare To**: Finish Variance Target Row **Calculation**: Default **Actual Name**: Work Variance **Target Name**: Target Work Target Row **Compare To**: Work Variance Target Row **Calculation**: Default
11.	From the **Properties** tab, specify a **Description**.	**Description**: The Overall KPI is the normalized average for all department KPIs
12.	From the **Workspace Browser**, right-click the **Objective KPI**, and then click **Save.**	**Objective KPI**: Overall KPI  **Figure 20 - Overall Objective KPI**

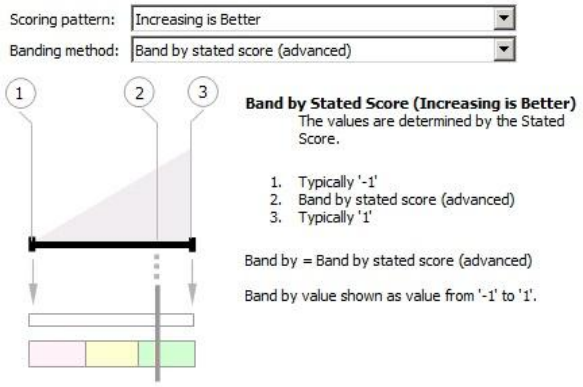
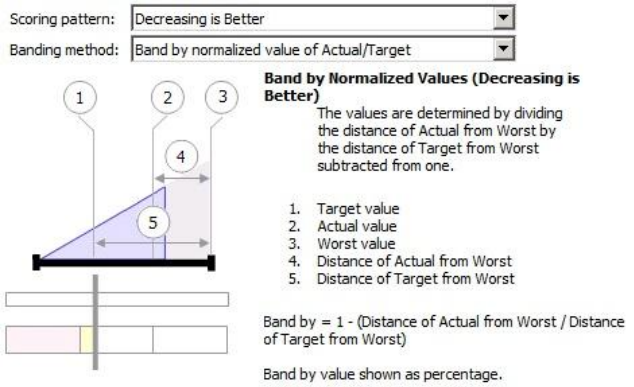
Create a Blank KPI

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Dashboard Items** | **KPI.**	
3.	In **Select a KPI Template** | **Template,** click **Objective KPI**, and then click **OK**.	
4.	From **Workspace Browser**, type the name of your **New KPI**.	**KPI Name**: Finance KPI

Step	Action	Settings, Notes and Comments
5.	From the **Editor** tab | **Actuals and Targets** under **Name**, click **Actual**, and then change its name.	**Actual Name**: Cost Variance
6.	From the **Editor** tab | **Actuals and Targets** | **Actual** row under **Number Format**, click **(Default)**.	
7.	From **Format Numbers** dialog, click the **Format**: dropdown, select **Currency**, and then click **OK**.	**Format**: Currency **Currency symbol**: $ **Decimals**: 0 **Multiplier**: 1 **Negative numbers**: Selected – Use negative sign Unselected – Use parentheses **Show zero as**: <unspecified> Checked – User number separator **Additional text**: **Before**: <unspecified> **After**: <unspecified>
8.	Back in the **Editor** tab | **Actuals and Targets** | **Actual** row under **Data Mappings**, click **1 (Fixed values)**.	
9.	From **Fixed Values Data Source Mapping** dialog, click **Change Source.**	
10.	From the **Select a Data Source** dialog | **Workspace** tab, find **Data Connection** for the **SQL table**, and then click **OK**.	**SQL table**: EPM Project UserView *Note: this table was created in the **Create a SQL Server** Data Source section*
11.	From the **Dimensional Data Source Mapping** dialog, find and **Select a measure** from the dropdown.	**Select a measure**: ProjectCostVariance
12.	From the **Dimensional Data Source Mapping** dialog, **Select a dimension** click **New Dimension Filter**.	
13.	From **Select Dimension**, find and select a dimension, and then click **OK**.	**Dimension**: Project Departments
14.	From **Dimensional Data Source Mapping** dialog | **Select a dimension** in the dimension row under **Default**, click **Default**.	
15.	From **Select Members** dialog, select a member, and then click **OK**.	**Member**: Finance

Step	Action	Settings, Notes and Comments
16.	From the **Dimensional Data Source Mapping** dialog, click **OK**.	
17.	Back in the **Editor** tab | **Actuals and Targets** under **Name**, click **Target** and then change its name.	**Target Name**: Target Cost
18.	From the **Editor** tab | **Actuals and Targets** | **Target** row under **Compare To**, find and select the associated **Actual**.	Target Row **Compare To**: Cost Variance
19.	From the **Editor** tab | **Actuals and Targets** | **Target** row under **Number Format**, click **(Default)**.	
20.	From the **Format Numbers** dialog, click **Format**: dropdown, select **Currency** then click **OK**.	**Format**: Currency **Currency symbol**: $ **Decimals**: 0 **Multiplier**: 1 **Negative numbers**: Selected – Use negative sign Unselected – Use parentheses **Show zero as**: <unspecified> Checked – User number separator **Additional text**: **Before**: <unspecified> **After**: <unspecified>
21.	From the **Editor** tab | **Actuals and Targets** | **Target** row under **Data Mappings**, click **1 (Fixed values)**.	
22.	From the **Fixed Values Data Source Mapping** dialog, change **Value** to the intended target value, and then click **OK**.	**Value**: 0 *Note: for project variances, the ideal value is 0 therefore decreasing values are trending towards a healthier metric*
23.	From the **Editor** tab | **Thresholds**, click **Set Scoring Pattern and Indicator**.	
24.	From the **Edit Band Settings** | **Select the Scoring Pattern** | **Scoring pattern**: dropdown, select **Decreasing is Better**, and **Banding method**: dropdown, select **Band by normalized value of Actual/Target**, and then click **Next**.	**Scoring pattern**: Decreasing is Better Choices: • Increasing is Better • Decreasing is Better • Closer to Target is Better **Banding method**: Band by normalized value of

Step	Action	Settings, Notes and Comments
		Actual/Target Choices: • Band by normalized value of Actual/Target • Band by numeric value of Actual • Band by stated score (advanced) Note: Nine Possible Scoring and Banding Combinations • Increasing is Better • Band by normalized value of Actual/Target  **Figure 21 - Increasing / Normalized Combination** • Increasing is Better • Band by numeric value of Actual  **Figure 22 - Increasing / Actual Numeric Value Combination**

Step	Action	Settings, Notes and Comments
		• Increasing is Better • Band by stated score (advanced)  **Figure 23 - Increasing / Stated Score Combination** • Decreasing is Better • Band by normalized value of Actual/Target  **Figure 24 - Decreasing / Normalized Combination** • Decreasing is Better • Band by numeric value of Actual

Step	Action	Settings, Notes and Comments

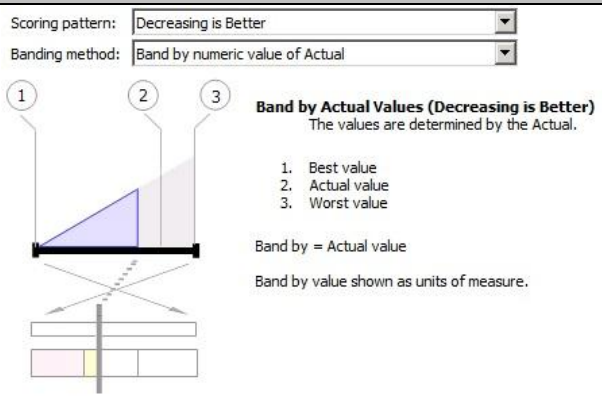


Figure 25 - Decreasing / Actual Numeric Value Combination

- Decreasing is Better
- Band by stated score (advanced)

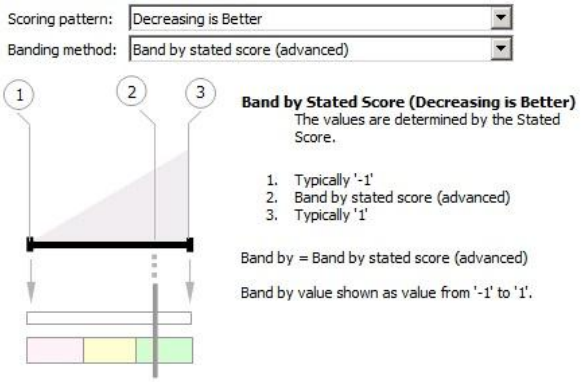
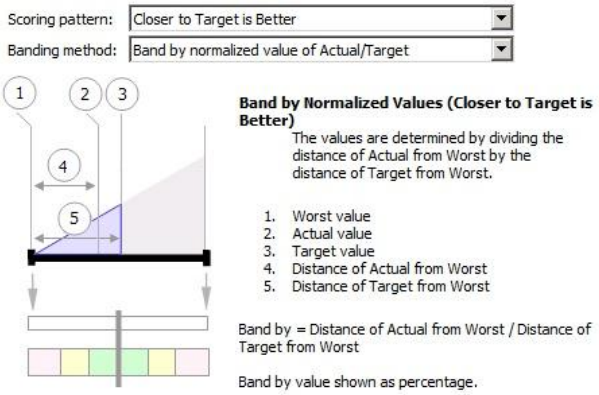
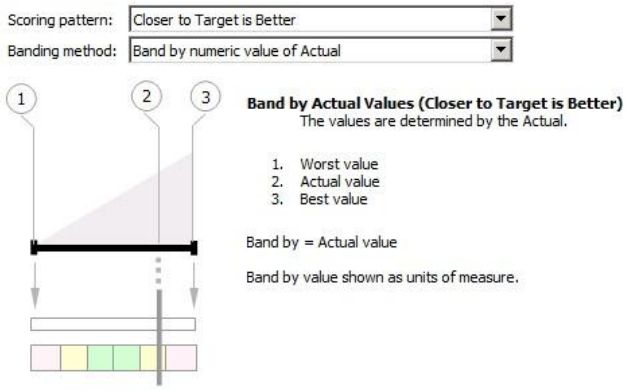
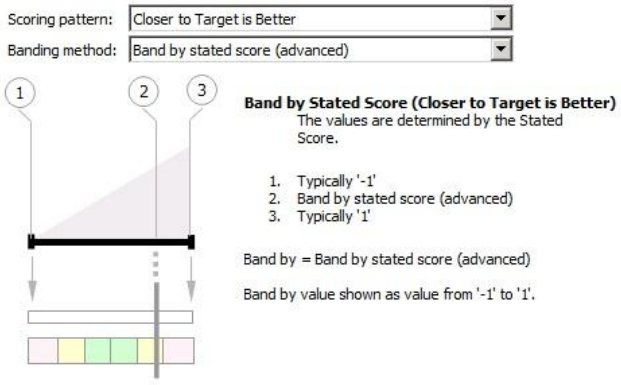


Figure 26 - Decreasing / Stated Score Combination

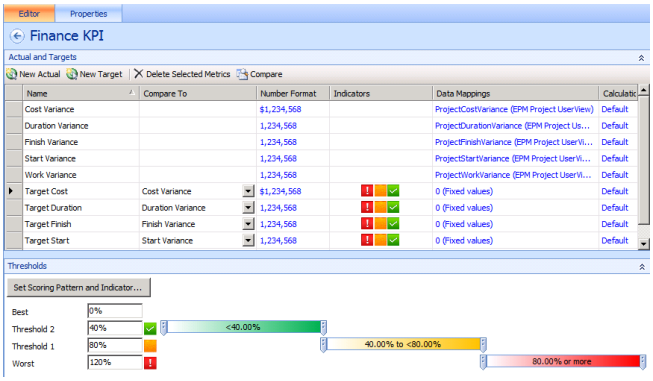
- Closer to Target is Better
- Band by normalized value of Actual/Target



Step	Action	Settings, Notes and Comments
		Figure 27 - Closer Target / Normalized Combination • Closer to Target is Better • Band by numeric value of Actual  **Figure 28 - Closer Target / Actual Numeric Value Combination** • Closer to Target is Better • Band by stated score (advanced)  **Figure 29 - Closer Target / Stated Score Combination**
25.	From **Edit Band Settings** | **Select an Indicator**, click **Workspace** tab, click custom **Indicator**, and then click **Next**.	**Indicator**: EPM Indicator
26.	From **Edit Band Settings** | **Specify the worst value**, **Enter worst value**: then click **Finish**.	**Enter worst value**: 1000000 *Note: the KPI band is calculated from the actual, target (best) and worst values.*
27.	From **Editor** tab | **Actuals and Targets**	**Actual Name**: Duration Variance

Step	Action	Settings, Notes and Comments
	click New Actual and New Target, alternately in sequence to create the following actuals and targets: • Duration Variance • Target Duration • Start Variance • Target Start • Finish Variance • Target Finish • Work Variance • Target Work Repeat steps 5-27 to create each Actual and Target pair based on specifications provided on the right.	Actual Row **Format**: Number Actual Row **Data Mappings**: • **SQL table**: EPM Project UserView • **Measure**: ProjectDurationVariance • **Dimension**: Project Departments • **Member**: Finance **Target Name**: Target Duration Target Row **Compare To**: Duration Variance Target Row **Format**: Number Target Row **Fixed Value**: 0 Target Row **Scoring pattern**: Decreasing is Better Target Row **Banding method**: Band by normalized value of Actual/Target Target Row **Indicator**: EPM Indicator Target Row **worst value**: 10000 **Actual Name**: Start Variance Actual Row **Format**: Number Actual Row **Data Mappings**: • **SQL table**: EPM Project UserView • **Measure**: ProjectStartVariance • **Dimension**: Project Departments • **Member**: Finance **Target Name**: Target Start Target Row **Compare To**: Start Variance Target Row **Format**: Number Target Row **Fixed Value**: 0 Target Row **Scoring pattern**: Decreasing is Better Target Row **Banding method**: Band by normalized value of Actual/Target Target Row **Indicator**: EPM Indicator Target Row **worst value**: 10000 **Actual Name**: Finish Variance Actual Row **Format**: Number Actual Row **Data Mappings**: • **SQL table**: EPM Project UserView • **Measure**: ProjectFinishVariance • **Dimension**: Project Departments • **Member**: Finance **Target Name**: Target Finish

Step	Action	Settings, Notes and Comments
		Target Row **Compare To**: Finish Variance Target Row **Format**: Number Target Row **Fixed Value**: 0 Target Row **Scoring pattern**: Decreasing is Better Target Row **Banding method**: Band by normalized value of Actual/Target Target Row **Indicator**: EPM Indicator Target Row **worst value**: 10000 **Actual Name**: Work Variance Actual Row **Format**: Number Actual Row **Data Mappings**: • **SQL table**: EPM Project UserView • **Measure**: ProjectWorkVariance • **Dimension**: Project Departments • **Member**: Finance **Target Name**: Target Work Target Row **Compare To**: Work Variance Target Row **Format**: Number Target Row **Fixed Value**: 0 Target Row **Scoring pattern**: Decreasing is Better Target Row **Banding method**: Band by normalized value of Actual/Target Target Row **Indicator**: EPM Indicator Target Row **worst value**: 10000
28.	From the **Properties** tab, specify a **Description**.	**Description**: The Finance KPI scores Cost, Duration, Start, Finish, and Work Variances aggregated from all Finance projects
29.	From the **Workspace Browser**, right-click the **KPI**, and then click **Save**.	**KPI**: Finance KPI
30.	Repeat steps 4-29 for each of the following Department KPIs following specifications in all steps modified by specifications on the right: • HR KPI • IT KPI • Legal KPI • Operations KPI • Sales and Marketing KPI	**KPI**: HR KPI **Data Mappings Member**: HR **Description**: The HR KPI scores Cost, Duration, Start, Finish, and Work Variances aggregated from all HR projects **KPI**: IT KPI **Data Mappings Member**: IT **Description**: The IT KPI scores Cost, Duration, Start, Finish, and Work Variances aggregated from all IT

Step	Action	Settings, Notes and Comments
		projects **KPI**: Legal KPI **Data Mappings Member**: Legal **Description**: The Legal KPI scores Cost, Duration, Start, Finish, and Work Variances aggregated from all Legal projects **KPI**: Operations KPI **Data Mappings Member**: Operations **Description**: The Operations KPI scores Cost, Duration, Start, Finish, and Work Variances aggregated from all Operations projects **KPI**: Sales and Marketing KPI **Data Mappings Member**: Sales and Marketing **Description**: The Sales and Marketing KPI scores Cost, Duration, Start, Finish, and Work Variances aggregated from all Sales and Marketing projects  **Figure 30 - Department Blank KPI**

The KPIs are now available to use in PerformancePoint scorecards.

Create a KPI Details

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content**.	
2.	On the ribbon, click the **Create** tab, and then click **Dashboard Items** | **KPI Details**.	
3.	From **Workspace Browser**, type the name of your **New Report**.	**Report Name**: KPI Details

4.	From the **Editor** tab fill in **KPI Sections**.	**Cell Context Information**
		• Check – **Show cell context information**
		  • Checked – **Expand cell context sections by default**
		Show Indicator Options
		• Uncheck – **Show status graph**
		• Uncheck – **Show indicator graphic**
		Show Details Information
		• Check – **Show actual**
		• Check – **Show calculation**
		• Check – **Show score**
		• Check – **Show threshold grid**
		For metrics with normalize weighted average, show:
		  • Select – **Percentage threshold values**
		  • Unselect – **Target values adjusted for indicator threshold percentages**
		• Check – **Show variance**
		Additional Information
		• Check – **Show Description**
		• Check – **Show Comments**
		• Check – **Show KPI properties**
		• Check – **Show Person Responsible**

5.	From the **Workspace Browser**, right-click the **Report Name**, and then click **Save**.	**Report Name**: KPI Details

Table 4 - KPI Options

KPI section	Option	Description
Cell Context Information	**Show cell context information**	Select this option to display the following information: • Metric • Measure • Row Path, which corresponds to the scorecard row that was clicked. • Column Path, which corresponds to the scorecard column that was clicked.
	Expand cell context sections by default	By default, this option is selected. It causes the KPI Details report to be expanded to display the information that you specify.
Show Indicator Options	**Show status graph**	Do not use this option. It does not work in the current version of PerformancePoint Services.
	Show indicator graphic	Do not use this option. It does not work in the current version of PerformancePoint Services.
Show Details Information	**Show actual**	Select this option to display actual values when cells in the scorecard's **Target** column are clicked.
	Show calculation	Select this option to display how scores are calculated and what banding method is used by the KPI that was clicked. KPIs use one of the following calculations: • Increasing is better • Decreasing is better • Closer to target is better
	Show score	Select this option to show raw scores when cells in the scorecard's **Target** column are clicked.
	Show threshold grid	Select this option to determine whether to show the threshold grid when cells in the scorecard's **Target** column are clicked. The threshold grid includes the following information: • The kind of indicator that is used by the KPI that was clicked • A table showing the different thresholds and performance for a KPI When you select **Show threshold grid**, you must also select one of the following two options: • **Percentage threshold values**

KPI section	Option	Description
		• **Target values adjusted for indicator threshold percentages**
	For metrics with normalized weighted value, show Percentage values	Select this option to display performance in percentages in the threshold grid.
	For metrics with normalized weighted value, show Target values adjusted for indicator threshold percentages	Select this option to display performance in numeric values in the threshold grid.
	Show variance	Select this option to show the variance from the next status threshold. For example, if performance is slightly off target for a particular metric, the variance would be how far away the metric is from being on target.
Additional information	**Show Description**	Select this option to display any text that was entered in the **Description** box for a KPI (visible on the **Properties** tab for a KPI in Dashboard Designer).
	Show Comments	Select this option to display any comments or annotations that have been added to a scorecard. Depending on whether comments (or annotations) are enabled in the SharePoint Central Administration Web site, both dashboard authors and dashboard consumers can add comments to a scorecard. • Dashboard authors can open a scorecard for editing in Dashboard Designer and add comments by using the **Edit** tab. • Dashboard users can add comments to a scorecard in its SharePoint site by right-clicking a cell and then clicking **Comments**.
	Show KPI Properties	Select this option to display any custom properties that might have been created for each KPI (visible on the **Properties** tab for a KPI in Dashboard Designer).
	Show Person Responsible	Select this option to display information about the person who is responsible for the KPI status (which is visible on the **Properties** tab for a KPI in Dashboard Designer).

After you have created the KPI Details report, you can add it to a dashboard page and connect it to a scorecard.

Create a Scorecard

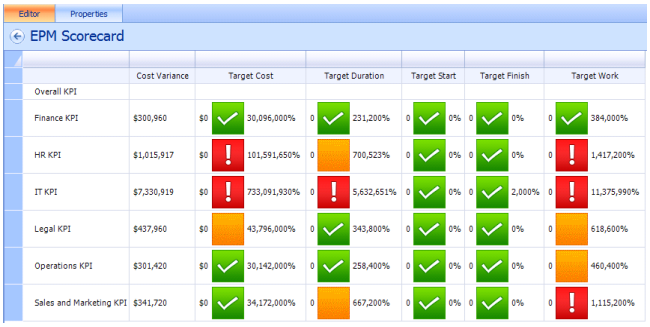
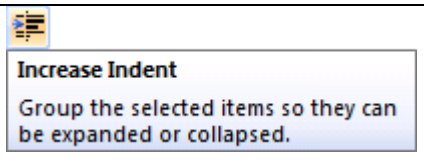
Scorecards are dashboard items that show performance for one or more metrics. Scorecards compare actual results to specified goals and express the results by using graphical indicators.

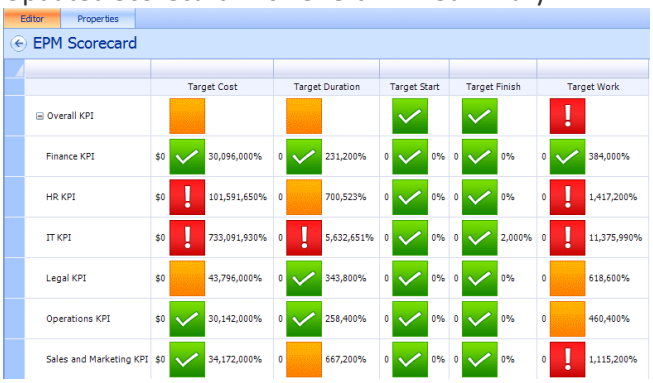
A scorecard resembles a table that usually has **Target** and **Actual** value columns and one or more key performance indicators (KPIs).

Scorecards can be created via a wizard method or manual method via a blank scorecard:

- A wizard is useful for those new to Dashboard Designer and do not have many existing dashboard items that can be reused. This method is also useful to quickly and easily create a scorecard. When the wizard is used to create a scorecard, start by selecting the kind of data source that will be used by at least one KPI in the scorecard. The wizard is used to create the scorecard, and then configured and completed in the workspace.
- The manual method is initiated by creating a blank scorecard then manually adding the KPIs and other items to be used in the scorecard. This is useful one or more KPIs are already available for use.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content**.	
2.	On the ribbon, click the **Create** tab, and then click **Dashboard Items** | **Scorecard.**	
3.	From the **Select a Scorecard Template** dialog, click **All** > **Tabular** > **SQL Server Table**, and then click **OK.**	
4.	From the **Create a SQL Server Scorecard** | **Select a data source** dialog | **Workspace** tab, find and click **Data Connection** for the intended **SQL table**, and then click **Next.**	**SQL Table**: EPM Project UserView **Wizard Option**: • Check – **Use wizards to create scorecards** *Note: You can configure Dashboard Designer to use or not to use a wizard to create scorecards.*
5.	From the **Create a SQL Server Scorecard** | **Select KPIs to Import** dialog, click **Select KPI**.	
6.	From **Select a KPI** dialog | **Workspace** tab select all Objective and Department **KPIs**, and then click **OK**.	**Objective KPI**: Overall KPI **Department KPIs**: • Finance KPI

Step	Action	Settings, Notes and Comments
		• HR KPI • IT KPI • Legal KPI • Operations KPI • Sales and Marketing KPI
7.	Back in the **Create a SQL Server Scorecard** | **Select KPIs to Import** dialog, click **Next**.	
8.	From the **Create a SQL Server Scorecard** | **Add Measure Filters** dialog, click **Next**.	
9.	From the **Create a SQL Server Scorecard** | **Add Member Columns** dialog, click **Finish**.	
10.	From the **Workspace Browser**, type the name of your **New Scorecard**.	**Scorecard Name**: EPM Scorecard Raw Scorecard:  **Figure 31- Raw Scorecard**
11.	From the **Editor** tab, highlight the **Cost Variance** column, right-click the selected column, and then click **Delete**.	
12.	From **Dashboard Designer** | **Edit** tab while in the **Editor** tab, click the first Department KPI below the Objective KPI, and then click the **Header** | **Increase Indent** icon. Repeat Increase Indent for all Department KPIs.	 **Objective KPI**: Overall KPI **Department KPIs**: • Finance KPI • HR KPI • IT KPI • Legal KPI

Step	Action	Settings, Notes and Comments
		• Operations KPI • Sales and Marketing KPI
13.	From **Dashboard Designer** | **Edit** tab while in the **Editor** tab, click **View** | **Update**.	Updated Scorecard with Overall KPI Summary:  **Figure 32 - Overall KPI and Indented Department KPIs**
14.	From **Dashboard Designer** | **Edit** tab while in the **Editor** tab, click **Objective KPI** (subsequently, each **Department KPI**), and then in the **Settings** group, click **KPI**.	**Objective KPI**: Overall KPI
15.	From **KPI Settings** dialog, change the **Display name**, and then click **OK**. Repeat steps 14-15 for each **Department KPI** as specified on the right.	**Objective KPI**: Overall KPI **Display name**: Overall **Department KPI**: Finance KPI **Display name**: Finance **Department KPI**: HR KPI **Display name**: HR **Department KPI**: IT KPI **Display name**: IT **Department KPI**: Legal KPI **Display name**: Legal **Department KPI**: Operations KPI **Display name**: Operations **Department KPI**: Sales and Marketing KPI **Display name**: Sales and Marketing
16.	From **Dashboard Designer** | **Edit** tab	**Metric**: Target Cost

Step	Action	Settings, Notes and Comments
	while in the **Editor** tab, click a **Metric** column header (subsequently, each **Metric** column header), and then in the **Settings** group, click **Metric**.	
17.	From **Target Settings** I **Values** dialog, change **Target name**, **Data value**, and **Additional data value**, and then click **OK**. Repeat steps 16-17 for each **Metric** column header as specified on the right.	**Metric**: Target Cost **Target name:** Cost **Data value**: No value **Additional data value**: Score **Metric**: Target Duration **Target name:** Duration **Data value**: No value **Additional data value**: Score **Metric**: Target Start **Target name:** Start **Data value**: No value **Additional data value**: Score **Metric**: Target Finish **Target name:** Finish **Data value**: No value **Additional data value**: Score **Metric**: Target Work **Target name:** Work **Data value**: No value **Additional data value**: Score

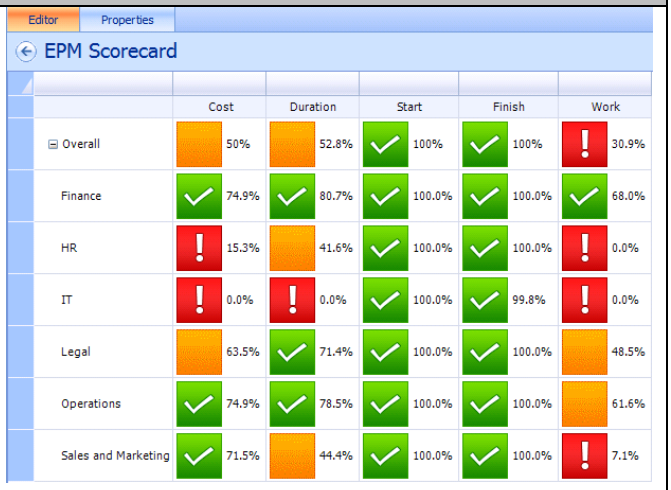
Step	Action	Settings, Notes and Comments
		 **Figure 33 - Updated Overall Scorecard**
18.	From the **Workspace Browser**, right-click the **Scorecard Name**, and then click **Save**.	**Scorecard Name**: EPM Scorecard

Table 5- Out-of-box PerformancePoint Normalization Algorithms

	Out-of-box PerformancePoint Normalization Algorithms[5]:
1.	Raw score = 100 * (Actual/Target)
2.	Threshold factor = (Upper threshold – Lower threshold) * No. of Bands
3.	Converted score = 0.01 * (Raw score – Lower threshold) / (Threshold factor)
4.	Band adjustment amount = (Number of bands from Worst) / No. of Bands
5.	Normalized score = Converted score + band adjustment amount

[5] See

PerformancePoint References for Walkthrough: Calculate normalized scores for KPIs for additional reading

Create an Analytic Chart

An analytic chart is an analytic report type that is a dynamic, visual representation of data displayed as an interactive line chart, bar chart, or pie chart.

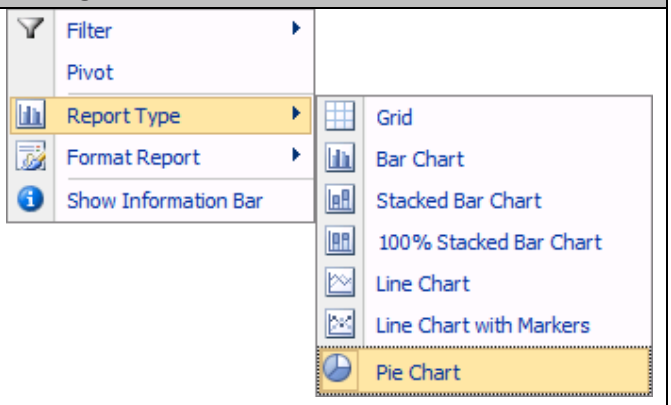
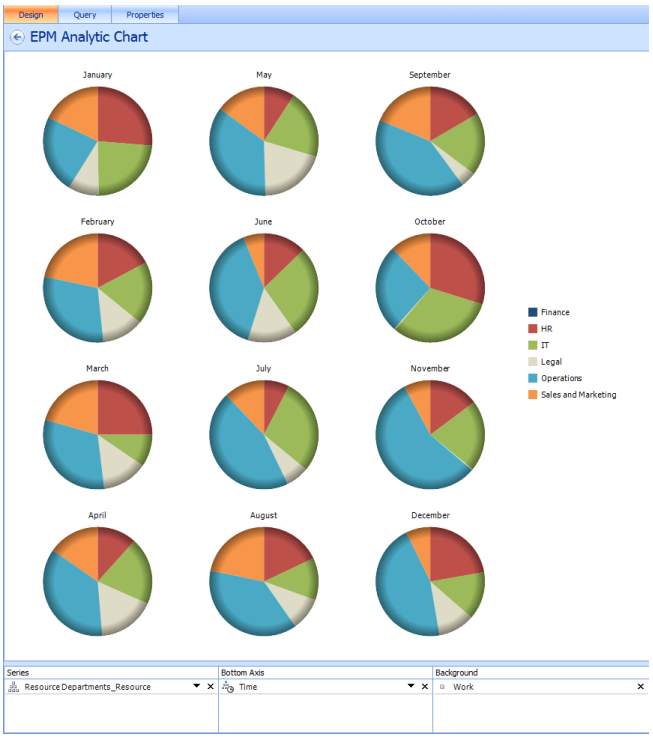
PerformancePoint analytic reports remain connected to the data, which means that their content is always up to date.

Typically, one or more analytic reports are included in the dashboard to enable users to easily view and explore data. Depending on how an analytic report is set up, users can use the report to perform these actions:

- Open a **Decomposition Tree** to see how a specific value can be broken down into its contributing members and discover trends across individual members. Note: Microsoft Silverlight 2 or Microsoft Silverlight 3 must be installed on the computer in order to use the Decomposition Tree.
- Apply value filters to display the top (or bottom) members in a group, or values that are in a given range.
- Use **Additional Actions**, which are defined in the Analysis Services cube.
- Sort values or chart legend items in ascending or descending order.
- Drill down or up to see lower or higher levels of detail.
- Filter out empty items, isolate an item, or remove an item from the report view.
- Pivot the report, or configure the view type and format.
- Show or hide information, such as measures or background information.
- Work with multiple pages of data. (This is useful when a query returns a large set of results.)

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content**.	
2.	On the ribbon, click the **Create** tab, and then click **Reports** | **Analytic Chart.**	
3.	From **Create an Analytic Chart** | **Select a Data Source** dialog | **Workspace** tab, find and click **Data Connection** for the intended **OLAP cube**, and then click **Finish**.	**OLAP cube**: EPM Portfolio Analyzer
4.	From **Workspace Browser**, type the name of your **New Report**.	**Report Name**: EPM Analytic Chart
5.	From the **Details** pane, drag **Measures**	**Measure**: Work

Step	Action	Settings, Notes and Comments
	and **Dimensions** to the **Analytic Chart** center pane **Series**, **Bottom Axis**, and **Background** areas.	**Area**: Background **Dimension**: Resource Departments_Resource **Area**: Series **Dimension**: Time **Area**: Bottom Axis
6.	Click the **Series Dimension** down-arrow.	**Series Dimension**: Resource Departments_Resource
7.	From **Select Members** dialog, clear **Default Member** and check all Department Members, and then click **OK**.	**Department Members**: • Finance • HR • IT • Legal • Operations • Sales and Marketing
8.	Click the **Bottom Axis Dimension** down-arrow.	**Bottom Axis Dimension**: Time
9.	From **Select Members** dialog, clear Default Member and expand Year 2010 > Quarters, selecting all months for 2010, and then click **OK**.	**Department Members**: • January • February • March • April • May • June • July • August • September • October • November • December

Step	Action	Settings, Notes and Comments
10.	Right-click anywhere on the **Analytic Chart** canvas outside of the bar graphs, and click **Report Type** > **Pie Chart**.	 **Figure 34- Analytic Grid and Chart Report Type Menu**  **Figure 35 - Work by Department Analytic Chart**
11.	From the **Workspace Browser**, right-click the **Report Name** and click **Save.**	**Report Name**: EPM Analytic Chart

To display data in your analytic report, you must put at least one item in each **Series** (or **Rows**) and **Bottom Axis** (or **Columns**) section. Placing an item in the **Background** section is optional.

You can use many combinations of measures, dimensions, and named sets. For example, you can place a named set in one section and a measure in another section. Or you can put one dimension hierarchy in one section and a different dimension hierarchy in another. You can also put measures in the **Background** section, or you can leave the **Background** section blank.

If you put a dimension in the **Background** section and select the **All** option in the list of members, make sure that you do not select individual dimension members, too. Otherwise, you might receive an error message. The error message indicates that there was an error running the data source query.

You can use the **Query** tab to specify or edit the custom Multidimensional Expressions (MDX query) that is used to display information. However, if you create an analytic chart by using the **Query** tab (and not the Design tab), dashboard users might be unable to drill up or down into the data.

Create an Analytic Grid

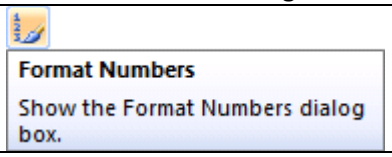
An analytic grid is an analytic report type that is a dynamic, visual representation of data displayed as a table which is called a grid.

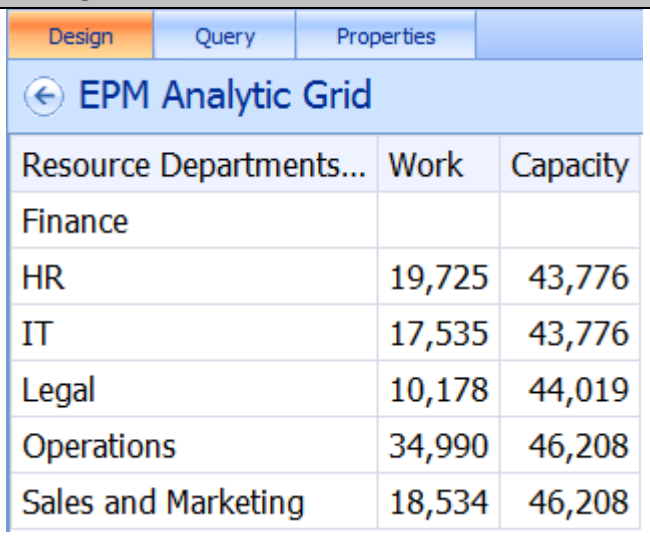
PerformancePoint analytic reports remain connected to the data, which means that their content is always up to date.

Typically, one or more analytic reports are included in the dashboard to enable users to easily view and explore data. Depending on how an analytic report is set up, users can use the report to perform these actions:

- Open a **Decomposition Tree** to see how a specific value can be broken down into its contributing members and discover trends across individual members. Note: Microsoft Silverlight 2 or Microsoft Silverlight 3 must be installed on the computer in order to use the Decomposition Tree.
- Apply value filters to display the top (or bottom) members in a group, or values that are in a given range.
- Use **Additional Actions**, which are defined in the Analysis Services cube.
- Sort values or chart legend items in ascending or descending order.
- Drill down or up to see lower or higher levels of detail.
- Filter out empty items, isolate an item, or remove an item from the report view.
- Pivot the report, or configure the view type and format.
- Show or hide information, such as measures or background information.
- Work with multiple pages of data. (This is useful when a query returns a large set of results.)
- Export information to Microsoft PowerPoint or Microsoft Excel.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Reports** | **Analytic Grid.**	
3.	From **Create an Analytic Grid Report** | **Select a Data Source** dialog | **Workspace** tab, find and click **Data Connection** for the intended **OLAP cube**, and then click **Finish**.	**OLAP cube**: EPM Portfolio Analyzer
4.	From **Workspace Browser**, type the name of your **New Report**.	**Report Name**: EPM Analytic Grid

Step	Action	Settings, Notes and Comments
5.	From the **Details** pane, drag **Measures** and **Dimensions** to the **Analytic Chart** center pane **Rows**, **Columns**, and **Background** areas.	**Measures**: Work, Capacity **Area**: Columns **Dimension**: Resource Departments_Resource **Area**: Rows
6.	Click the **Rows Dimension** down-arrow.	**Rows Dimension**: Resource Departments_Resource
7.	From the **Select Members** dialog, clear **Default Member** and check all **Department Members**, and then click **OK**.	**Department Members**: • Finance • HR • IT • Legal • Operations • Sales and Marketing
8.	From **Dashboard Designer** | **Edit** tab, click **Number | Format Numbers**.	
9.	From the **Format Numbers** dialog, select each **Measure** and select the number format as specified, and then click **OK**.	**Measures**: Work, Capacity **Format**: Number **Currency symbol**: $ (grayed out) **Decimals**: 0 **Negative numbers**: • Selected – Use negative sign • Unselected – Use parentheses **Show zero as**: <unspecified> • Check – User 1000 separator (,) **Additional text**: **Before**: <unspecified> **After**: <unspecified>

Step	Action	Settings, Notes and Comments
10.	From **Dashboard Designer** | **Edit** tab, change the **Font** size to 12.	 **Figure 36 - Work and Capacity by Department Analytic Grid**
11.	From the **Workspace Browser**, right-click the **Report Name** and click **Save.**	**Report Name**: EPM Analytic Grid

If you are creating an analytic grid that uses a PowerPivot data connection, make sure that you use the tabular layout option instead of the compact layout. Otherwise, dashboard users might get error messages when they attempt to use Value Filters on the report.

To apply a tabular layout to the grid, on the **Edit** tab, in the **View** group, use the **Layout** menu to select **Tabular Layout**.

Create a Strategy Map

The strategy map uses a scorecard as its data source and a Visio diagram as its visual display structure. When you create and configure a strategy map, you connect individual shapes in a Microsoft Visio diagram to KPIs in a scorecard. The color of each shape indicates whether performance is on or off target for that particular item.

The Microsoft Visio version installed must be compatible with PerformancePoint Dashboard Designer.

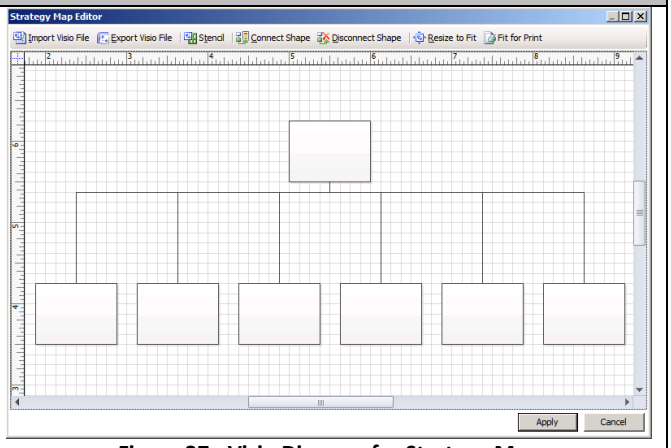
- The 64-bit edition of Dashboard Designer is compatible with the 64-bit edition of Microsoft Visio 2010
- The 32-bit edition of Dashboard Designer is compatible with the 32-bit edition of either Microsoft Office Visio 2007 or Microsoft Visio 2010

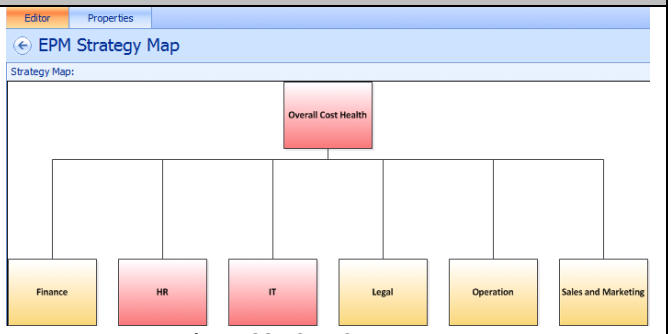
Before you begin to create your strategy map, make sure that the following items have been created:

- A diagram that was created by using Microsoft Visio 2010 or Microsoft Office Visio 2007. The diagram cannot consist of complex shapes (groups or sets of other shapes).

- A scorecard that was created by using Dashboard Designer

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Reports** | **Strategy Map.**	
3.	From **Create a Strategy Map Report** | **Select a Scorecard** dialog | **Workspace** tab, find and select the intended **Scorecard**, and then click **Finish**.	**Scorecard**: EPM Scorecard
4.	From **Workspace Browser**, type the name of your **New Report**.	**Report Name**: EPM Strategy Map
5.	From **Dashboard Designer** | **Edit** tab while in the **Strategy Map Editor** tab, click **Report Editor** | **Edit Strategy Map**.	
6.	From the **Strategy Map Editor** dialog, click **Import Visio File**.	
7.	From the **Open** dialog, find the intended **Visio file**, and then click	**Visio file**: EPM.vsdx

Step	Action	Settings, Notes and Comments
	Open.	 **Figure 37 - Visio Diagram for Strategy Map** *Note: You must create this Visio file separately. This example uses the Basic Flowchart stencil with 7 rectangle shapes that will contain impressions of the 7 Cost KPIs – Overall, Finance, HR, IT, Legal, Operations, Sales and Marketing*
8.	In the Visio diagram, click the top box, and then click **Strategy Map Editor** | **Connect Shape**.	
9.	From the **Connect Shape** dialog, click the **Overall** | **Cost** cell, clear **Show KPI names in shape text**, and then click **Connect**. Double-click the box and enter the desired text. Repeat this step for each department, starting with the left-most constituent box, moving left to right.	**Top box**: Overall Cost Health **Constituent boxes** (left to right): • Finance • HR • IT • Legal • Operations • Sales and Marketing *Note: The box color takes on the background color of the KPI it is connected to as specified in the EPM Indicator background color specification*

Step	Action	Settings, Notes and Comments
10.	From the **Strategy Map Editor** dialog, click **Apply**.	 **Figure 38 - Cost Strategy Map**
11.	From **Dashboard Designer** | **Edit** tab while in the Strategy Map's **Editor** tab, click **Report Editor** | **Settings**.	
12.	From the **Strategy Map Options** dialog, check **Show toolbar**, and then click **OK**.	
13.	From the **Workspace Browser**, right-click the **Report Name**, and then click **Save.**	**Report Name**: EPM Strategy Map

Create a Reporting Services Report

In Dashboard Designer, you do not actually create a SQL Server Reporting Services report. Instead, you create a PerformancePoint Web Part to display an existing Reporting Services report. Therefore these sets of instructions only refer to the PerformancePoint steps. To information about creatin an SSRS report, see the SSRS-specific documentation. The example Risk Matrix SSRS report has source code provided as-is in the Appendix – Risk Matrix Source Code section.

Before you start, make sure that you have collected the following information:

- The full name of the report that you want to use.
- The server location where the Reporting Services report is stored.
- The server mode (SharePoint Integrated or Report Center) that you will use for the report and whether Reporting Services is configured to use the Trusted Account authentication mode in SharePoint Server 2010.

  Report Center mode in Dashboard Designer corresponds to **Native** mode in Reporting Services. **SharePoint Integrated** mode in Dashboard Designer corresponds to **SharePoint Integrated** mode in the Reporting Services report server.

  To view Reporting Services configuration settings in SharePoint Server 2010, in Central Administration, under **General Application Settings**, click **Reporting Services Integration**.

- Any parameters that might exist in the Reporting Services report and information about how those parameters are configured. (You would typically need this information to connect a PerformancePoint dashboard filter to the Reporting Services report.)

- Also, make sure that you and the dashboard users have the necessary permissions to view the report.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Reports** | **Reporting Services.**	
3.	From **Workspace Browser**, type the	**Report Name**: EPM Reporting Services

Step	Action	Settings, Notes and Comments
	name of your **New Report**.	
4.	From the **Editor** tab, set **Report Settings** as specified on the right. From **Report parameters**, click **Edit** to temporarily select a **Department Value**, and then click **Preview** to preview a report. Revert **Department Value** back to <Default Value>.	**Server mode**: SharePoint Integrated **Report Server URL**: http://project.contoso.com/reportserver **Report URL**: http://project.contoso.com/PWA/Reporting Services Report/Risk Matrix.rdl • Check – Show toolbar • Uncheck – Show parameters • Uncheck – Show docmap **Zoom**: 100 (default) **Format**: HTML 4.0 (default) **Section**: <unspecified> **DocMap ID**: <unspecified> **Report parameters**: • **Name**: Department • **Value**: <Default Value>

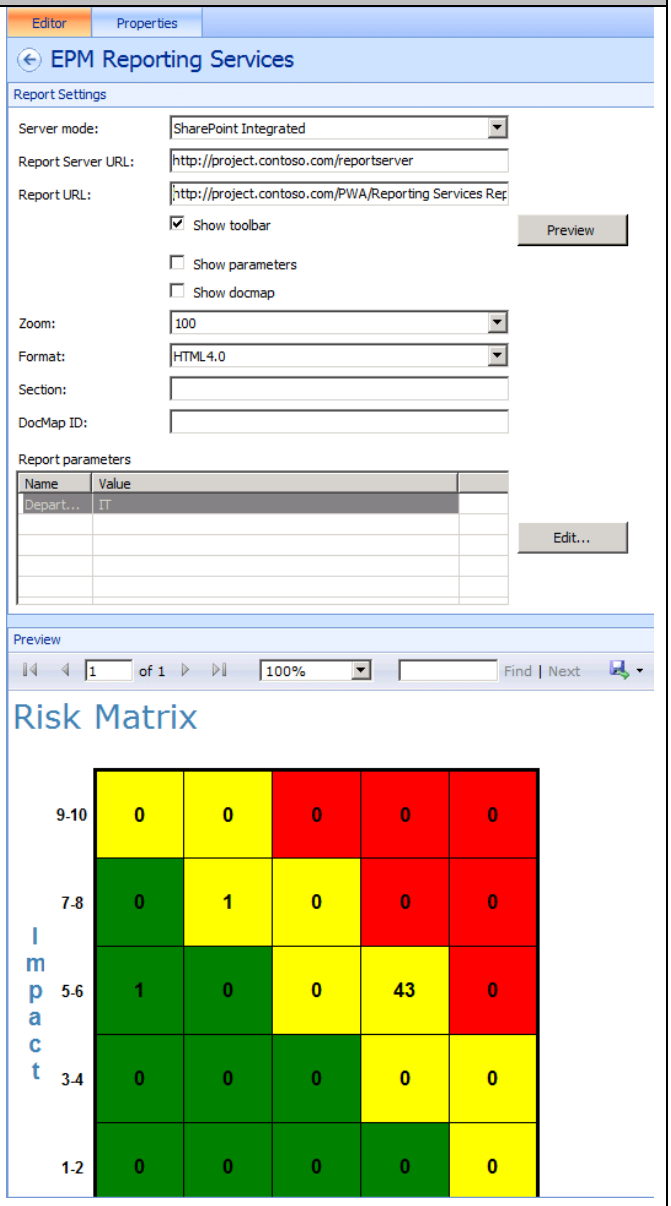
Step	Action	Settings, Notes and Comments
		 **Figure 39 - Risk Matrix Reporting Services Report**
5.	From the **Workspace Browser**, right-click the **Report Name**, and then click **Save.**	**Report Name**: EPM Reporting Services

Table 6 - Reporting Services Report Settings

Item	Description
Show toolbar	Select this check box to display the Reporting Services toolbar.
Show parameters	Select this check box to display the filters that are specific to the report.
Show docmap	Select this check box to include a document map in a separate pane in your report view. *Note: Not all Reporting Services reports have document maps. The document map is created by using either SQL Server Reporting Services Report Builder or Microsoft Business Intelligence Development Studio.*
Zoom	Select a value in this list to set the viewing size of the report.
Format	Select a value in this list to specify how you want your report to appear in the dashboard.
Section	In this box, type the page number of the page that you want to display. For example, suppose that the Reporting Services report contains three pages, and the information that you want to display is located on page three. In this case, you would type **3** in the **Section** box in Dashboard Designer.
DocMap ID	Whether you use this option depends on the version of SQL Server Reporting Services that was used to create the Reporting Services report. 1.1. If SQL Server 2005 Reporting Services was used, select this option to display a specific page or an item in the Reporting Services report. 1.2. If SQL Server 2008 Reporting Services was used, do not use this option. It does not work in the current version of PerformancePoint Services.

After you have created and saved your report, you can add it to a dashboard page.

Create an Excel Services Report

In Dashboard Designer, you do not actually create an Excel Services report. Instead, you create a PerformancePoint Web Part to display an existing Excel Services report.

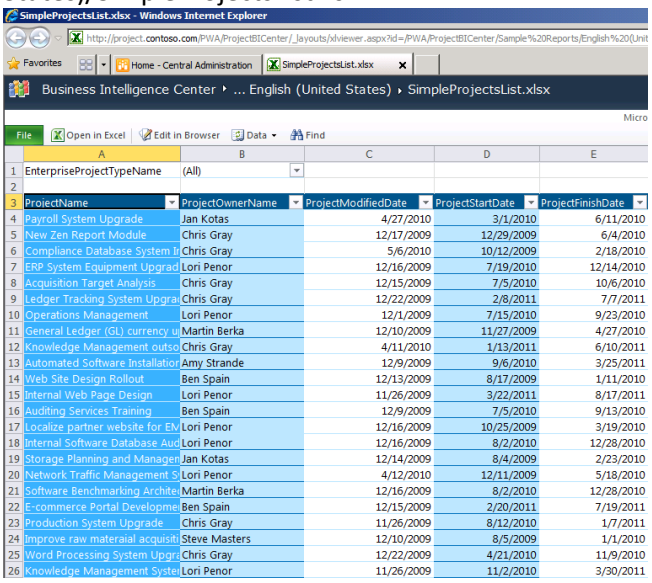
Before you start, make sure that you have collected the following information:

- The name of the report that you want to use
- The Microsoft SharePoint Server location (including the SharePoint site and document library) where the Excel Services report is stored
- Any named items that might exist in the Excel Services report
- Any parameters that might exist in the Excel Services report and information about how those parameters are configured. (You would typically need this information to connect a PerformancePoint dashboard filter to the Excel Services report.)

  If the Excel Services workbook is stored in a different server farm than the one that you are using for Dashboard Designer, parameters in the Excel workbook will not be available in Dashboard Designer.

Also make sure that you and the dashboard users have the necessary permissions to view the report.

Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content**.	
2.	On the ribbon, click the **Create** tab, and then click **Reports** | **Other Reports.**	
3.	From **Select a Report Template** | **Template**, click **Excel Services**, and then click **OK**.	
4.	From **Workspace Browser**, type the name of your **New Report**.	**Report Name**: EPM Excel Services
5.	From the **Editor** tab, set **Report Settings** as specified on the right, and	**SharePoint site**: http://project.contoso.com/PWA/ProjectBICenter

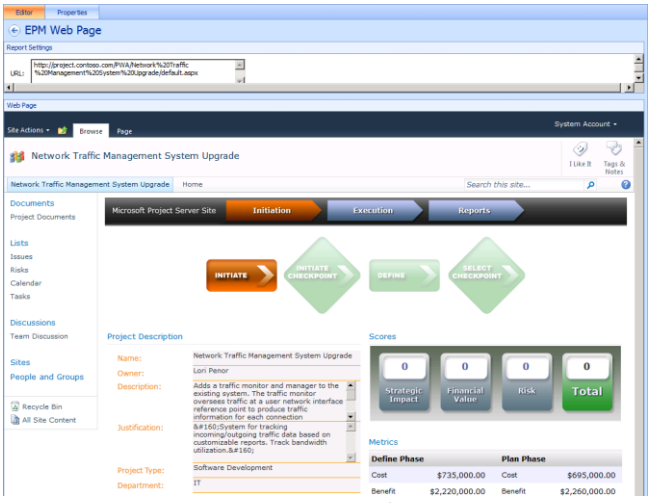
Step	Action	Settings, Notes and Comments
	then click **View** to view a report.	**Document Library**: Sample Reports **Excel workbook**: English (United States)/SimpleProjectsList.xslx  **Figure 40 - Simple Project List Excel Services Report**
6.	Back in the **Workspace Browser**, right-click the **Report Name**, and then click **Save**.	**Report Name**: EPM Excel Services

After you have created and saved the report, you can configure it, or you can add it to a dashboard page.

Create a Web Page Report

In Dashboard Designer, when you create a Web Page report, you create a PerformancePoint Web Part to display an existing Web site. You do not actually create the Web site by using Dashboard Designer.

Some kinds of pages might not work with the Web Page report type. For example, pages that store cookies might not function correctly in a PerformancePoint Web Part. Make sure that the Web site that you want to use will work with this report type. For more information, contact a SharePoint Server administrator.

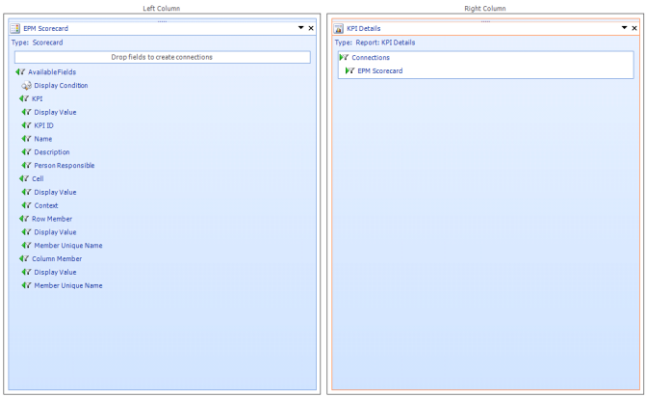
Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content**.	
2.	On the ribbon, click the **Create** tab, and then click **Reports** | **Other Reports.**	
3.	From **Select a Report Template** | **Template**, click **Web Page**, and then click **OK**.	
4.	From **Workspace Browser**, type the name of your **New Report**.	**Report Name**: EPM Web Page
5.	From the **Editor** tab, specify the **URL**.	**URL**: http://project.contoso.com/PWA/Network%20Traffic%20Management%20System%20Upgrade/default.aspx  **Figure 41 - Project Site Web Page Report**

Step	Action	Settings, Notes and Comments
6.	Back in the **Workspace Browser**, right-click the **Report Name**, and then click **Save.**	**Report Name**: EPM Web Page

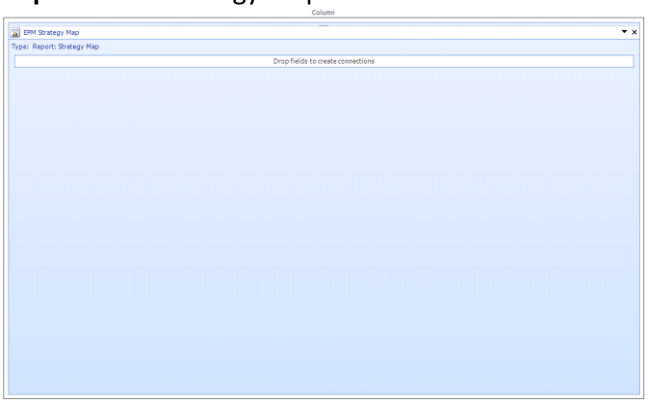
Create a Dashboard: "Putting it all together"

When you and other dashboard authors have created one or more views to display in a dashboard, you are ready to create dashboard pages to contain those dashboard items.

Create an Overall Scorecard Page

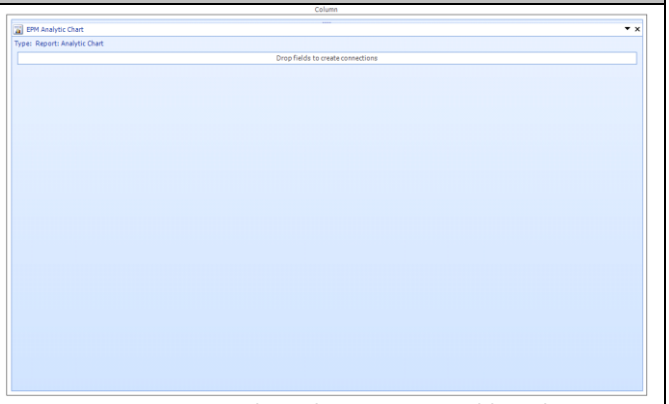
Step	Action	Settings, Notes and Comments
1.	From **Dashboard Designer** | **Workspace Browser**, click **PerformancePoint Content.**	
2.	On the ribbon, click the **Create** tab, and then click **Dashboard Items** | **Dashboard.**	
3.	From **Select a Dashboard Page Template** | **Template**, click **2 Columns**, and then click **OK**.	
4.	From **Workspace Browser**, type the name of your **New Dashboard**.	**Dashboard**: EPM Dashboard
5.	From the **Editor** tab, change the name of **Page 1**.	**Page 1**: Overall Scorecard
6.	From the **Details** pane, drag a **Scorecard** to the **Bottom Row**, and drag a **Report** to the **Top Row**.	**Scorecard**: EPM Scorecard **Report**: KPI Details
7.	Click the **Report** down-arrow, and then click **Create Connection**.	**Report**: EPM Details
8.	From the **Connection** dialog | **Items** tab, set **Get values from:** to the **Left Column**.	Left Column – (1) EPM Scorecard
9.	From **Connection dialog** | **Values** tab, set **Connect to**: Cell and **Source value:** to **Cell: Context**, and then click **OK**.	 **Figure 42 - Scorecard Zone in Dashboard**

Create Cost Strategy Map Page

Step	Action	Settings
1.	From the New Dashboard's **Editor** tab | **Pages**, click **New Page**.	**Dashboard**: EPM Dashboard
2.	Select a **Dashboard Page Template** | **Template**, click **1 Zone**, and then click **OK**.	
3.	From the **Editor** tab, change the name of **Page 1**.	**Page 1**: Cost Strategy Map
4.	From the **Details** pane, drag a **Report** to the **Column**	**Report**: EPM Strategy Map  **Figure 43 - Strategy Map Zone in Dashboard**

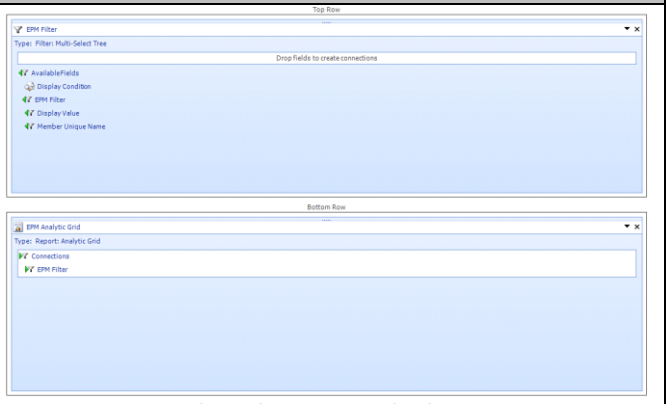
Create Work Forecast by Month Page

Step	Action	Settings, Notes and Comments
1.	From the New Dashboard's **Editor** tab | **Pages**, click **New Page**.	**Dashboard**: EPM Dashboard
2.	Select a **Dashboard Page Template** | **Template**, click **1 Zone**, and then click **OK**.	
3.	From the **Editor** tab, change the name of **Page 1**.	**Page 1**: Work Forecast By Month
4.	From the **Details** pane, drag a **Report** to the **Column**.	**Report**: EPM Analytic Chart

Step	Action	Settings, Notes and Comments
		 **Figure 44 - Analytic Chart Zone in Dashboard**

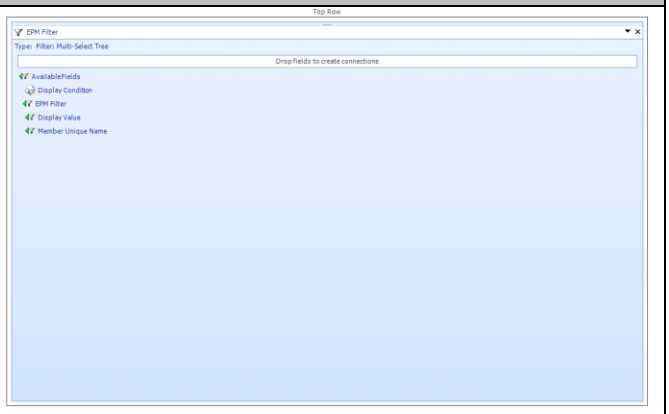
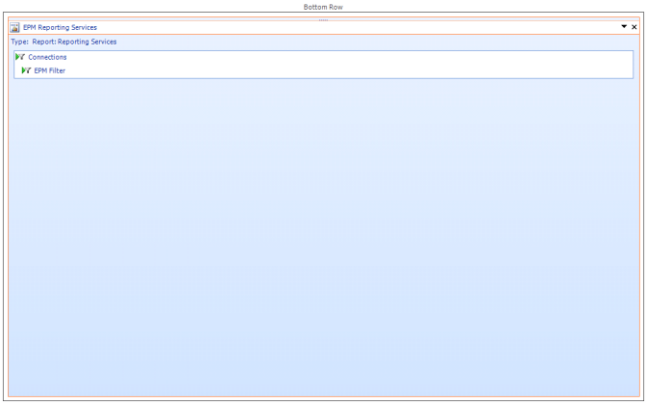
Create Work and Capacity Page

Step	Action	Settings, Notes and Comments
1.	From the New Dashboard's **Editor** tab | **Pages**, click **New Page**.	**Dashboard**: EPM Dashboard
2.	Select a **Dashboard Page Template** | **Template**, click **2 Rows**, and then click **OK**.	
3.	From the **Editor** tab, change the name of **Page 1**.	**Page 1**: Work and Capacity
4.	From the **Details** pane, drag a **Report** to the **Bottom Row** and drag a **Filter** to the **Top Row**.	**Report**: EPM Analytic Grid **Filter**: EPM Filter
5.	Click the **Report** down-arrow, and then click **Create Connection**.	**Report**: EPM Analytic Grid
6.	From the **Connection** dialog | **Items** tab, set **Get values from:** to the **Top Row**.	Top Row – (1) EPM Filter
7.	From **Connection dialog** | **Values** tab, set **Connect to**: Resource Departments_Resource and **Source value:** to **Member Unique Name**, and then click **OK**.	

Step	Action	Settings, Notes and Comments
		 **Figure 45 - Analytic Chart Zone with Filter Connection in Dashboard**

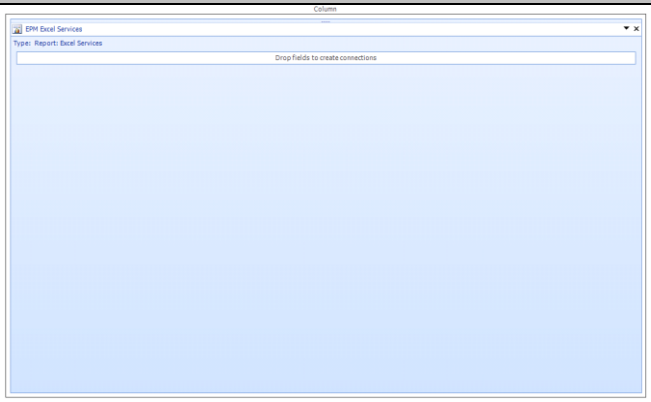
Create Risk Heat Map Page

Step	Action	Settings, Notes and Comments
1.	From the New Dashboard's **Editor** tab | **Pages**, click **New Page**.	**Dashboard**: EPM Dashboard
2.	Select a **Dashboard Page Template** | **Template**, click **2 Rows**, and then click **OK**.	
3.	From the **Editor** tab, change the name of **Page 1**.	**Page 1**: Risk Heat Map
4.	From the **Details** pane, drag a **Report** to the **Bottom Row** and drag a **Filter** to the **Top Row**.	**Report**: EPM Reporting Services **Filter**: EPM Filter
5.	Click the **Report** down-arrow and click **Create Connection**.	**Report**: EPM Reporting Services
6.	From the **Connection** dialog | **Items** tab, set **Get values from:** to the **Top Row**.	Top Row – (1) EPM Filter
7.	From **Connection dialog** | **Values** tab, set **Connect to**: Department and **Source value:** to **Display Value**, and then click **OK**.	
8.	Click the **Report** down-arrow and click **Edit Item**.	**Report**: EPM Reporting Services
9.	From **Item Settings**, click the **Size** tab, and then from **Height** select **Specify height** and **Specify pixels**, and then click **OK**.	**Pixels**: 1000

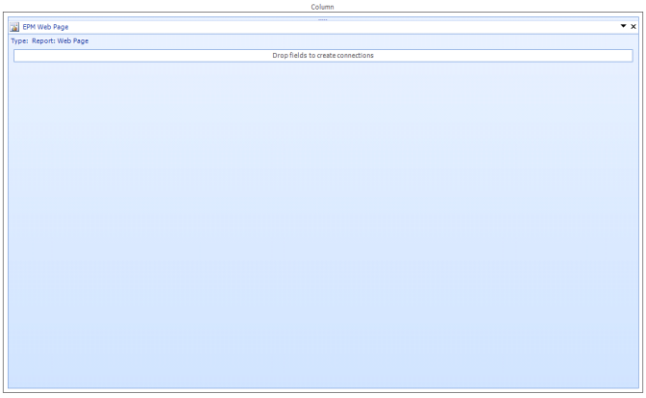
Step	Action	Settings, Notes and Comments
		 **Figure 46 - Department Filter Zone for Reporting Services Report in Dashboard**  **Figure 47 - Reporting Services Report Zone in Dashboard**

Create Sample Excel Report Page

Step	Action	Settings, Notes and Comments
1.	From the New Dashboard's **Editor** tab | **Pages**, click **New Page**.	**Dashboard**: EPM Dashboard
2.	Select a **Dashboard Page Template** | **Template**, click **1 Zone**, and then click **OK**.	
3.	From the **Editor** tab, change the name of **Page 1**.	**Page 1**: Sample Excel Report
4.	From the **Details** pane, drag a **Report** to the **Column**.	**Report**: EPM Excel Services

Step	Action	Settings, Notes and Comments
		 **Figure 48 - Excel Services Report Zone in Dashboard**

Create Sample Web Page

Step	Action	Settings, Notes and Comments
1.	From the New Dashboard's **Editor** tab | **Pages**, click **New Page**.	**Dashboard**: EPM Dashboard
2.	Select a **Dashboard Page Template** | **Template**, click **1 Zone**, and then click **OK**.	
3.	From the **Editor** tab, change the name of **Page 1**.	**Page 1**: Sample Web Page
4.	From the **Details** pane, drag a **Report** to the **Column**.	**Report**: EPM Web Page  **Figure 49 - Web Page Report Zone in Dashboard**
5.	Back in the **Workspace Browser**, right-click the **Dashboard**, and then click **Save**.	**Dashboard**: EPM Dashboard

Deploy the EPM Dashboard

Step	Action	Settings, Notes and Comments
6.	From the **Workspace Browser**, right-click the **Dashboard**, and then click **Deploy to SharePoint**.	**Dashboard**: EPM Dashboard
7.	From the **Deploy To** dialog, find and select the intended **Folder**, specify a **Master Page**, check **Include page list for navigation**, and then click **OK**.	**Folder**: Business Intelligence Center\Dashboards **Master Page**: v4 • Check – Include page list for navigation *The Deploy to SharePoint Site dialog will initiate and progress. Once completed the EPM Dashboard will launch.*
8.	Click the **File** button, and then click **Save All**.	**Workspace Name**: EPM.ddwx

The Deployed EPM Dashboard

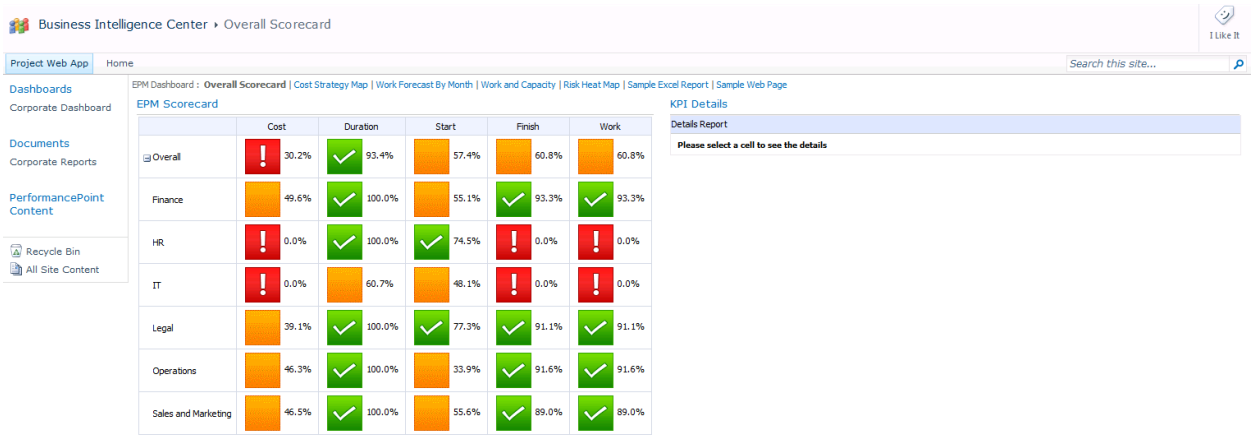


Figure 50 - Overall Scorecard Page

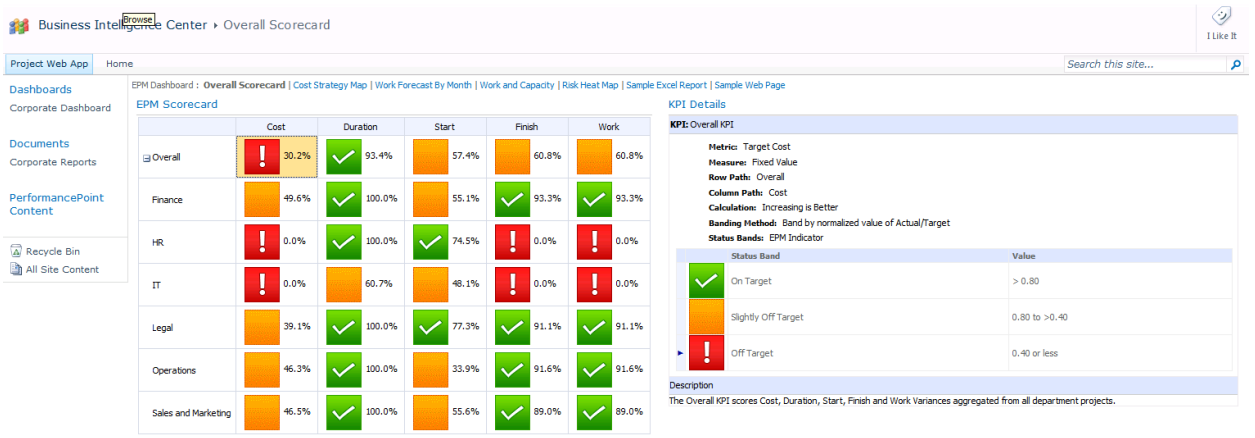


Figure 51 - Overall Scorecard Page with KPI Details

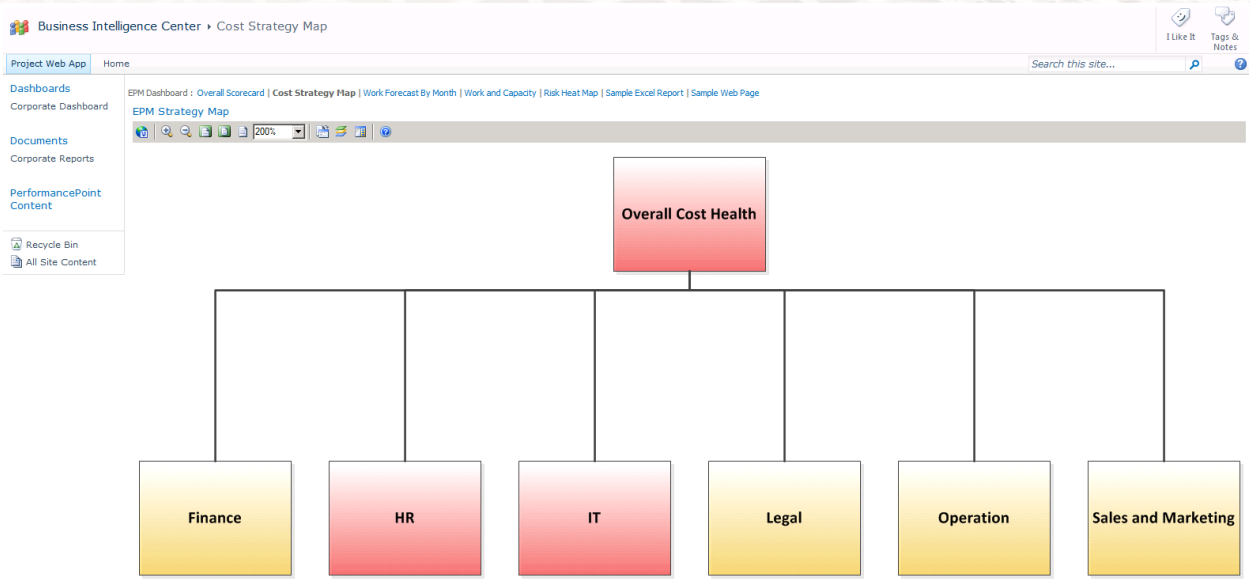


Figure 52 - Cost Strategy Map Page

Figure 53 - Work Forecast by Month Page

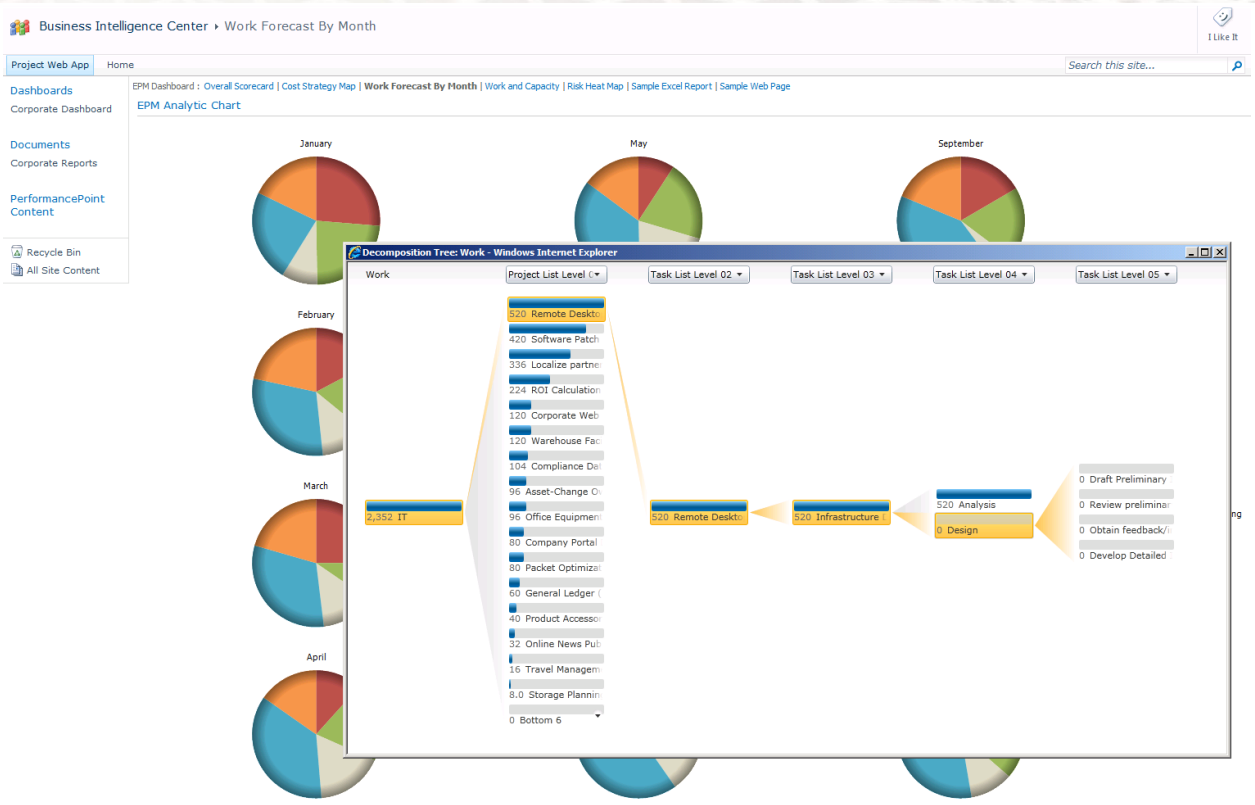
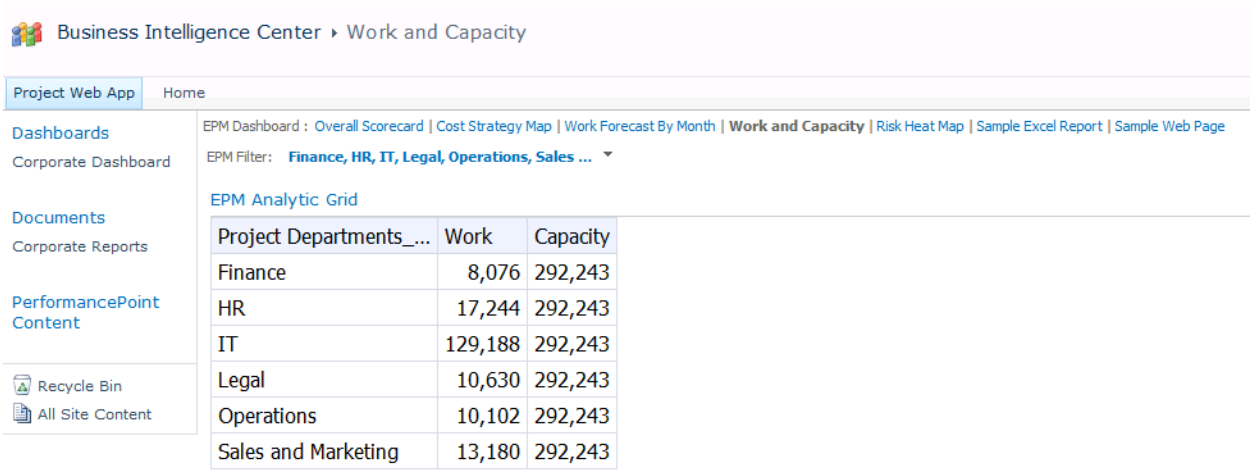


Figure 54 - Work Forecast by Month Page with Decomposition Tree



Project Departments_...	Work	Capacity
Finance	8,076	292,243
HR	17,244	292,243
IT	129,188	292,243
Legal	10,630	292,243
Operations	10,102	292,243
Sales and Marketing	13,180	292,243

Figure 55 - Work and Capacity Page

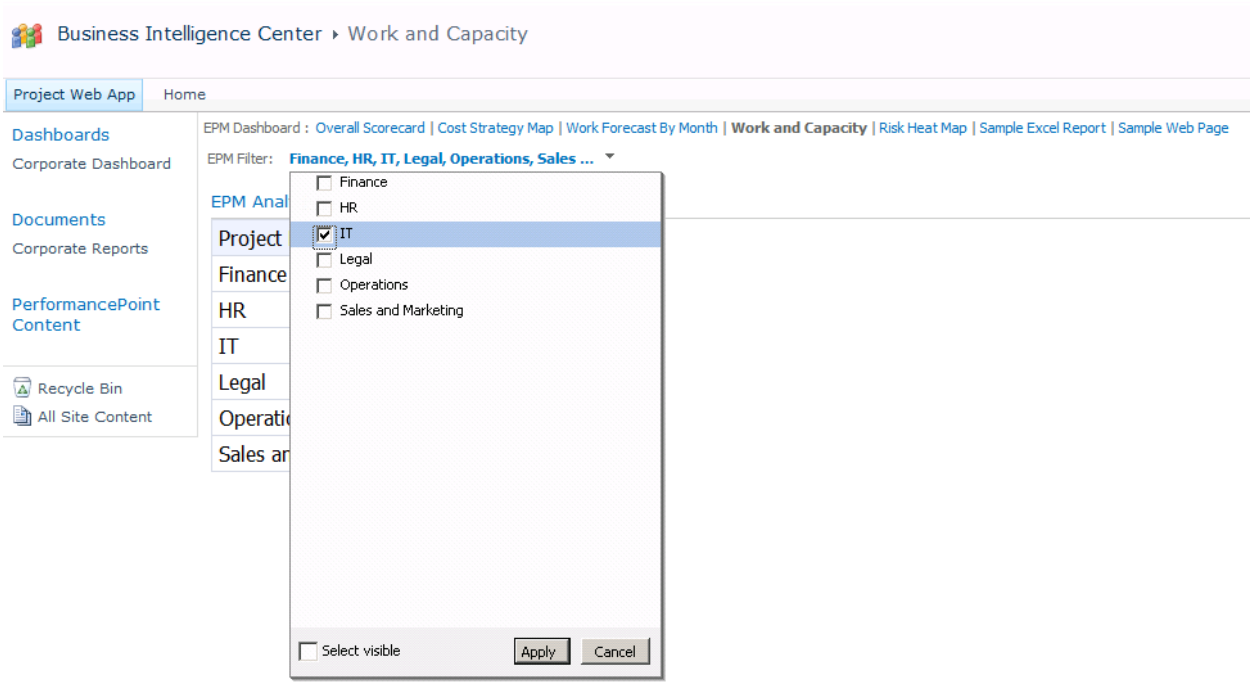


Figure 56 - Work and Capacity Page with Department Filter

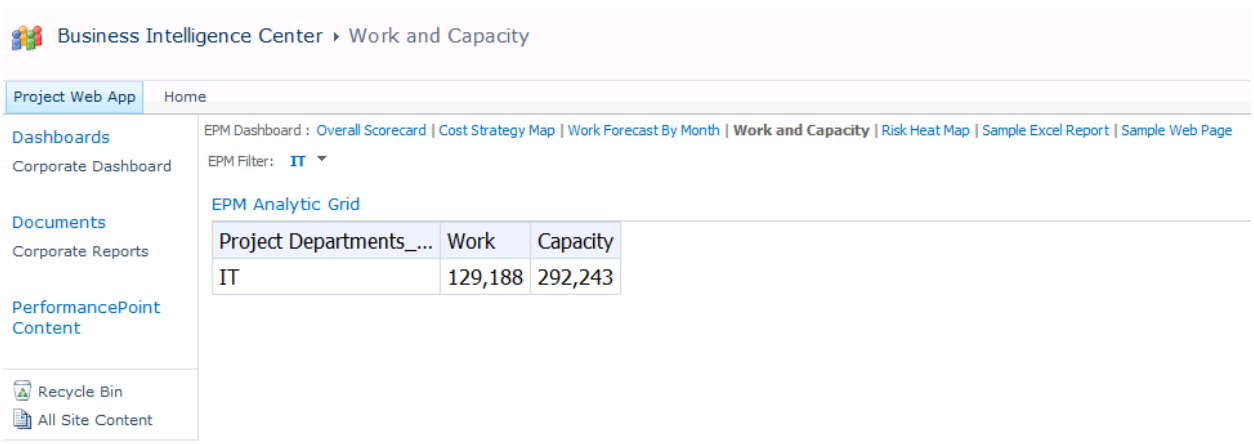


Figure 57 - Work and Capacity Page filtered by IT Department

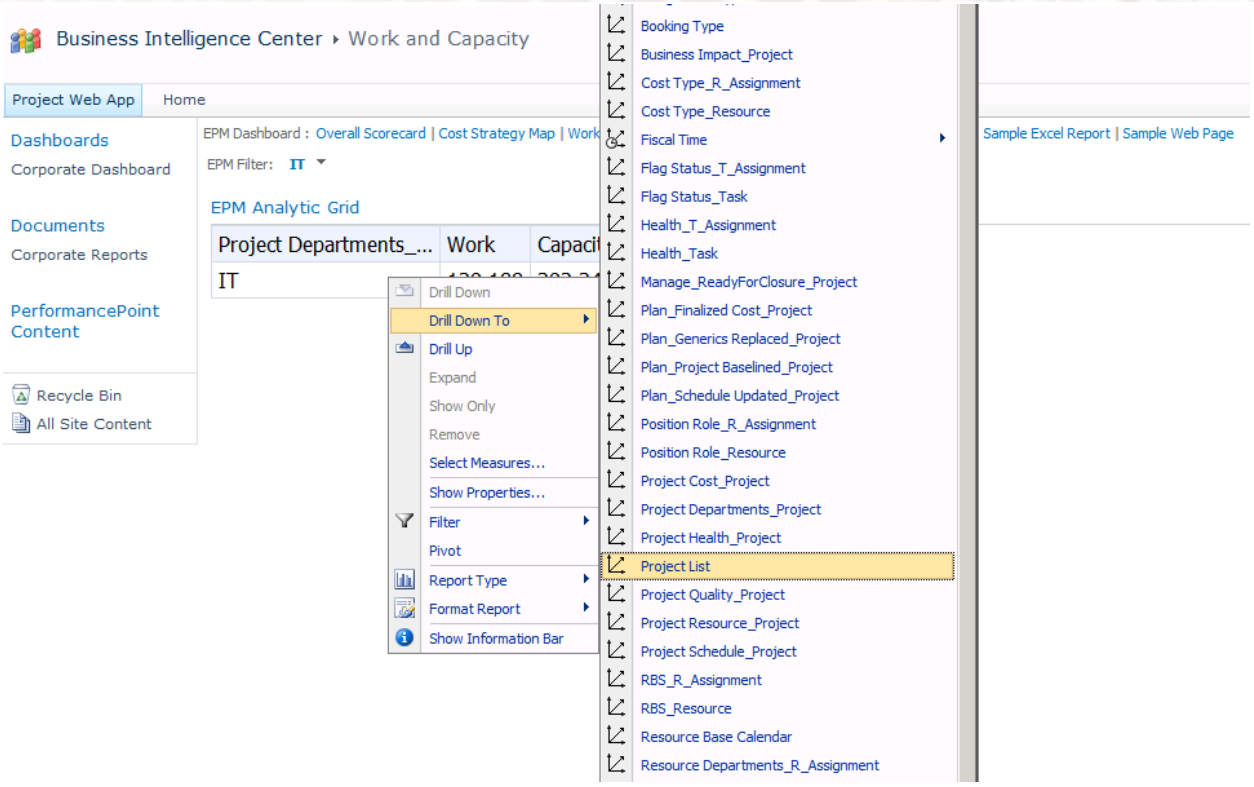
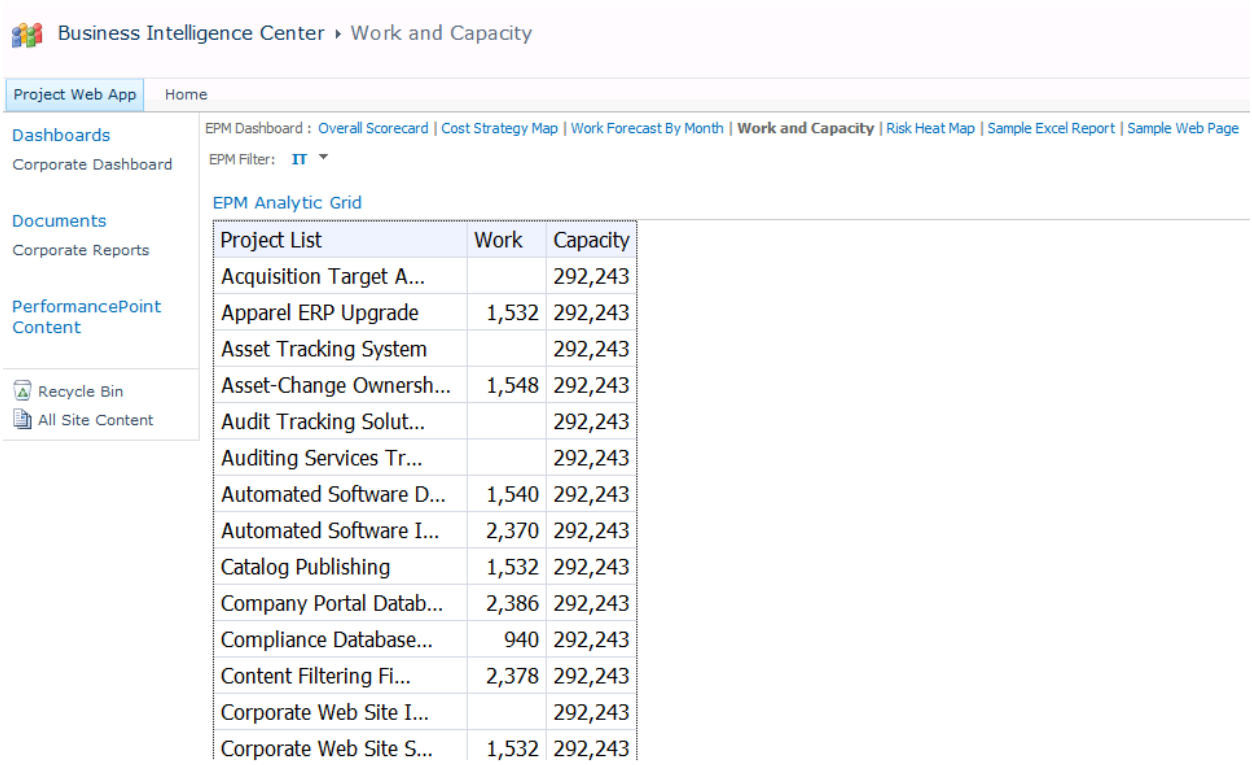


Figure 58 - Work and Capacity Page with Drilldown



Project List	Work	Capacity
Acquisition Target A...		292,243
Apparel ERP Upgrade	1,532	292,243
Asset Tracking System		292,243
Asset-Change Ownersh...	1,548	292,243
Audit Tracking Solut...		292,243
Auditing Services Tr...		292,243
Automated Software D...	1,540	292,243
Automated Software I...	2,370	292,243
Catalog Publishing	1,532	292,243
Company Portal Datab...	2,386	292,243
Compliance Database...	940	292,243
Content Filtering Fi...	2,378	292,243
Corporate Web Site I...		292,243
Corporate Web Site S...	1,532	292,243

Figure 59 - Work and Capacity Page drilled down to IT Department Projects

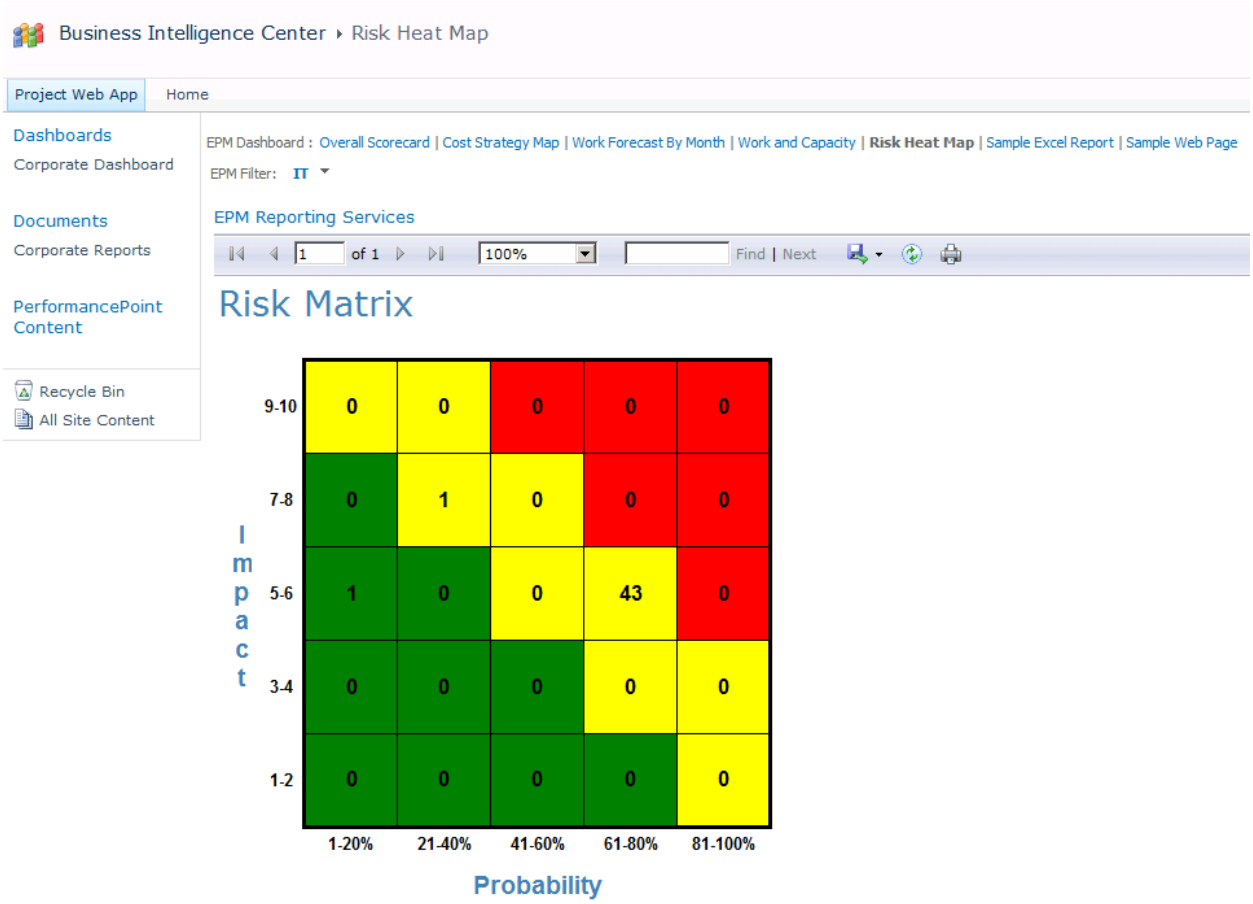
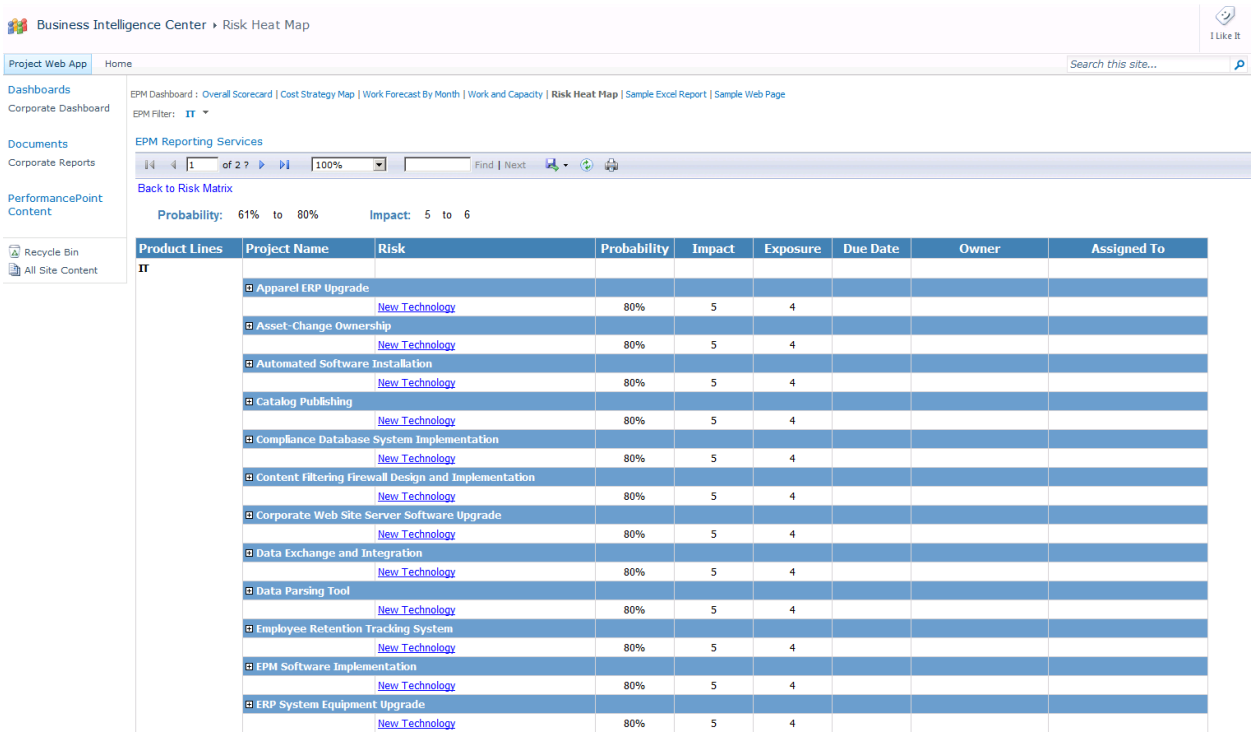


Figure 60 - Risk Heat Map Page drilled down to IT Department



Product Lines	Project Name	Risk	Probability	Impact	Exposure	Due Date	Owner	Assigned To
IT								
	⊞ Apparel ERP Upgrade							
		New Technology	80%	5	4			
	⊞ Asset-Change Ownership							
		New Technology	80%	5	4			
	⊞ Automated Software Installation							
		New Technology	80%	5	4			
	⊞ Catalog Publishing							
		New Technology	80%	5	4			
	⊞ Compliance Database System Implementation							
		New Technology	80%	5	4			
	⊞ Content Filtering Firewall Design and Implementation							
		New Technology	80%	5	4			
	⊞ Corporate Web Site Server Software Upgrade							
		New Technology	80%	5	4			
	⊞ Data Exchange and Integration							
		New Technology	80%	5	4			
	⊞ Data Parsing Tool							
		New Technology	80%	5	4			
	⊞ Employee Retention Tracking System							
		New Technology	80%	5	4			
	⊞ EPM Software Implementation							
		New Technology	80%	5	4			
	⊞ ERP System Equipment Upgrade							
		New Technology	80%	5	4			

Figure 61 - Risk Heat Map drilled down to IT Department Risks

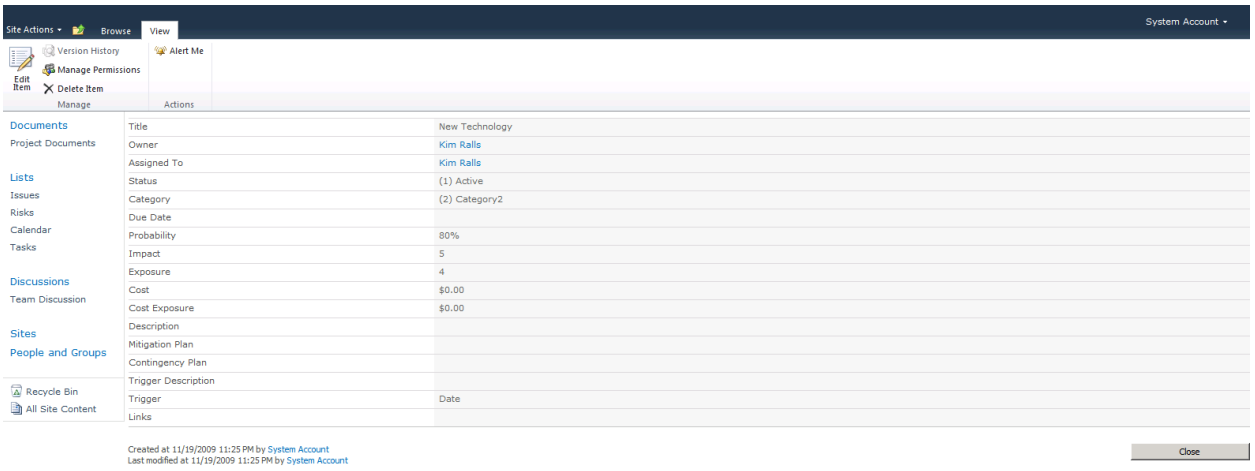


Figure 62 - Risk Heat Map drilled down to single IT Risk Item

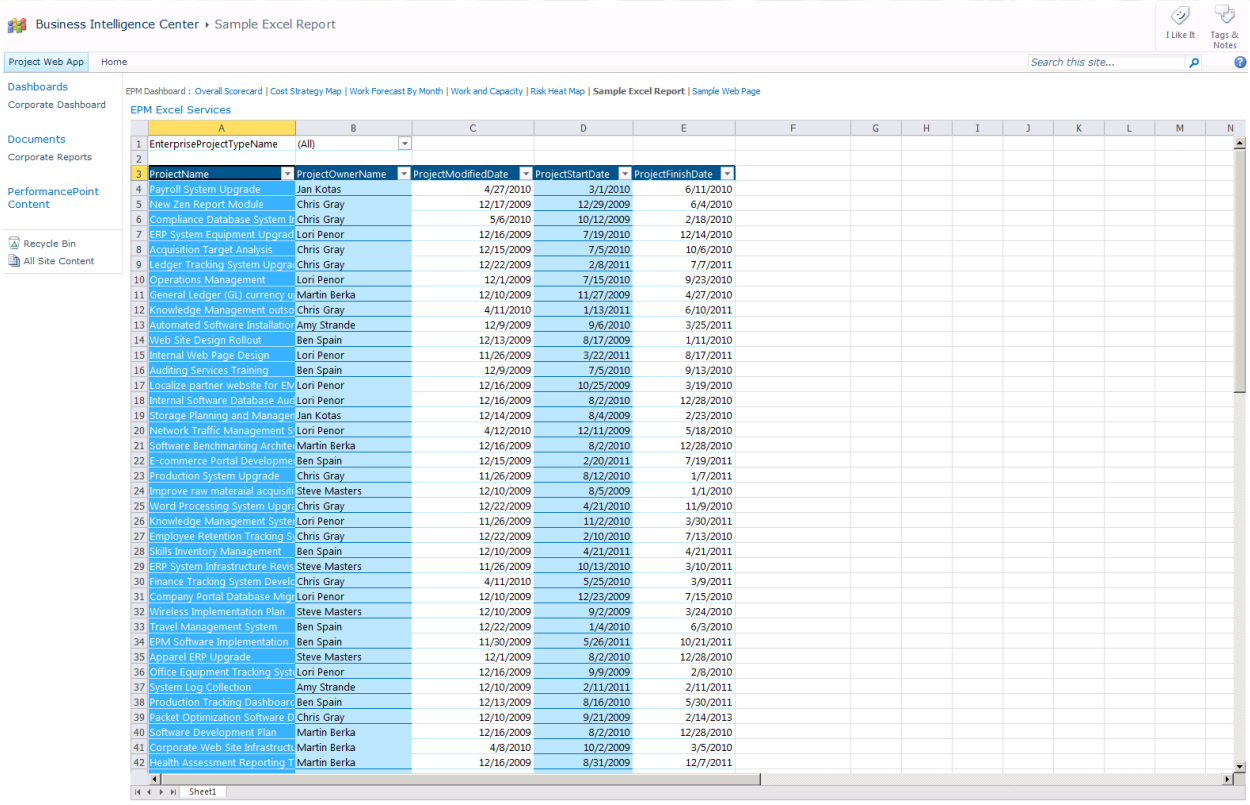


Figure 63 - Simple Project List Page

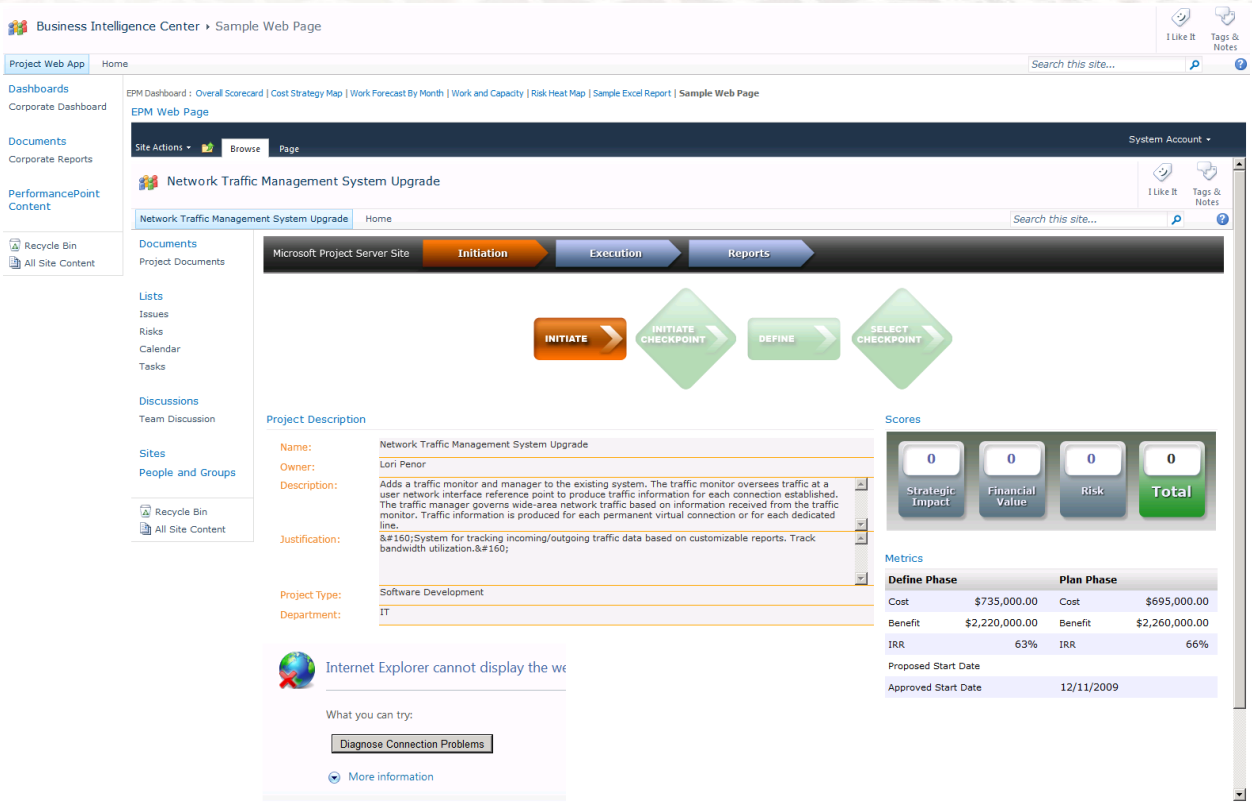


Figure 64 - Project Subsite Web Page

Security

In PerformancePoint Services in Microsoft SharePoint Server 2010, the objects that are stored in lists and document libraries are secured by the Microsoft SharePoint Server 2010 security model. On top of that model, PerformancePoint Services adds product features to the basic SharePoint Server 2010 framework to help make data sources and dashboard content more secure and protected from unwarranted access. Even though PerformancePoint Services has a dependency on the SharePoint Server 2010 security model, there are still special security considerations to consider and therefore plan and manage. All service-based security settings are managed within the SharePoint Server Central Administration Web site to make it easier to manage shared resources and user access.

Assumption

The following security specifications are to be applied by a SharePoint farm administrator who has full understanding of the farm's security architecture.

Trusted locations

In PerformancePoint Services, data source connections are contained in document libraries and data content (KPIs, filters, scorecards, and so on) is contained in document lists. In order to help secure the content, and to prevent users from running queries against data sources if the objects in the query are not trusted, the lists and libraries must be established as "trusted" locations. The farm administrator has the option to have all locations in the farm set as "trusted" or opt to identify specific locations to trust. Because of the ability to easily define the location in the farm to be secured, the farm administrator is freed from having to help secure the whole farm.

Trusted locations provide an additional layer of security that restricts query execution of data sources or of any object that depends on a data source that is not in a trusted location. The document library or any parent object up to the web application can be defined as trusted. In PerformancePoint Services, the configuration of trusted location settings is managed centrally through Central Administration. Configuration can also be managed by using Windows PowerShell 2.0 cmdlets. As you plan the security of PerformancePoint Services, consider if you want or have to secure your whole web application or to more tightly manage the location of secure data.

For example: Locations inside a farm that are independently marked as "trusted" have the following SharePoint Server 2010 hierarchy for either data content or data sources:

1. Disable the use of Trusted Locations for either data sources or content for the whole farm.

2. Trust lists or document libraries in the web application.

3. Trust lists or document libraries in a site collection including any child sites.

4. Trust lists or document libraries in a site.

5. Trust a single list or document library in the farm.

When verifying whether a location is trusted, the server will check whether Trusted Locations is enabled. If that property is enabled, the server will check the list of trusted locations starting at the site collection and continuing with each lower level of the hierarchy to verify that the content is trusted.

Items that do not use a data source do not have to be in a trusted location to be rendered. This includes Web pages, static KPIs, dashboards, and indicator icons.

Trusted data source locations cannot be defined on a list and Trusted content locations cannot be defined on a document library.

Trusted data content libraries

Trusted data content libraries are SharePoint Server 2010 document libraries that contain PerformancePoint Services data connection (.ppsdc) files. The .ppsdc files are used to centrally manage connections to data sources. These include SQL Server databases, OLAP cubes, relational databases, and Excel Services spreadsheets.

The data sources are defined in Dashboard Designer and stored in a trusted data connection library on SharePoint Server 2010. A trusted data connection library is a document library that you have determined as safe. It restricts the use of the data source files, but still enables them to be read. A document library is created by default when provisioning PerformancePoint Services, however. Administrators can manage data connections on the server by creating more than one data connection library. If a user updates a data source connection in the document library, the information is shared and updated when a workspace file is opened in Dashboard Designer.

Trusted lists for dashboard content

Reports, scorecards, KPIs, and filters are all required to be stored in a trusted SharePoint Server 2010 list. The list or any parent object up to the site collection can be defined as trusted during the initial configuration or later in Central Administration.

Data source security

In PerformancePoint Services the security setting for data sources is stored in each data source. The setting that determines whether the server uses the currently authenticated user, unattended user account, or unattended user account using custom data is configured on each data source.

Secure Store Service and Unattended Service accounts

The SharePoint Server 2010 Secure Store Service provides the capability of securely storing data such as credentials and associating them to a specific identity or group of identities. The Secure Store Service is present on all SharePoint Server 2010 farms.

In PerformancePoint Services, each data source can be configured to use the currently authenticated user credentials or the "Unattended Service Account". The unattended service account is a set of domain credentials that are impersonated when connecting to a data source. The server uses the unattended service account instead of the managed account for data source queries to prevent the PerformancePoint Services process from accessing the content database during query execution.

PerformancePoint Services stores and retrieves unattended service account credentials in the Secure Store Service. Because the server must keep both the user name and password in order to impersonate the user, the password for the unattended service account is stored in the Secure Store Service. The user name is stored in the PerformancePoint Services database so that it can be accessed and can be displayed in the settings page.

When you create your unattended service account, ensure that the account has the necessary access to the data sources that will be required.

It is important to understand that unattended service account credentials are not cached globally. Instead, they are retrieved from the Secure Store Service only when they are needed. If you open a workspace file in Dashboard Designer with a data source that connects by using the unattended service option and the credentials are not already cached for that connection, the unattended service account password is retrieved from the Secure Store Service and uses the target data source.

Authorization and permissions

Planning permissions and roles

PerformancePoint Services uses the SharePoint Server security model to control user access to various functionality and tasks. There are subtle yet significant changes in working with PerformancePoint Services in Microsoft SharePoint Server 2010 over Microsoft Office PerformancePoint Server 2007. In Microsoft Office PerformancePoint Server 2007, Monitoring Server has its own server and database that

stores metadata and content. In Microsoft Office PerformancePoint Server 2007, security is applied globally at the server level and on each individual object.

In SharePoint Server 2010, the PerformancePoint metadata content is stored in SharePoint lists and document libraries. You therefore need to understand the differences between the assignment of permissions and roles between Microsoft Office PerformancePoint Server 2007 and SharePoint Server 2010. In Microsoft Office PerformancePoint Server 2007, the administrator on the server computer is automatically made an administrator. In SharePoint Server 2010, that individual is not automatically made an administrator. If needed, this assignment may be done manually.

Roles and permissions

PerformancePoint Services uses SharePoint Server authorization groups and permissions. As you plan how your users will use the service, review the primary SharePoint Server roles.

- **Farm Administrator:** In order to edit Dashboard items, this role needs at least contributor permissions on content lists (or list items) and data source libraries (or library items).
- **Site collection Administrator** In order to edit Dashboard items, this role needs at least contributor permissions on data source libraries (or library items).
- **Site Administrator or List/Document Library contributor:** In order to edit Dashboard items, this role needs at least contributor permissions on content lists (or list items) and data source libraries (or library items).

If any person or role is tasked with re-deploying Dashboards after they have been imported from Microsoft Office PerformancePoint Server 2007, that person or role must have at least Designer permissions.

We recommend as a best practice that you create new SharePoint groups (or leverage existing ones) to help organize your roles within PerformancePoint Services. If you establish clear permission groups by work role you can keep better control over who has access to what.

The four server roles that are available in Microsoft Office PerformancePoint Server 2007 loosely map to predefined roles in SharePoint Server 2010. In PerformancePoint Services, they are Admin, Power Reader, Data Source Manager, and Creator. In addition, two additional roles of Editor and Reader at the individual item level are set within Dashboard Designer. The table below maps out how roles in PerformancePoint Server 2007 map to PerformancePoint Services in Microsoft SharePoint Server 2010.

Being an administrator on the server does not automatically add you as an administrator in PerformancePoint Services in Microsoft SharePoint Server 2010.

Table 7 - PerformancePoint Roles and Permissions

PerformancePoint Server 2007 role	PerformancePoint Server 2007 Permissions	PerformancePoint Services in Microsoft SharePoint Server 2010 role
Admin	Edit any item and create new items	**Contributor:** Data Content and Data Sources
Power Reader	Read any items (used for SDK processes)	**Read:** Data Content and Data Sources
Data Source Manager	Create new items (data sources only)	**Contributor:** Data Sources only
Creator	Create new items (except for data sources)	**Contributor:** Data Content Only
Item Permissions		
Editor	View, edit or delete the item	**Contributor**
Reader	View the item	**None**

Another way of approaching access needs is to look at the permissions based on the tasks:

Table 8 - PerformancePoint Tasks and Permissions

User task	PerformancePoint Services in Microsoft SharePoint Server 2010 Permissions Required
Launch Dashboard Designer	None, other than being an authenticated user in SharePoint Server 2010
Create PerformancePoint Dashboard items and save them to a SharePoint list or document library.	Contributor
Perform all Contributor tasks plus publish PerformancePoint Dashboards	Designer
View PerformancePoint Dashboards and use	Read

User task	PerformancePoint Services in Microsoft SharePoint Server 2010 Permissions Required
interactive features	
Manage user permissions for Dashboard items	Full Control (Site) or Site Collection Administrator

Appendix – Risk Matrix Source Code

The following Reporting Services Report source code is provided AS-IS. Microsoft does not provide warranties, neither guarantees nor support for the code.

Risk Matrix.rdl

Design

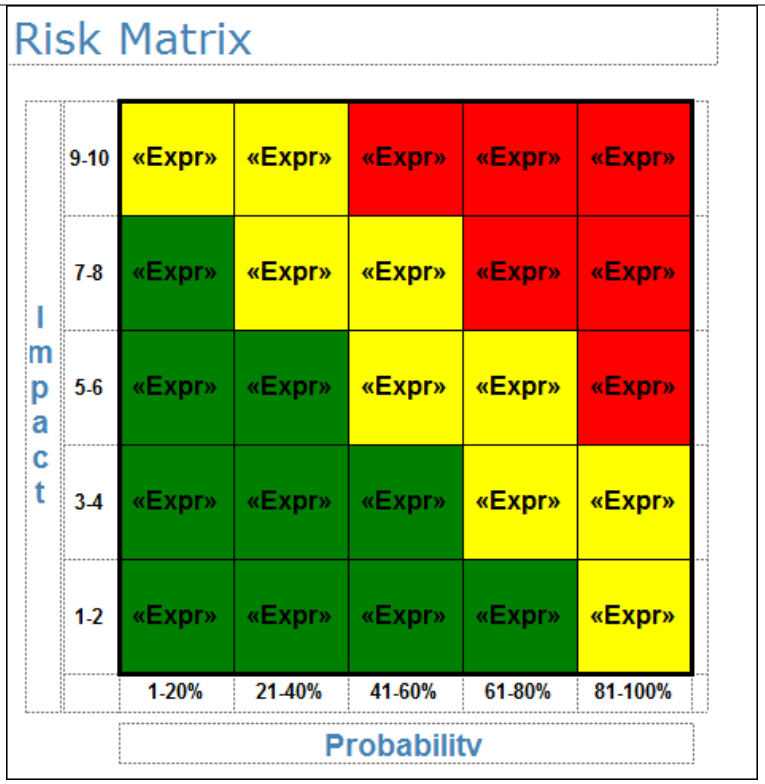


Figure 65 - Risk Matrix Design Pane

Data Sources

Project Server Reporting Database

Parameters

Department

Datasets

RiskData

```
SELECT     MSP_WssRisk.Title, MSP_WssRisk.RiskID,
MSP_WssRisk.Probability, MSP_WssRisk.Impact,
MSP_EpmProject_UserView.[Project Departments],

MSP_EpmProject_UserView.ProjectWorkspaceInternalHRef
FROM         MSP_WssRisk INNER JOIN
                      MSP_EpmProject_UserView ON
MSP_WssRisk.ProjectUID = MSP_EpmProject_UserView.ProjectUID
```

SelectDepartments

```
SELECT     NULL AS DepartmentUID, NULL AS Description, '<ALL
DEPARTMENTS>' AS DepartmentName, NULL AS DepartmentValue
UNION
SELECT     LookupMemberUID AS DepartmentUID, MemberDescription AS
Description, MemberValue AS DepartmentName, MemberValue AS
DepartmentValue
FROM         MSPLT_Department_UserView AS dep
WHERE     (MemberValue IS NOT NULL)
ORDER BY DepartmentName
```

TextBox Properties - Actions

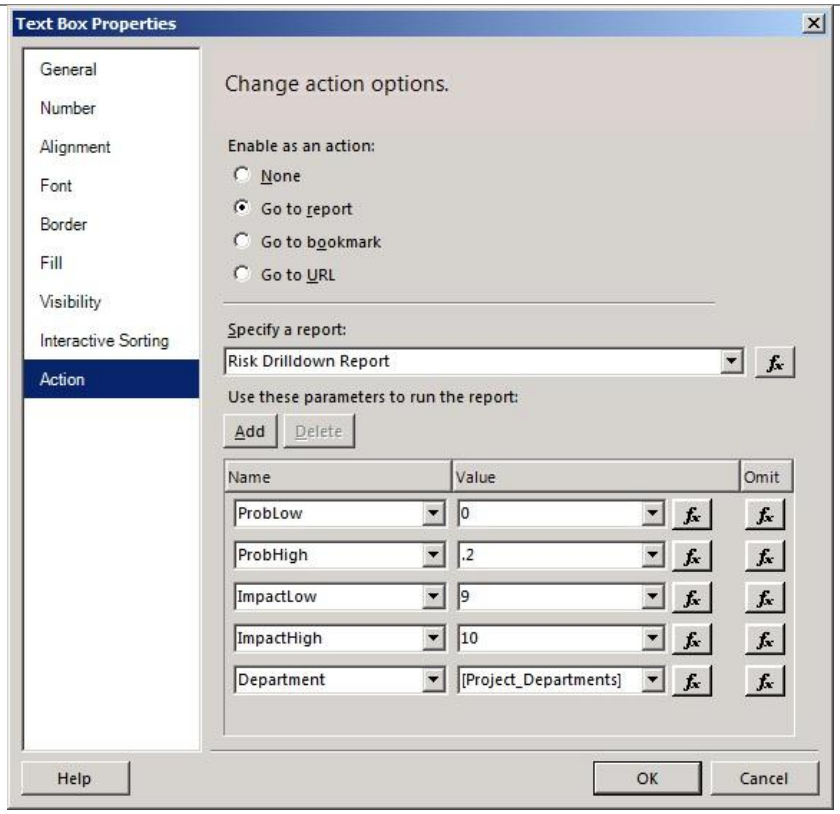


Figure 66 - Risk Matrix Drilldown Definition

Risk Drilldown Report.rdl

Design

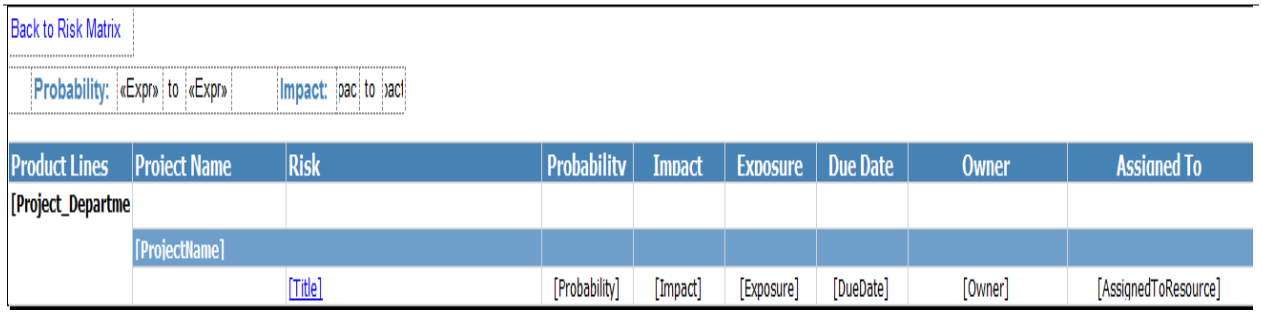


Figure 67 - Risk Drilldown Design Pane

Data Sources

Project Server Reporting Database

Parameters

ProbLow
ProbHigh
ImpactLow
ImpactHigh
Deparment

Datasets

RiskData

```
SELECT     MSP_EpmProject_UserView.ProjectName, MSP_WssRisk.RiskID,
MSP_WssRisk.Title, MSP_WssRisk.Status, MSP_WssRisk.AssignedToResource,
                      MSP_WssRisk.Owner, MSP_WssRisk.DueDate,
MSP_WssRisk.Probability, MSP_WssRisk.Impact, MSP_WssRisk.Exposure,

MSP_EpmProject_UserView.ProjectWorkspaceInternalHRef,
MSP_EpmProject_UserView.[Project Departments]
FROM         MSP_EpmProject_UserView INNER JOIN
                      MSP_WssRisk ON
MSP_EpmProject_UserView.ProjectUID = MSP_WssRisk.ProjectUID
WHERE     (MSP_WssRisk.Status = N'(1) Active') AND
(MSP_WssRisk.Probability BETWEEN @ProbLow AND @ProbHigh) AND
(MSP_WssRisk.Impact BETWEEN
                      @ImpactLow AND @ImpactHigh)
```

Glossary of Terms

Term	Definition
actual value	The value for a key performance indicator (KPI). This value is measured against a pre-determined target value for the KPI.
aggregate	A single value that is composed of multiple values. For KPIs, aggregation determines the mathematical formula that is used to combine members (SUM, AVERAGE, and so on).
analytic chart	A report type that displays cube data in a visual, interactive chart format.
analytic grid	A report type that displays cube data in a visual, interactive tabular format.
average weighted	A type of rollup. It indicates an average that considers the weighted value of all child KPIs. This rollup reflects overall performance.
balanced scorecard	A business oriented scorecard that conveys key metrics related to the service and business of providing service. A balanced scorecard contains a balance of operational, financial, and quality driven metrics.
balanced scorecard methodology	A scorecard system that adheres to the framework and components established by the Balanced Scorecard Collaborative.
banding	The use of bands to represent ranges of performance based on thresholds.
banding settings	A setting that defines thresholds, or boundaries between changes in indicator status.
bulk edit	A procedure by which a user can simultaneously change specified properties for a group of selected items.
cache interval	The length of time that a stored copy of the views that are shown in a dashboard can exist on the server.
calculated metric	A metric that is based on the result of an expression, rather than originating from a data source.
Calculated Metrics	A feature that enables users to create simple calculations by using one or more KPI values. This reduces the amount of MDX that is required to create complex scorecards.

Term	Definition
centered indicator	The indicator set that can be used when the "closer to target" scoring pattern is selected when you edit the band settings.
collapse	An analysis tool, similar to drill up, that displays less detail about an item while maintaining the current display of other items.
cube	A set of data that is organized and summarized into a multidimensional structure that is defined by a set of dimensions and measures.
custom table	A type of filter that enables users to choose from a list and then drive dashboard content from multiple data sources.
customized scorecard	A scorecard that is created without using a template.
dashboard	A related group of interactive scorecard and report views that are organized together in a SharePoint or Web-hosted site. Dashboard elements may share common filters that control the data displayed within the elements.
Dashboard Designer	See Other Term: PerformancePoint Dashboard Designer
data source	A source of business data used by PerformancePoint applications. PerformancePoint data sources may include cubes or data source views (DSV) based on online analytical processing (OLAP) cubes, relational databases, CSV files, Microsoft Excel spreadsheets, or any other Open Database Connectivity (ODBC) or multidimensional (ADOMD.NET) data source.
data source formatting	A type of conditional formatting that is configured within Microsoft SQL Server Analysis Services. It causes individual cells to be highlighted when certain conditions, based on business rules, are met. For example, if Gross Margin is over 28%, the cell is shown with a green background. Known as "OLAP Server Formatting" in Excel.
Decomposition Tree	A data visualization tool that helps users analyze complex information using a hierarchical scheme. The Decomposition Tree can help users find the root cause that is driving a value. For example, if sales in Canada are poor in March, the Decomposition Tree will help determine whether that is being driven by a particular product line, a certain sales territory, or an increase in returns.
deploy	To create a SharePoint page from a PerformancePoint dashboard so that users can access it.

Term	Definition
dimension	A structural attribute of a cube that organizes data into levels. For example, a Geography dimension might include the members Country, Region, State or Province, and City.
display item	A folder into which attributes, measures, calculated members, KPIs, and PerformancePoint items can be organized to facilitate browsing by users.
drill down/drill up	A technique for navigating through levels of data ranging from the most summarized (up) to the most detailed (down). For example, when viewing the details of sales data by year, a user can drill down to display sales data by quarter and further to display data by month.
filter	A control that is added to a dashboard or dashboard content so that users can modify the view. With this control, users can view a subset of data that is displayed in reports and scorecards that are returned by their corresponding data sources.
filter link	An association between a filter control and a parameter. This association is defined on a report or scorecard in a dashboard. Items with links to a filter change when the filter is modified.
Filter Web Part	A feature that enables users to modify dashboard views by changing the subset of data that is displayed in reports or scorecards.
fixed value	A user-entered value or a static value from an Excel spreadsheet that does not change unless manually altered by the user. Contrast this with dynamic values that are queried from a SQL Server database, OLAP cube, or other data source.
formatting dimension	The dimension (usually "Measures") that numeric formatting is applied to. Some cubes use a Scenario dimension that is more desirable for numeric formatting.
hierarchy	1. A logical tree structure that organizes the members of a dimension such that each member has one parent member and zero or more child members. 2. A logical tree structure that organizes the members of a set into parent-child relationships. A ranked structure with a top level and subordinate levels.
hierarchy level	In a hierarchy, members are classified into levels (branches). Leaf level is the bottom level in the hierarchy. In a Time dimension, levels can also have names associated with them. For example, in a [Time] dimension, leaf level can represent Months and level above -- Years.

Term	Definition
import	To bring information from one system or program into another. The system or program receiving the data must somehow support the internal format or structure of the data.
indicator	A set of graphics, text, and colors for defining different levels of performance when comparing an actual value and a target value within a KPI.
indicator count	A type of rollup. It gives the total numbers of indicators in the tree below it, rolled up according to status
Internet Protocol Security (IPsec)	A set of industry-standard, cryptography-based protection services and protocols. IPSec protects all protocols in the TCP/IP protocol suite and Internet communications by using Layer Two Tunneling Protocol (L2TP).
IPsec	See Other Term: Internet Protocol Security (IPsec)
key performance indicator (KPI)	A predefined measure that is used to track performance of a strategic goal, objective, plan, initiative, or business process. A KPI is evaluated against a target. An explicit and measurable value taken directly from a data source. Key performance indicators (KPIs) are used to measure performance in a specific area, for example, revenue per customer.
Komodo dragon	The largest monitor lizard in the world, the Komodo Dragon was unknown in the west until 1910, when local stories reached the ears of the Dutch colonialists about a "land crocodile". A couple of years later, a paper was published that identified the Komodo as a monitor lizard, and it was given the Scientific name Varanus Komodoensis. The Dutch and local rulers quickly realized that the species was rare, and protection plans were made in 1915. A recent estimate puts the number of individuals at about 1,100 - rare indeed.
KPI	See Other Term: key performance indicator (KPI)
KPI details report	A report type that shows information about a KPI that is selected in a scorecard.
level	A degree of granularity in hierarchies. Levels enable you to view data in various degrees of detail. The Time dimension, for example, can have the levels Year, Quarter, Month, and Day.
list	A Web site component that stores and displays information that users can add to by using their browsers. For PerformancePoint Services, the

Term	Definition
	site requires a Web server that is running Microsoft SharePoint Server.
MDX	See Other Term: multidimensional expression (MDX)
MDX formula	The online analytical processing (OLAP) equivalent of an SQL query.
measure	A quantified value that is indicative of the size, quantity, scale, importance, or extent of something important to an organization.
measure group	A collection of related measures in an Analysis Services cube. The measures are generally from the same fact table.
member	A single position or item in a dimension. The Account dimension, for example, could have a dimension member called Travel Expenses. Dimension members can be user-defined or predefined and can have properties associated with them. See dimension member property for details.
metadata	Information about the properties of data, such as the type of data in a column (numeric, text, and so on) or the length of a column. It can also be information about the structure of data or information that specifies the design of objects such as cubes or dimensions.
metric	An actual or target value of a KPI. A metric may be used as a scorecard element.
multidimensional expression (MDX)	A language for querying and manipulating data in multidimensional objects (OLAP cubes).
named set	A grouping of dimension members or items from a data source that are named and treated as a single unit and can be referenced or reused multiple times.
objective	A group of key performance indicators (KPIs) that correspond to the functional areas or strategic initiatives of an organization.
objective KPI	A KPI that derives its target value and score from a rollup of its child KPIs. Objective KPIs do not have actual values and do not connect to external data sources. They indicate performance by showing a normalized aggregation of the KPIs one level below them in the scorecard.
ODBC	See Other Term: Open Database Connectivity (ODBC)
OLAP	See Other Term: online analytical processing (OLAP)

Term	Definition
OLAP cube	See Other Term: cube
online analytical processing (OLAP)	A technology that uses multidimensional structures to provide rapid access to data for analysis. The source data for OLAP is commonly stored in data warehouses in a relational database.
parameter	A field defined on a dashboard item that can receive data from a filter control. Data supplied to this field modifies content that is displayed in the dashboard scorecard or report.
PerformancePoint Content List	A list that stores the elements that are used to construct a PerformancePoint dashboard. A PerformancePoint dashboard is a related group of interactive scorecards, filters, and report views that are organized together into a set of Web pages.
PerformancePoint Dashboard Designer	A client application that you use to create and manage dashboards, scorecards, reports, and other PerformancePoint items prior to deploying them within a dashboard to a SharePoint site.
PerformancePoint Data Connections Library	A SharePoint document library that may contain Office Data Connections (ODC), Universal Data Connection (UDC) files, and PerformancePoint data connections. Data connections identify a source of business data that may include cubes or perspectives that are based on online analytical processing (OLAP) cubes, relational databases, CSV files, Microsoft Excel Services spreadsheets, or other data sources.
PerformancePoint Server	See Other Term: PerformancePoint Services in Microsoft SharePoint Server
PerformancePoint Service	The SharePoint service application that enables dashboarding capabilities by means of scorecards, analytic grids and charts, and other decision-making tools for the enterprise.
PerformancePoint Service application	The PerformancePoint component that runs as a SharePoint shared service. It is one of many service applications that plug into SharePoint Server. Other examples include Excel Services, Search Service, and Visio Graphics Service.
PerformancePoint Service application proxy	The PerformancePoint front-end Web service interface. It abstracts the communication layer between front-end Web components and the service application.
PerformancePoint	See Other Term: PerformancePoint Services in Microsoft SharePoint

Term	Definition
Services	Server
PerformancePoint Services Central Administration	A collection of SharePoint administration pages that the administrator can use to configure PerformancePoint Services for SharePoint.
PerformancePoint Services in Microsoft SharePoint Server	A collection of services for Microsoft SharePoint Server that enables users to monitor organizational goals, to analyze performance information through up-to-date content and context-rich dashboards and scorecards, and to use that information to make business decisions. These capabilities were formerly part of the PerformancePoint Server product.
PerformancePoint Settings Database	A PerformancePoint-specific database that stores the annotations for each dashboard element, user-based filter selections, and other information about dashboard elements.
PerformancePoint trusted location	A location within Microsoft SharePoint Server from which dashboard content can run. The default is to trust all locations. The PerformancePoint Services administrator must change it to make it more restrictive.
PerformancePoint Web Parts	Functionality in PerformancePoint Services that makes it possible to display dashboard views that are defined in Dashboard Designer to users of a SharePoint site.
PerformancePoint Web Services	A collection of Web services that determines how PerformancePoint Services operates.
pie chart	A round chart that shows the size of items in a single data series, proportional to the sum of the items.
refresh	The activity of synchronizing dashboards and dashboard elements between the local workspace and PerformancePoint Services in Microsoft SharePoint Server.
relational database	A database or database management system that stores information in tables. In conducting searches, a relational database matches information from a field in one table with information in a corresponding field of another table to produce a third table that combines requested data from both tables.
report	A visual display of data in a dashboard that can be coordinated with other report views by using filters. Reports include analytic grids and

Term	Definition
	charts, KPI details, Excel Services spreadsheets, SQL Server Reporting Services reports, strategy maps, ProClarity Analytics Server reports, and Web pages.
report view group	Reports that are grouped together in a single dashboard zone. These reports can be conditionally shown, based on the selected KPI.
Report Web Part	A feature that allows users to view and interact with reports that are created in PerformancePoint Dashboard Designer.
Reporting Services report	A report type that acts as a wrapper for a SQL Server Reporting Services report so that the Reporting Services report can be displayed in a PerformancePoint dashboard.
ribbon	The ribbon is part of the Microsoft Office Fluent user interface (UI). In Dashboard Designer, It consists of contextual tools for creating, editing, and exporting dashboards and their elements.
rollup	The calculated value of a KPI is derived from the aggregated scores of child or descendant KPIs.
scorecard	A report type that depicts organizational performance by displaying a collection of key performance indicators (KPIs) together with performance targets for those KPIs. A scorecard can be organized hierarchically.
scorecard element	Any one of the individual components of a scorecard, such as key performance indicators (KPIs), members, properties, actuals, targets, or MDX expressions.
Scorecard Web Part	A feature that enables users to view and interact with scorecards that are created in PerformancePoint Dashboard Designer.
Stack Selector Web Part	A feature that enables users to show more than one view in a single location on a dashboard, and provides a control to switch between them.
standard indicator	An indicator set that can be used when either the "increasing is better" or "decreasing is better" scoring patterns are selected when you edit the band settings.
strategy map	A performance management tool for visually presenting an organization's or organizational unit's objectives and goals, their groupings of objectives and goals, and their mappings of objectives and

Term	Definition
	goals to themes, initiatives, KPIs, targets, business processes, and action plans. Each item in the visualization contains a set of metadata, which itself is customizable.
target	As one aspect of a KPI, a target is the desired level of performance with respect to a specific business goal or strategy. Actual values are evaluated against the target to determine KPI score and status.
time dimension	A dimension that breaks time down into levels such as Year, Quarter, Month, and Day. In Analysis Services, a special type of dimension created from a date/time column.
time formula	An expression that is created following the Simple Time Period Syntax. It takes the form of a time unit plus or minus a whole number, such as Year-1 or Month-6. It is the formula that is applied when you are using time intelligence on a dashboard.
time intelligence filter	A dynamic dashboard filter that can be linked to scorecards and reports so that they will update automatically relative to the current time.
unattended service account	The security account that is used when a data source is configured to connect as a single shared identity for all users.
update	To retrieve the most current data from the data source that is associated with a scorecard.
validate	To ensure that all data sources that are used by a KPI or scorecard are available.
variance	The difference between two values, such as the difference between estimated and actual expenses.
Web page report view	A report type that contains a Web page.
weight	The value of a scorecard KPI in relation to the values of other KPIs. For example, you might have an objective with two key performance indicators (KPIs), the first with a weight of one and the second with a weight of three. This means that the second KPI is three times more important than the first. The weights that are assigned to the KPIs are part of the calculation when their values are rolled up to derive the value for their parent objective.
workspace	The user interface area in Dashboard Designer that contains the dashboard items that are being edited by a user. The contents of the

Term	Definition
	workspace can be saved as a file with a .dew extension.
worst indicator	A type of rollup of child KPIs. It moves the indicator of the lowest performing KPI to the objective KPI row.

PerformancePoint References

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3. Create data connections (PerformancePoint Services): http://technet.microsoft.com/en-us/library/ff191196.aspx
4. Configure data sources to work with Time Intelligence by using Dashboard Designer: http://technet.microsoft.com/en-us/library/ff701697.aspx
5. Create a Member Selection filter: http://technet.microsoft.com/en-us/library/ff724279.aspx
6. Create a KPI: http://technet.microsoft.com/en-us/library/ff758653.aspx#createKPI
7. Create a KPI Details report: http://technet.microsoft.com/en-us/library/ff724282.aspx
8. Create a blank scorecard by using Dashboard Designer: http://technet.microsoft.com/en-us/library/ff979282.aspx
9. Walkthrough: Calculate normalized scores for KPIs: http://office.microsoft.com/en-us/performancepoint-server/walkthrough-calculate-normalized-scores-for-kpis-HA010254033.aspx
10. Create an analytic chart or gird by using Dashboard Designer: http://technet.microsoft.com/en-us/library/ff535914.aspx
11. Create a Reporting Services report by using Dashboard Designer: http://technet.microsoft.com/en-us/library/ff724283.aspx
12. Create an Excel Services report by using Dashboard Designer: http://technet.microsoft.com/en-us/library/ff724277.aspx
13. Create a strategy map by using Dashboard Designer: http://technet.microsoft.com/en-us/library/ff535789.aspx
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Project References

- Learn about PerformancePoint report types
- Create an Excel Services report by using Dashboard Designer
- Project 2010 Overview for Developer – Build Cube Service
- Create data connections (PerformancePoint Services)
- How to: Use an Office Data Connection (.odc) with Reports (Reporting Services in SharePoint Integrated Mode)
- How to: Add Report Server Content Types to a Library (Reporting Services in SharePoint Integrated Mode)
- Create a Reporting Services report by using Dashboard Designer
- Create an Excel Services report by using Dashboard Designer
- Create a dashboard page by using Dashboard Designer
- Create a dashboard page by using Dashboard Designer

Microsoft Project 2010 Resources:

Product information

- Project 2010 product site: http://www.microsoft.com/project
- Project Team Blog: http://blogs.msdn.com/project

End-User Product Help

- Project 2010 Help http://office2010.microsoft.com/project-help
- Project 2010 Help http://office2010.microsoft.com/project-server-help
- Demand Management for Project 2010 - http://go.microsoft.com/?linkid=9739874
- Business Intelligence for Project 2010 - http://go.microsoft.com/?linkid=9726143
- Upgrade and Migration to Project 2010 - http://go.microsoft.com/?linkid=9676814

Interactive content - Videos & Sessions & Webcasts

- http://www.microsoft.com/showcase/en/US/channels/microsoftproject
- http://www.microsoft.com/events/series/epm.aspx

Project Professional 2010 and Project 2010 Demo Image:

- Download: http://go.microsoft.com/?linkid=9713956
- Hosted Virtual Lab: http://go.microsoft.com/?linkid=9713654

IT Professional related - TechNet

- Tech Center: http://technet.microsoft.com/ProjectServer

- Admin Blog: http://blogs.technet.com/projectadministration

Developer related - MSDN

- Developer center: http://msdn.microsoft.com/Project
- Programmability blog: http://blogs.msdn.com/project_programmability

Got Questions? Search or ask in the official Microsoft Forums!

- http://social.msdn.microsoft.com/Forums/en-US/category/projectserver2010,projectprofessional2010/

SharePoint 2010 Products

http://sharepoint.microsoft.com

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List of Figures

List of Tables