

Building a Data-centric Portal in SharePoint

Mike Cox – Sr. Product Manager NSE Inc.





Building a Data Centric Portal in SharePoint

- ❑ My Key Point: “You should build your next **data** application in SharePoint. Here’s why and here’s how!”

- ❑ Part 1 – Why you should

- ❑ Part 2 – How to do it / Examples



Sample Dashboard (Demo)

Multi-links

Clicks directly to CRM System

Export to Excel

Standard document libraries

eSENSE Demo Site

Home

eSENSE Demo Site > Shared Documents > SamplePortal

SEC Medical Systems
SEC Medical Systems Sales and Marketing

This Site: eSENSE Demo

Site Actions

New Accounts

Acct. #	Account Name
379	NorthCentral Hospitals
456	Request for Proposal
499	SampleCustomerRequestForm
6790	Napville City Council

Current Sales Opportunities

Opportunity	Account	Est. Value	Est. Close Date	Close Probability
HeartStrong System	NorthCentral Hospitals	\$150,000.00	6/5/2007	30
L45 Laser Accessories	NorthCentral Hospitals	\$42,000.00	6/19/2007	20
MRI Diagnostics (RR-#568)	First Health	\$175,000.00	6/22/2007	50
DataCom IS package	First Health	\$12,000.00	6/14/2007	10

Rows Per Page: 50

MarketingActivities

Title	Event Type	Description	Event Date
SharePoint Expo -07	Trade Show	Large Trade Show	11/5/2007
Diag. Imaging Newsletter	Email Blast	Online Review	10/19/2007
NADA Show '07	Trade Show	Large Trade Show	10/23/2007
CTO Summit	Online Marketing Event	Online Conference	10/23/2007
MRI Expo	Trade Show	Chicago Show	11/27/2007

CustomerLibrary

Type	Name	Modified By
Folder	NorthCentral Hospital Systems	Mike Cox
Document	Request for Proposal	Mike Cox
Document	SampleCustomerRequestForm	Demo User

Add new document

Accounts By Region

TerritoryName: Americas Ok

Acct. #	Account	Territory	Owner
456	American Medical Systems	Americas	Aida Catic
499	First Health	Americas	Dawn Evans
379	NorthCentral Hospitals	Americas	Aida Catic

Alternate formats (charts, etc.)

Account Name	Estimated Value
HeartStrong System	150,000.00
L45 Laser Accessories	42,000.00
MRI Diagnostics (RR-#568)	175,000.00
DataCom IS package	12,000.00

Standard SP Lists

Alternate formats (charts, etc.)

Drop-downs with lookups

A quick thought on costs...

- Reduced Up-front Costs:** You already own most of what you need.
- Reduced Dev. Costs:** Security, user interface, already done
- Reduced Maintenance Costs:** Easy to change, very flexible

The key issue with reduced costs is not just \$\$ savings, it's that it makes collaborative applications possible that previously were not feasible!

Top 8 Reasons You Should Use SharePoint for Building Your Next Data Focused Application:

1. Instant gratification!
2. Because nobody has the time/resources to build another custom UI!
3. Many of these collaborative applications will not be feasible “the old fashioned way”
4. The people who will **use** the application can significantly participate in **building** the application.
5. Most applications can be build with little to no code.
6. You already own most of what you need to build it.
7. Other people have tried it, and it works! (Kids, don't try this argument with Mom)
8. Most people actually like to use SharePoint, increasing chances of the application being used!

Are You Convinced?

- 1. If so... great.**
- 2. If you are skeptical about how... stick with me**
- 3. If you need more convincing... let's talk afterwards**



Building a Data-Centric Portal (3 Steps)

*Assuming we have created the general requirements for our system, we need to complete **three** key project requirements...*

- 1. Define Functional Requirements** in a way appropriate for the kind of portal we are trying to build.
- 2. Determine what technology** we will use to build our solution
- 3. Implement our solution** in the chosen technology

The importance of organizing this effort cannot be overstated. What we don't want is "web part chaos" for our administrators and end-users.



Data Centric Portal... The Big Hurdle

DATA SOURCES



Drag & Drop Data-Centric Web Parts

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MRU Diagnostics (88-#568)	First Health	\$175,000.00	6/22/2007	50
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eSENSE Demo Site

SEC Medical Systems Sales and Marketing

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Act. #	Account Name
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DataCom IS package	First Health	\$12,000.00	6/14/2007	10

CustomerLibrary

Type	Name	Modified By
Request for Proposal	NorthCentral Hospital Systems	Mike Cox
SampleCustomerRequestForm	SampleCustomerRequestForm	Demo User

Accounts By Region

Act. #	Account	Territory	Owner
456	American Medical Systems	Americas	Aida Catic
499	First Health	Americas	Dawn Evans
379	NorthCentral Hospitals	Americas	Aida Catic

MarketingActivities

Title	Event Type	Description	Event Date
SharePoint Exps -07	Trade Show	Large Trade Show	11/5/2007
Diag. Imaging Newsletter	Email Blast	Online Review	10/19/2007
NAHA Show '07	Trade Show	Large Trade Show	10/23/2007
CTO Summit	Online Marketing Event	Conference	10/23/2007
MRU Exps	Trade Show	Chicago Show	11/27/2007

SharePoint 2003 and 2007 Sites

DATA SOURCES



Databases



Web Services



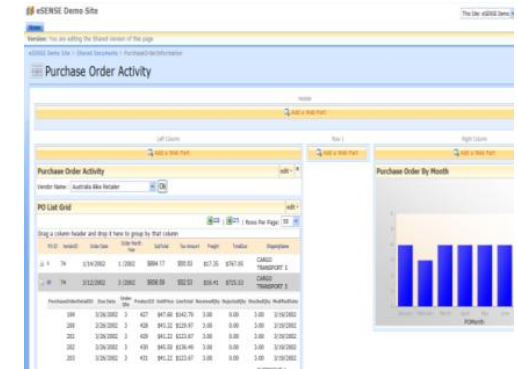
XML Files

INTEGRATION TECHNOLOGY

- Define data access
- Define views of my data
- Define security
- Define specific queries (large #)
- Provide display options
- Manage all of this!!!



SHAREPOINT SITES



Options:

- ✓BDC
- ✓Build Own Web
- ✓Vendor Provided
- ✓Reporting Services
- ✓3rd Party Solutions (data)
- ✓Other



Definition Process (Step 1)

DATA SOURCES

INTEGRATION TECHNOLOGY

SHAREPOINT SITES

ROLES



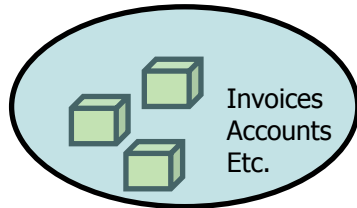
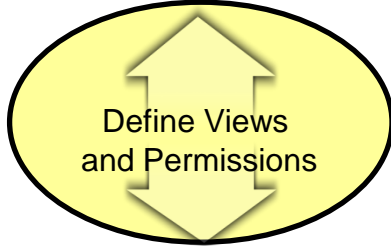
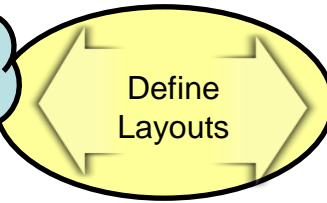
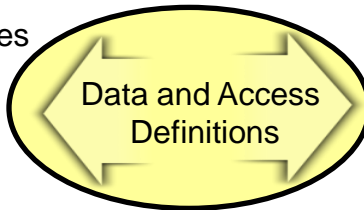
Databases



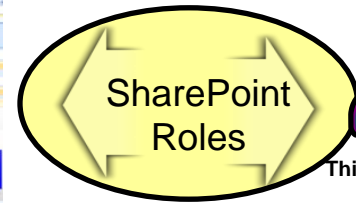
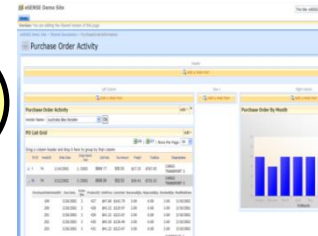
Web Services



XML Files



LIBRARY OF BUSINESS DATA



Customer



Third Party



Employee

Define:

- ✓ SharePoint Roles
- ✓ Data Access Methods
- ✓ Views
- ✓ Permissions
- ✓ Layouts

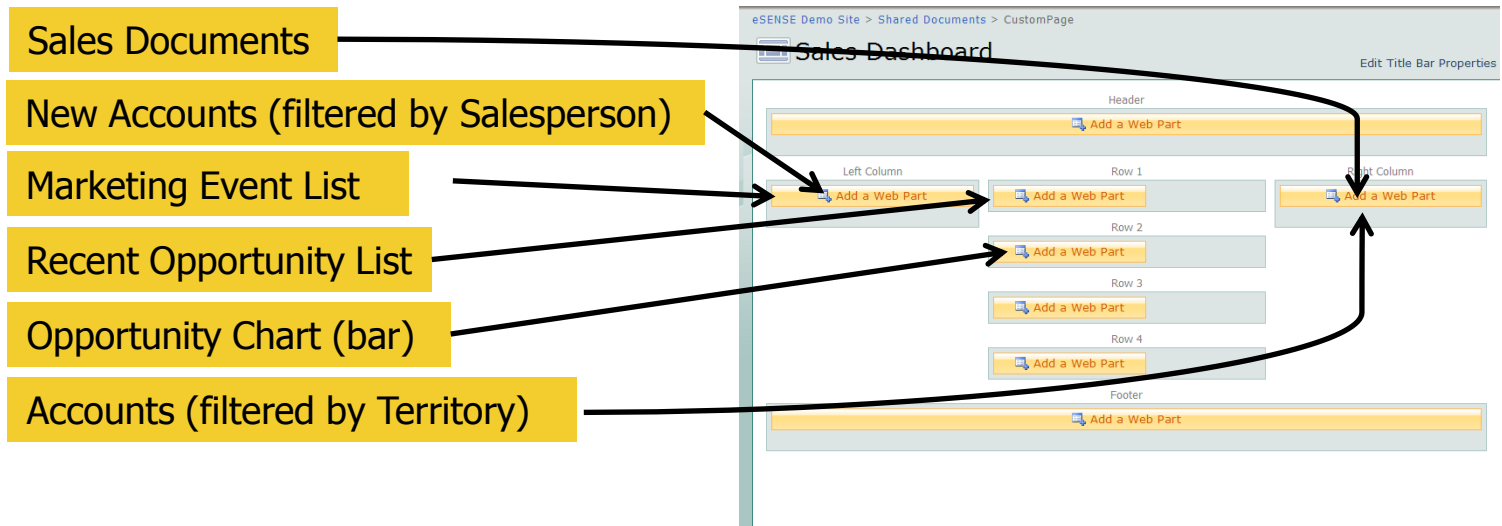
❑ Sample Data Definition Chart (Library of Business Data):

Name	Data	Source	SP Role	View
Accounts	Current Customer Accounts	CRM	Internal Users Only	Default
Current Invoices	Invoices (last 6 months history)	ERP	Internal Users	Int. View
Current Invoices	Invoices (last 6 months history)	ERP	Customers	Ext. View
Project Details	Project Status Information	SP List	Internal Users	Default
Catalog Data	Product Catalog (per customer)	Commerce Server	Customers Internal Users	Ext. View Int. View

A chart (similar to the one above) helps us identify and categorize the data that will be needed on our SharePoint pages

□ User Interface Requirements

- Select the structure of the pages (parameters, filters, etc.)
- Select Display format (e.g. grid or chart, style, color, etc.)
- Determine web part placement



This phase is mostly about user experience and layout. We need to ask questions such as "How will most user want to see this data?" "What filters and parameters need to be available?"

DATA SOURCES



Databases



Web Services



XML Files

INTEGRATION TECHNOLOGY

Purpose:

- ✓ Define data access
- ✓ Define views
- ✓ Define security
- ✓ Define queries
- ✓ Provide display (web parts)
- ✓ Manage all these items
- ✓ 3rd Party Web Parts (data)



Options:

- ✓ BDC
- ✓ Build Own Web
- ✓ Vendor Provided
- ✓ Reporting Services
- ✓ 3rd Party Solutions (data)
- ✓ Other

ORGANIZATIONAL ROLES



Customer



Third Party



Employee

Determine Technology...(Step 2)

Method	Advantage	Disadvantage	Comment
BDC	<ul style="list-style-type: none"> •Built-in with MOSS •Pre-made web parts 	<ul style="list-style-type: none"> •Configuration (not for the feint of heart) •Requires MOSS •Limited Flexibility 	If you have MOSS and you are not afraid of XML you can determine if the BDC web parts will meet your needs.
Build your own	<ul style="list-style-type: none"> •Flexibility 	<ul style="list-style-type: none"> •Difficult •Time consuming 	One of the biggest issue is having enough flexibility in your web parts that you don't have to "open it up" each time you want to make a change.
Vendor provided	<ul style="list-style-type: none"> •Works well with data needed 	<ul style="list-style-type: none"> •Lack of Flexibility •Cost 	Most major application vendors have SP parts available for an extra charge
Data Form Web Part	<ul style="list-style-type: none"> •Built in with SharePoint Designer 	<ul style="list-style-type: none"> •Custom coding •Not for end users (requires SPD for add/config) 	Limited to SPD static sites
3 rd Party	<ul style="list-style-type: none"> •Flexible interfaces •Easy-to-use 	<ul style="list-style-type: none"> •Additional Expense 	NSE (shameless plug ☺), others...

Consider your current as well as likely future needs in making the "What Technology" decision. Consider also, what will happen if your initial site is "wildly successful".

Implement the Solution (Step 3)

- ❑ Once we choose the technology we need to implement it.
- ❑ Below is an example of steps needed to implement in the BDC and via a 3rd party web part

Steps	BDC	3rd Party WP
Define Data Sources and Access Methods	Via XML file	Via configuration panel or application
Define permissions	In Shared Services	Various ways
Define multiple views	N/A	Based on information specific to the user
Create business data libraries	Via SQL queries embedded in XML file	Via configuration panel or application
Select the structure of the pages	Using BDC web part capabilities	Using 3 rd party web part capabilities
Select Display format	Via menu options and XSLT	Via configuration panel or application
Determine web part placement	Directly on page	Directly on page

DATA SOURCES



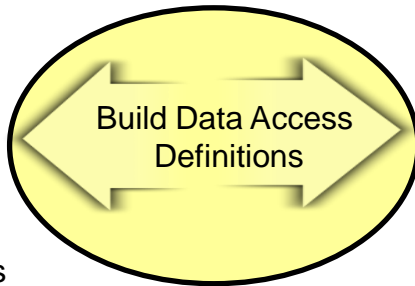
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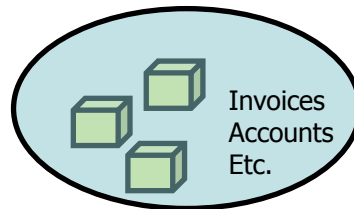
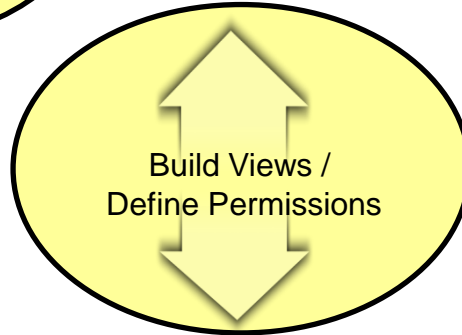
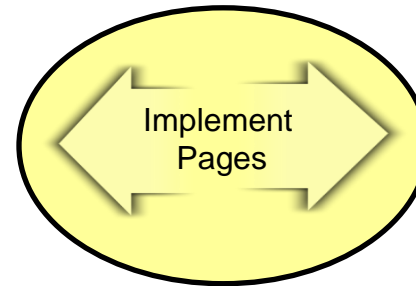
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XML Files

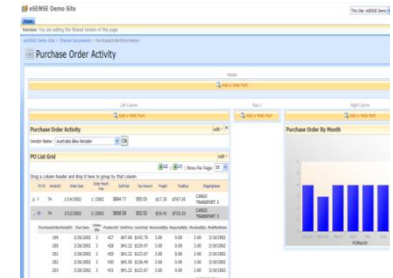


INTEGRATION TECHNOLOGY



LIBRARY OF BUSINESS DATA

SHAREPOINT SITES



We have several typical pages we want to create in our data portal. These four pages demonstrate some of the more popular page types.

1. Building a “dashboard” (data-centric Intranet/Extranet page)
2. Building a page with “Personal” data
3. Building a “details” page
4. Building a Query data page

A dashboard allows us to take advantage of the SharePoint web part UI which is a natural for this type of data.



Sample Dashboard (MS-CRM)

Multi-links

Clicks directly to CRM System

Export to Excel

Standard document libraries

eSENSE Demo Site

Home

eSENSE Demo Site > Shared Documents > SamplePortal

SEC Medical Systems
SEC Medical Systems Sales and Marketing

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Accounts By Region

TerritoryName : Americas

Acct. #	Account	Territory	Owner
456	American Medical Systems	Americas	Aida Catic
499	First Health	Americas	Dawn Evans
379	NorthCentral Hospitals	Americas	Aida Catic

Estimated Value Chart

Standard SP Lists

Alternate formats (charts, etc.)

Drop-downs with lookups

We have several typical pages we may want to create in our data portal

1. Building a “dashboard” (data-centric Intranet/Extranet page)
2. Building a page with “Personal” data
3. Building a Query data page
4. Building a “details” page

A personal data page allows each user to see data relevant to them. It automatically filters based on their user ID

“MyData” functionality

Data specific to User ID

eSENSE Demo Site | Welcome Mike Cox | My Site | My Links |

eSENSE Demo Site

Home | This Site: eSENSE Demo | | Site Actions

eSENSE Demo Site > Shared Documents > MySalesPage

MySalesPage

Account Representative

LoginID: NSE\mike.cox
 HireDate: 2/4/2001
 FirstName: Michael
 LastName: Cox

My Stores and Accounts | Performance to Quota

Rows Per Page: 50

AccountNumber	StoreName	OrderDate	TotalDue
AW00000697	Brakes and Gears	8/1/2001	\$27,210.30
AW00000047	Greater Bike Store	9/1/2001	\$2,705.03
AW00000471	Social Activities Club	11/1/2001	\$5,562.03
AW00000548	New Bikes Company	11/1/2001	\$2,846.87
AW00000167	Farthermost Bike Shop	2/1/2002	\$81,157.12
AW00000047	Greater Bike Store	3/1/2002	\$8,088.96
AW00000498	Quick Delivery Service	3/1/2002	\$16,184.17
AW00000485	Clamps & Brackets Co.	4/1/2002	\$44,397.07
AW00000678	Vigorous Exercise Company	6/1/2002	\$110,453.90
AW00000126	Famous Bike Sales and Service	6/1/2002	\$5,239.06
AW00000007	Associated Bikes	7/1/2002	\$3,944.22
AW00000440	Hobby Store	7/1/2002	\$859.24
AW00000115	Security Racks and Locks Wholesalers	8/1/2002	\$3,260.53
AW00000107	Wholesale Bikes	8/1/2002	\$5,659.67
AW00000233	Fashionable Department Stores	8/1/2002	\$64,709.74
AW00000296	Extreme Toy Store	8/1/2002	\$285.18
AW00000424	Bikes for Two	9/1/2002	\$64.81

Performance to Quota

User Filter applied to grid and chart

We have several typical pages we may want to create in our data portal

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2. Building a page with “Personal” data
3. Building a Query data page
4. Building a “details” page

A query page allows the user to make somewhat free form requests for data from a database. It could be considered a “reporting light” page.

Allow users to specify multiple parameters

eSENSE Demo Site This Site: eSENSE Demo

Home Site Actions

eSENSE Demo Site > Shared Documents > CRMParameters

Request Opportunity Data
 SEC Medical Systems Opportunities

Opportunities

Territory : Americas

And Owner : Aida Catic

And Est. Close (Start Date) : 12/14/2001

And Est. Close (End Date) : 12/14/2007

Account	Territory	Opportunity	Est. Value	Est. Close Date	Close Probability	Actual Value	Actual Close Date	Last Modified	Acct. Owner
NorthCentral Hospitals	Americas	HeartStrong System	\$150,000	6/5/2007	30			12/14/2007 7:22:46 PM	Aida Catic
NorthCentral Hospitals	Americas	L45 Laser Accessories	\$42,000	6/19/2007	20			12/14/2007 7:22:46 PM	Aida Catic

We have several typical pages we may want to create in our data portal

1. Building a “dashboard” (data-centric Intranet/Extranet page)
2. Building a page with “Personal” data
3. Building a Query data page
4. Building a “details” page

A details page is usually called from another page and typically passes information in the query string.


Specify the parameters in the Querystring.

http://atpsvms7/Shared%20Documents/AW2.aspx?POID=167

[Home](#)
[Site Actions](#)

eSENSE Demo Site > Shared Documents > AW2

Purchase Order Details



Purchase Order Header

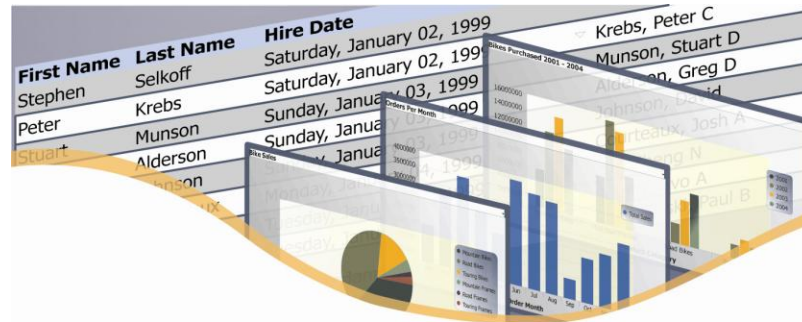
PO ID: 167
 Vendor: Australia Bike Retailer
 Ship Method: OVERNIGHT J-FAST
 Status: 4
 Order Date: 7/1/2002
 Ship Date: 7/10/2002
 Total Due: \$785.61

Purchase Order Detail

POID	Line Item	DueDate	OrderQty	ProductID	UnitPrice	LineTotal	ReceivedQty	RejectedQty	StockedQty	ModifiedDate
167	395	7/15/2002	3	432	\$39.12	\$117.37	3.0	0.0	3.0	7/8/2002
167	396	7/15/2002	3	433	\$43.40	\$130.19	3.0	0.0	3.0	7/8/2002
167	397	7/15/2002	3	434	\$39.12	\$117.37	3.0	0.0	3.0	7/8/2002
167	398	7/15/2002	3	435	\$37.02	\$111.07	3.0	0.0	3.0	7/8/2002
167	399	7/15/2002	3	436	\$41.30	\$123.89	3.0	0.0	3.0	7/8/2002
167	400	7/15/2002	3	437	\$37.02	\$111.07	3.0	0.0	3.0	7/8/2002



Visualizer Demo



eSENSE Visualizers

SharePoint Data Visualization

Work With Business Data In SharePoint!

5 STEPS IN 5 MINUTES

- 1 Connect to A Data Source**
- 2 Select And Filter Data**
- 3 Configure Display Options**
- 4 Assign Permissions**
- 5 Drag And Drop Visualizers**

*No Custom Development Required;
Multiple Grid & Chart Display Options;
Supports ALL 2003 & 2007 Versions of SharePoint;*

Learn More Today About NSE's eSENSE Solutions For SharePoint
Download a free, full-function 30-day trial at WWW.NSE.COM;



www.nse.com

- ❑ Office/SharePoint is so easy to use and so prevalent in many organizations that it should be **the development platform of choice** for knowledge worker applications, especially data-centric portals.

- ❑ There are a lot of options available for configuring and displaying data.

- ❑ Follow up:
 - <http://www.nse.com>
 - mike.cox@nse.com