Building Business Solutions: InfoPath, Visio & Workflows

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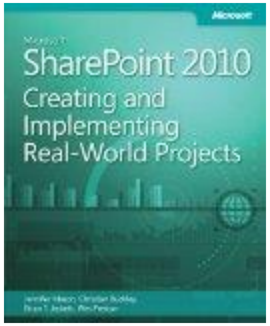
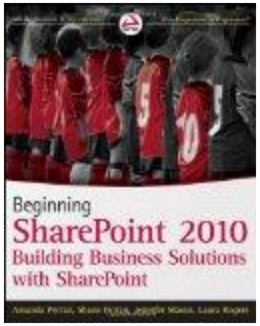
About me…

@jennifermason





@jennifermason

Let's Keep in Touch!

Email	jennifer.mason@rackspace.com
Twitter	@jennifermason
Blog	http://JenniferAnnMason.com

My Job Description

twitter
@jennifermason

- I work with users at Rackspace to answer the question.......

"Wouldn't it be great if we could do {enter thing here}, yeah it would be great! Can you please go do {enter thing here}"

In Today's Session:

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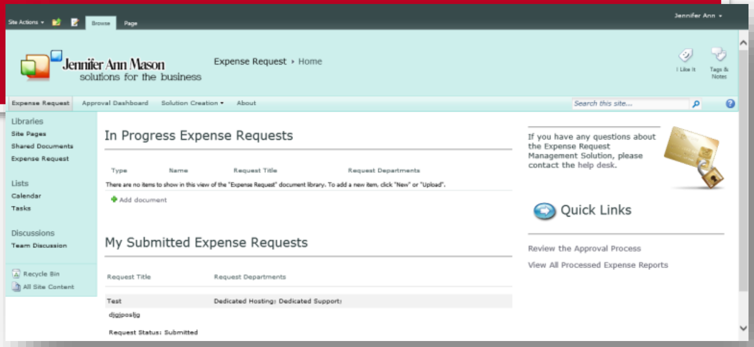
- How do we define a business solution?

- Something that can be used to address a specific, measurable business requirement
- Our Solution is No Code (no syntax or semi-colons)
- Techniques covered today apply to multiple solutions!



Our Total Solution: Part 1

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Part 1: The For

Part 3: Automat

Goals!

- Understand the Problem
- Create a Plan
- Build the Form

Our Problem

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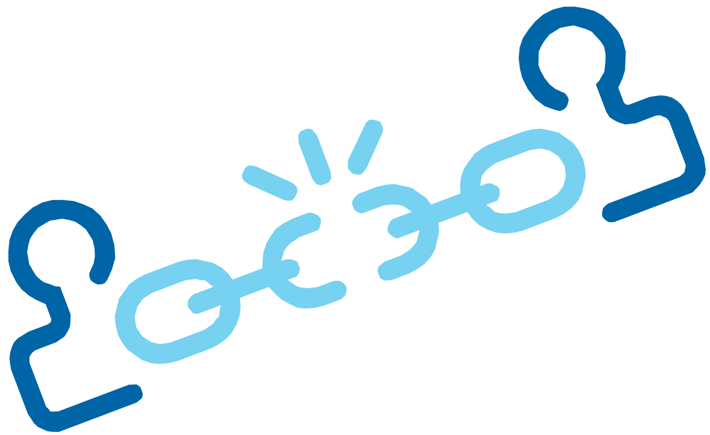
- Users need to a way to easily request to spend department funds.
- Managers need a way to see all requests and approve based on overall department needs.



Current Solution

- Users email their managers for approval.
- Managers approve expenses without comparing with the larger context. This has caused some division among departments.

Our Final Solution

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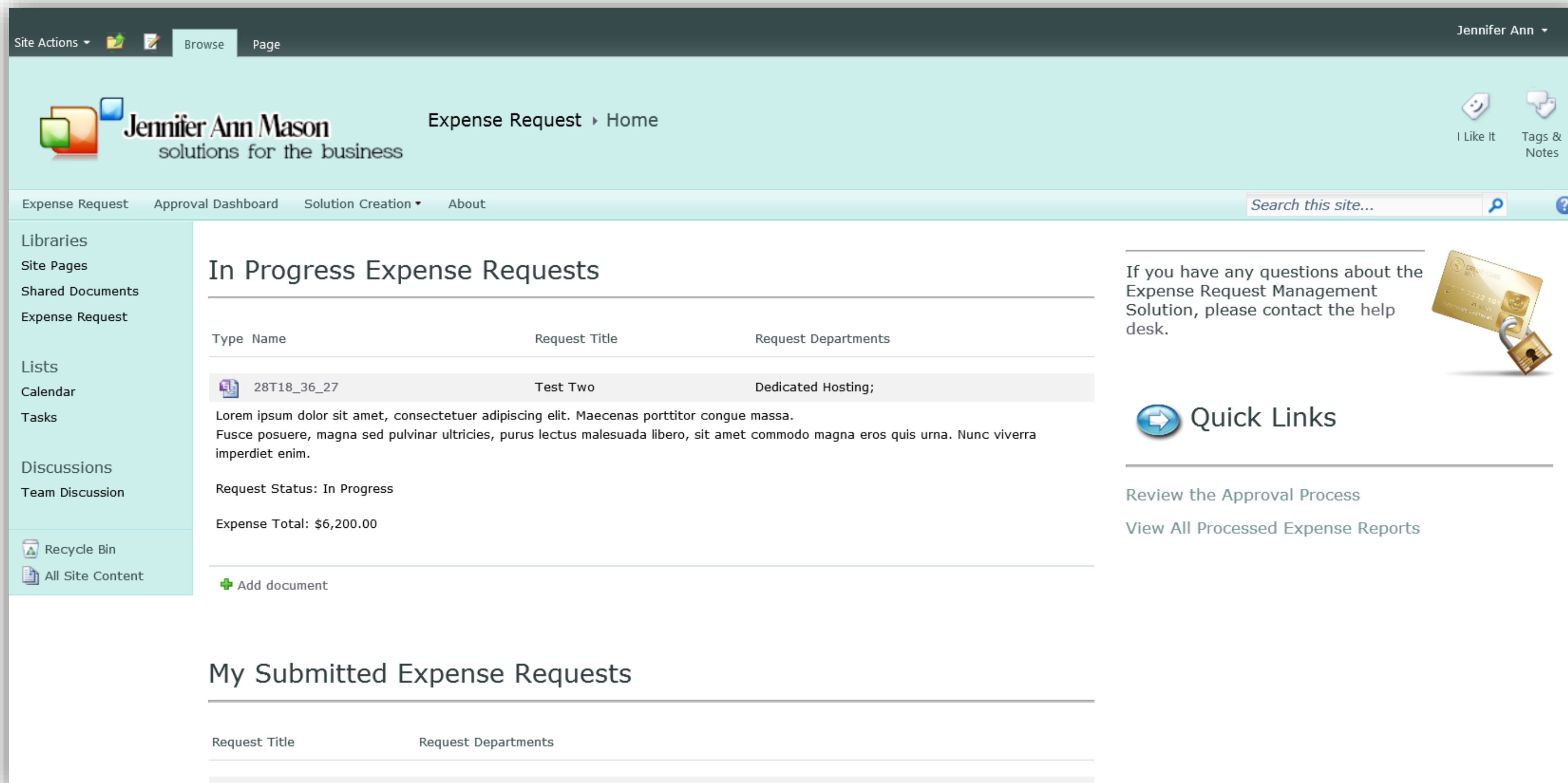

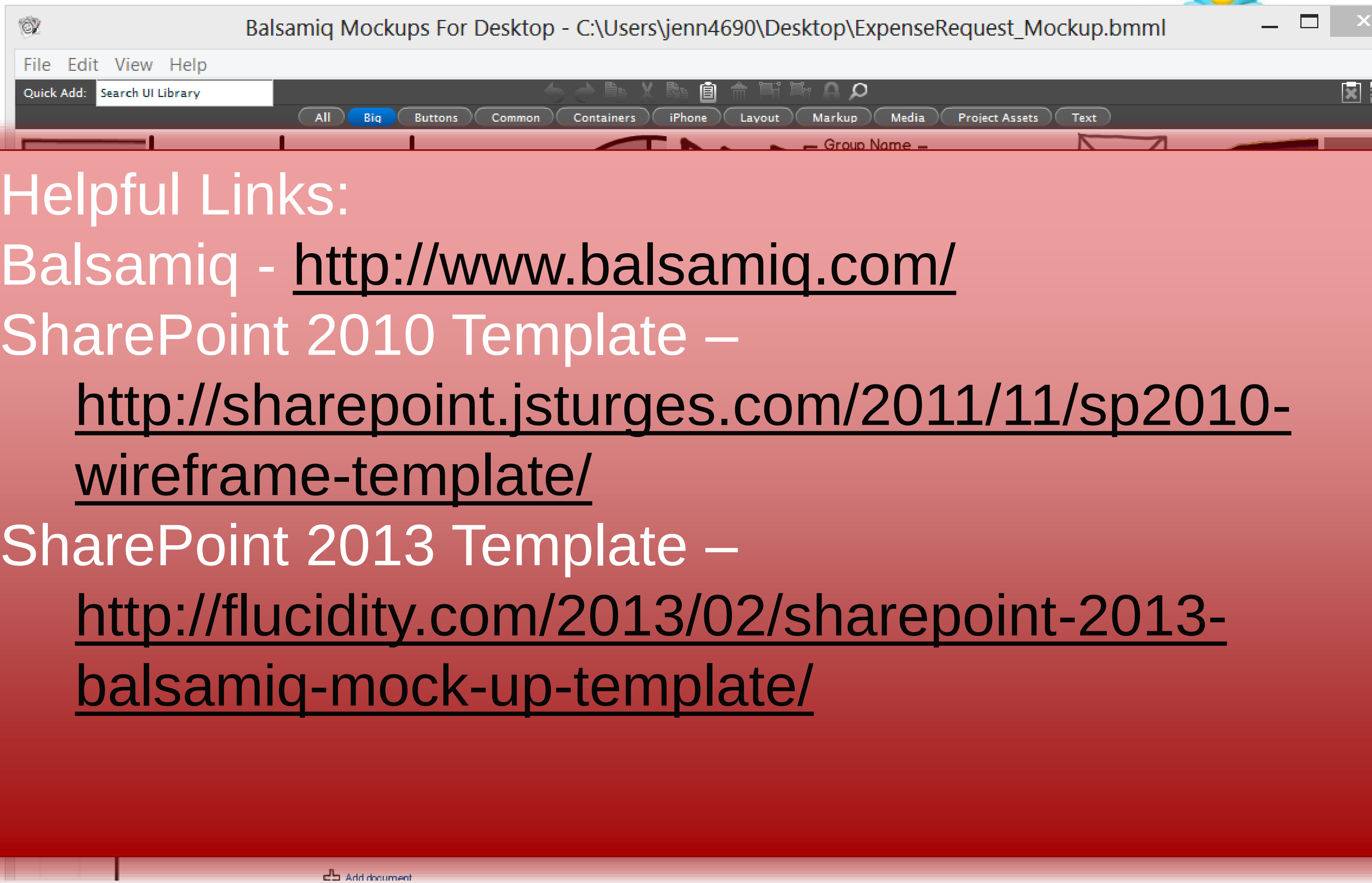

Helpful Links:

Balsamiq - http://www.balsamiq.com/

SharePoint 2010 Template – http://sharepoint.jsturges.com/2011/11/sp2010-wireframe-template/

SharePoint 2013 Template – http://flucidity.com/2013/02/sharepoint-2013-balsamiq-mock-up-template/

Building the Form

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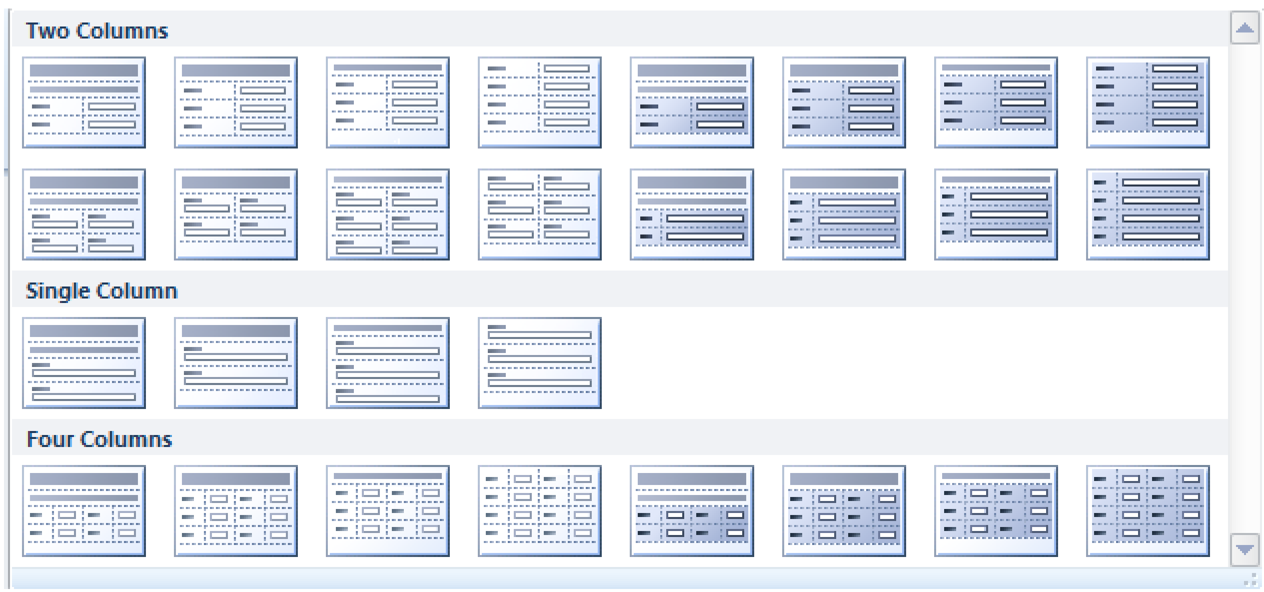
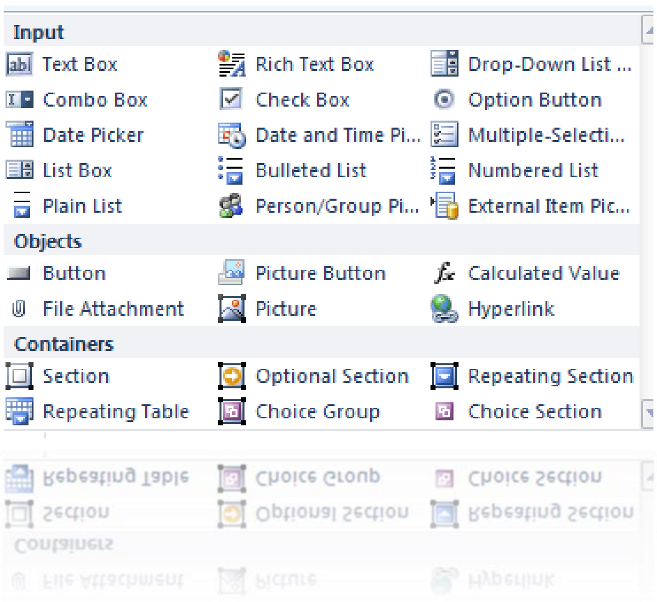
- Fundamentals
  - Form Layout
  - Form Controls
  - Data Sources
  - Form Publishing

Form Layout

- On the Page Design tab, pick a page template layout first
- On the Insert tab, insert needed sub-tables
- Pick a color scheme to use



Form Controls



- Input
  - Fields (text, date / time, choice)
- Objects
  - Buttons, Attachments, Calculated Values
- Containers
  - Repeating Tables
  - Sections

Putting it Together

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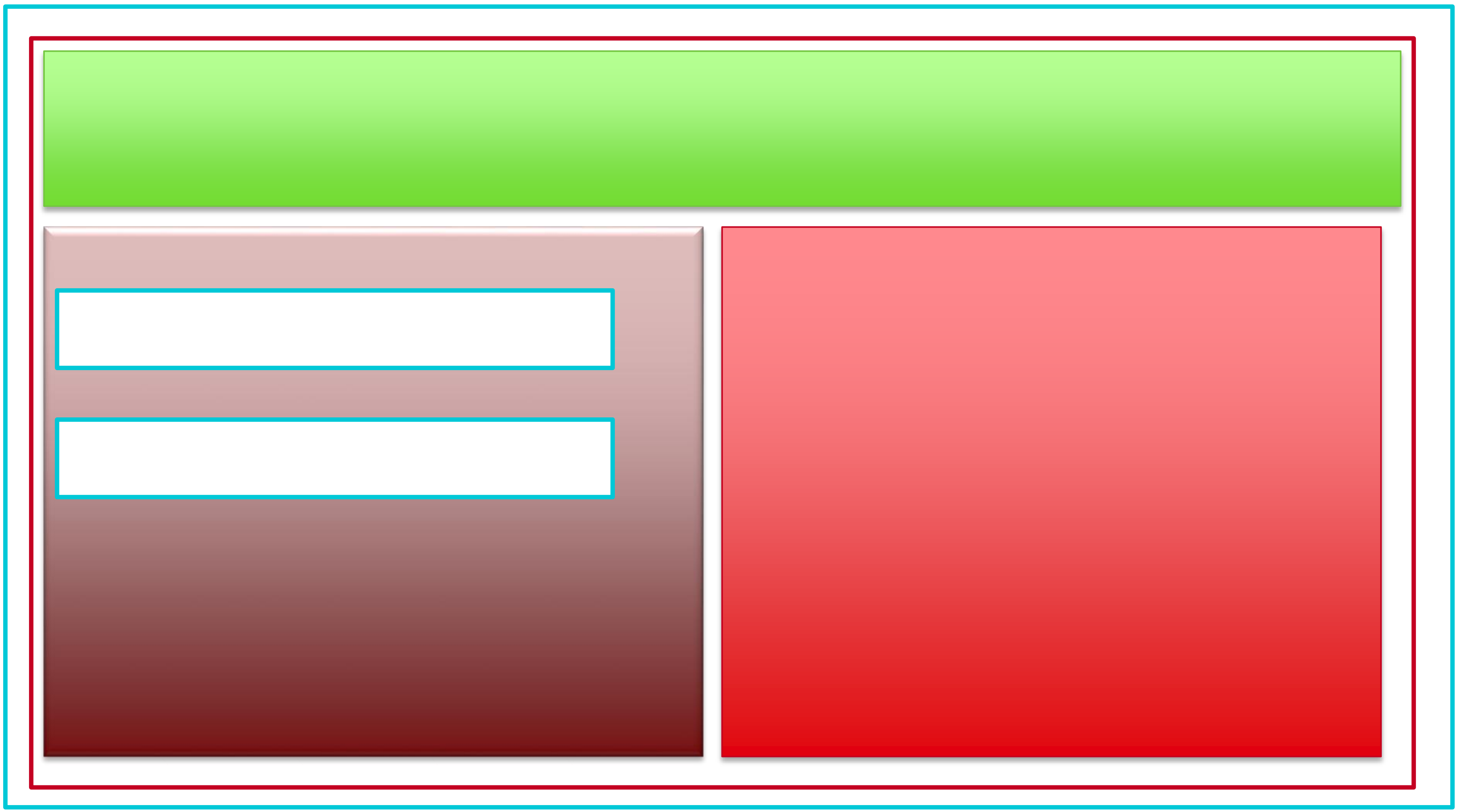

Publishing the Form

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Design the Form in InfoPath

Associate the Form with a Library in a Site

Using the Form

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User Creates New Item in Library (An Instance of the Form)

User Manually Does "Something" with Form Once Complete

Adding Rules

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User Creates New Item in Library (An Instance of the Form)

Form "Completes" Based on Form Logic & Associated Rules

InfoPath Rules

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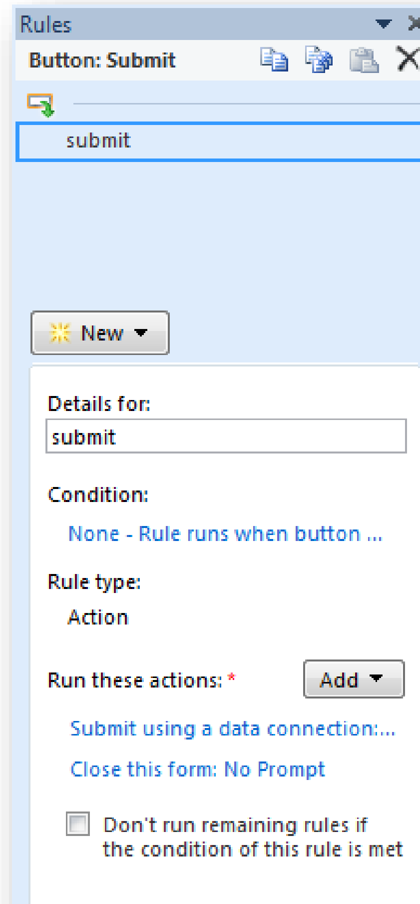
- Types of rules:
  - Validation
  - Formatting
  - Action
- Different Rules Based on Control Type
- Create multiple rules on any one control
- Common Rules:
  - Receive / Submit Data
  - Hide / Show Sections
  - Validate Data Entry



Add Publishing "Rules"

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1. Design the Form in InfoPath
2. Create a Data Connection in the Form to "Submit" the Form
3. Add a Control to the Page that will Trigger the Data Connection
4. Associate the Form with a Library in a Site

Putting it Together

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Our Total Solution: Part 2

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Part 1: The Form

Part 2: Visio Services

Goals!

- Utilize existing Office Tools
- Create a Rich, Interactive Solution
- Provide Visual Aids

Design

Our Final Solution

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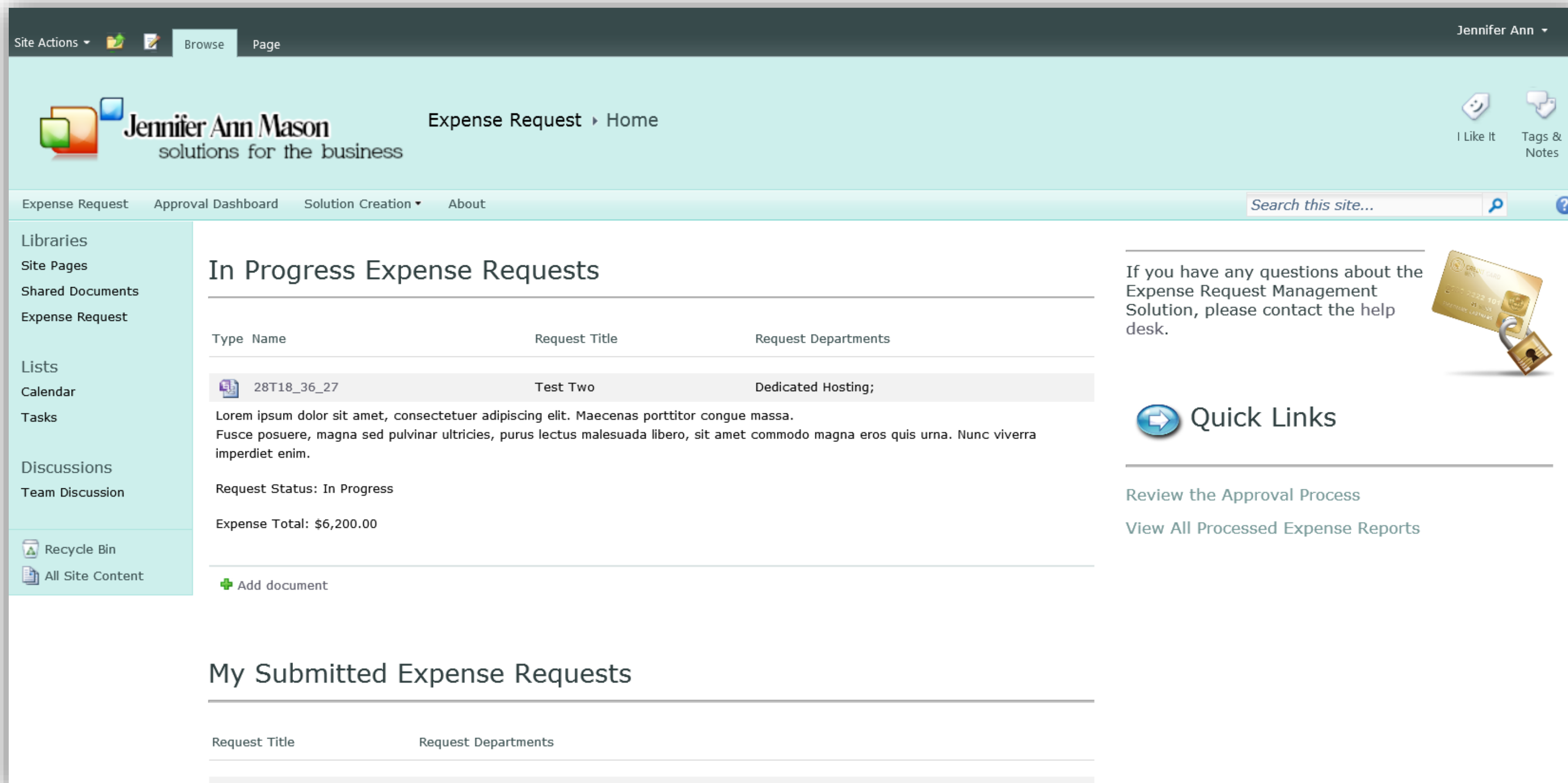

Describing Process

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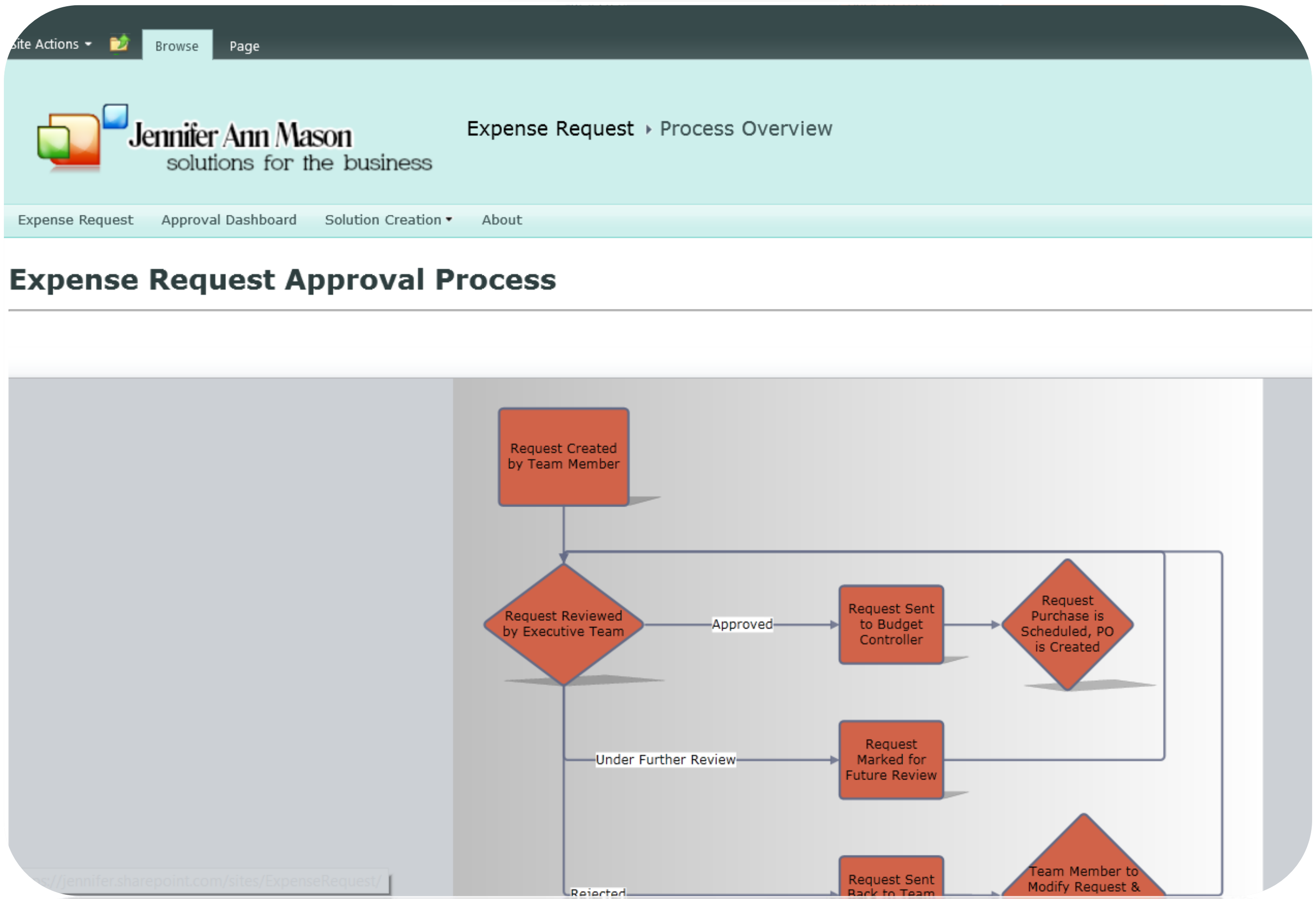

Driving Process

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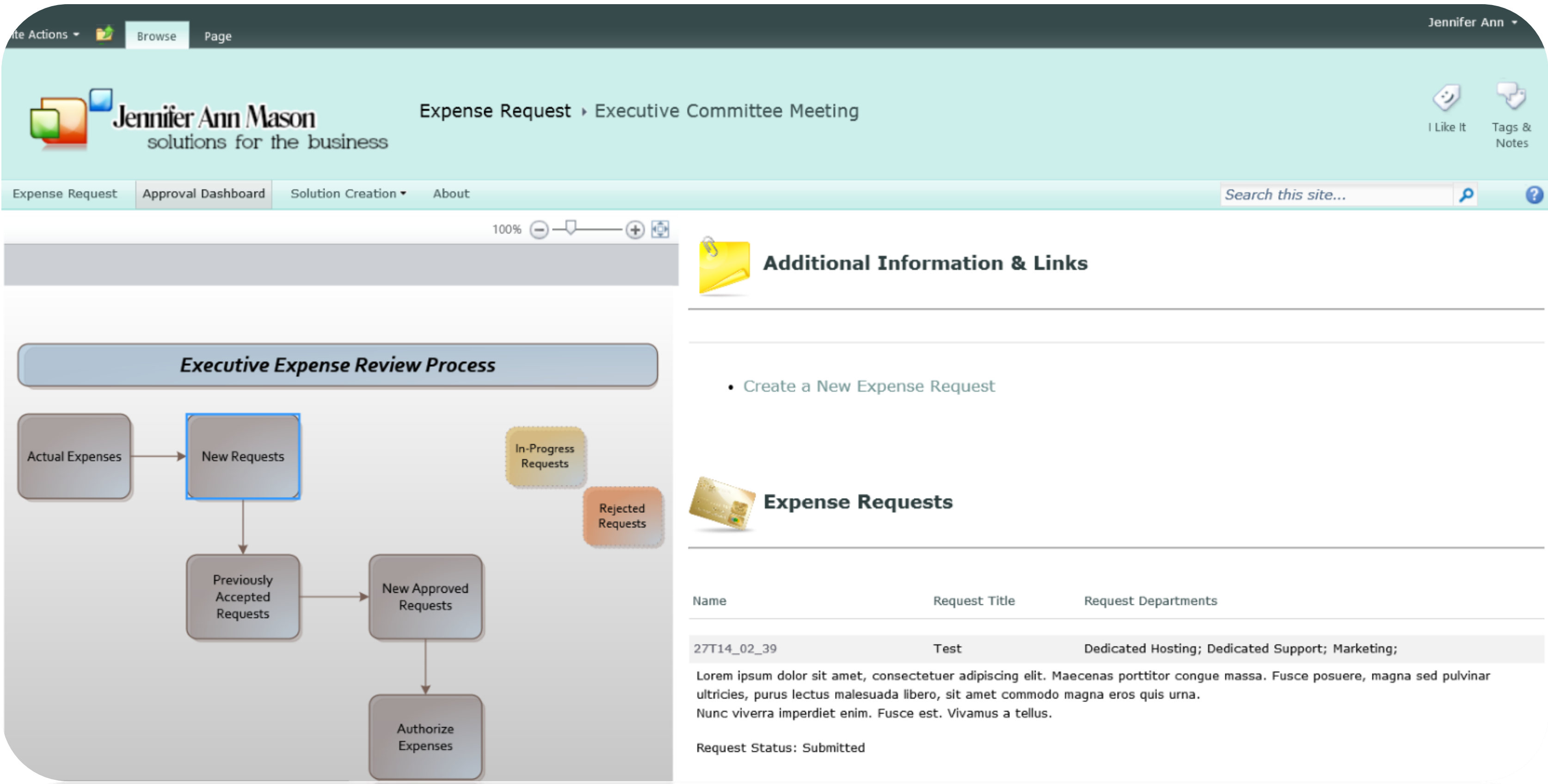

Goals

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- Use the tools that are common and familiar to enhance our existing solution

- Examples:
  - –Display our Process
  - –Provide Interactive Experience for Decision Makers

The Tools

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- Visio
  - Premium vs. Professional
    - http://office.microsoft.com/en-us/visio/visio-edition-comparison-FX101838162.aspx
- Visio Services Web Part
- Any SharePoint Page

The Process

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- Build Visio Document
- Save as Web Drawing
- Upload to SharePoint
- Add Visio Web Part to Page
- Configure Web Part to use Uploaded Document

Helpful Hints!

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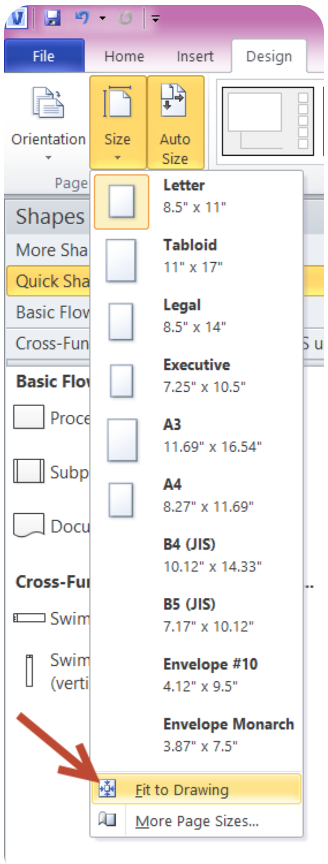
- Fit to Drawing
  - Size the drawing based on the contents, provides the best viewing experience



Visio Web parts

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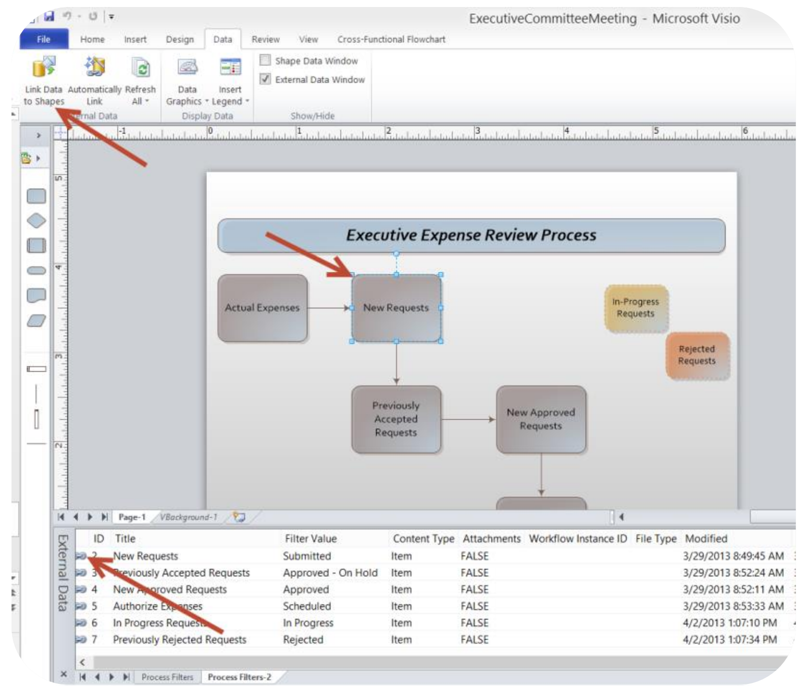
Advanced Options

- Data Connections
  - Connects shapes to data sources, such as SharePoint lists or SQL Databases

  - *Don’t forget: Kerberos required for “double hops”*



Data Connection Example

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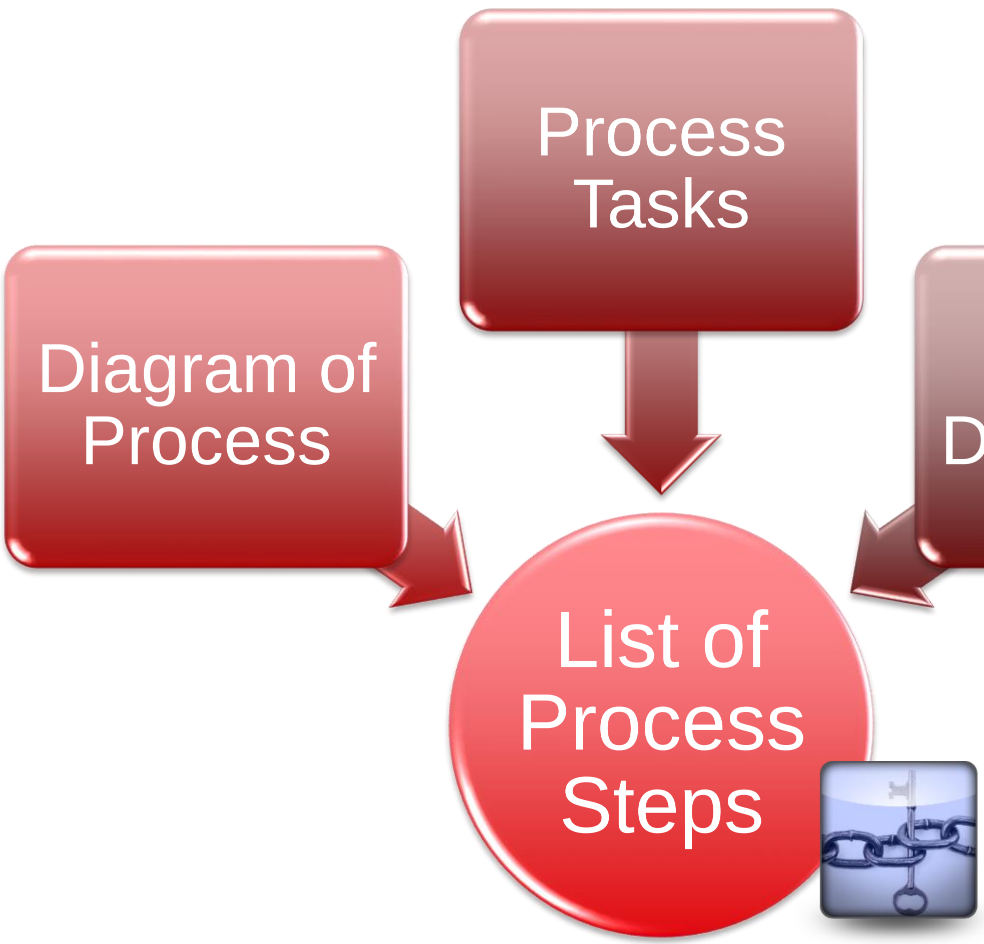

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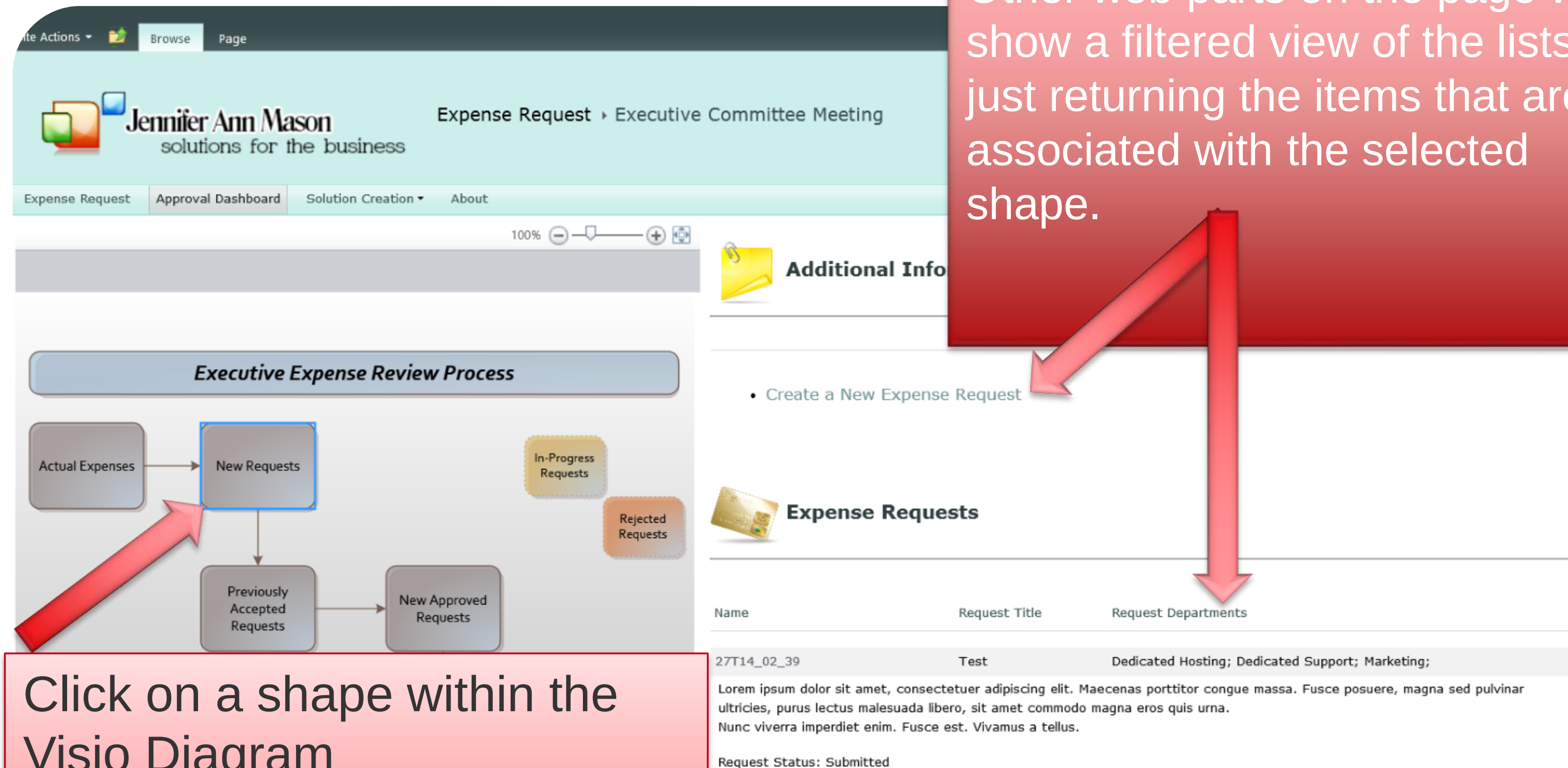
Data Connection Example

Other web parts on the page will show a filtered view of the lists, just returning the items that are associated with the selected shape.



Click on a shape within the Visio Diagram

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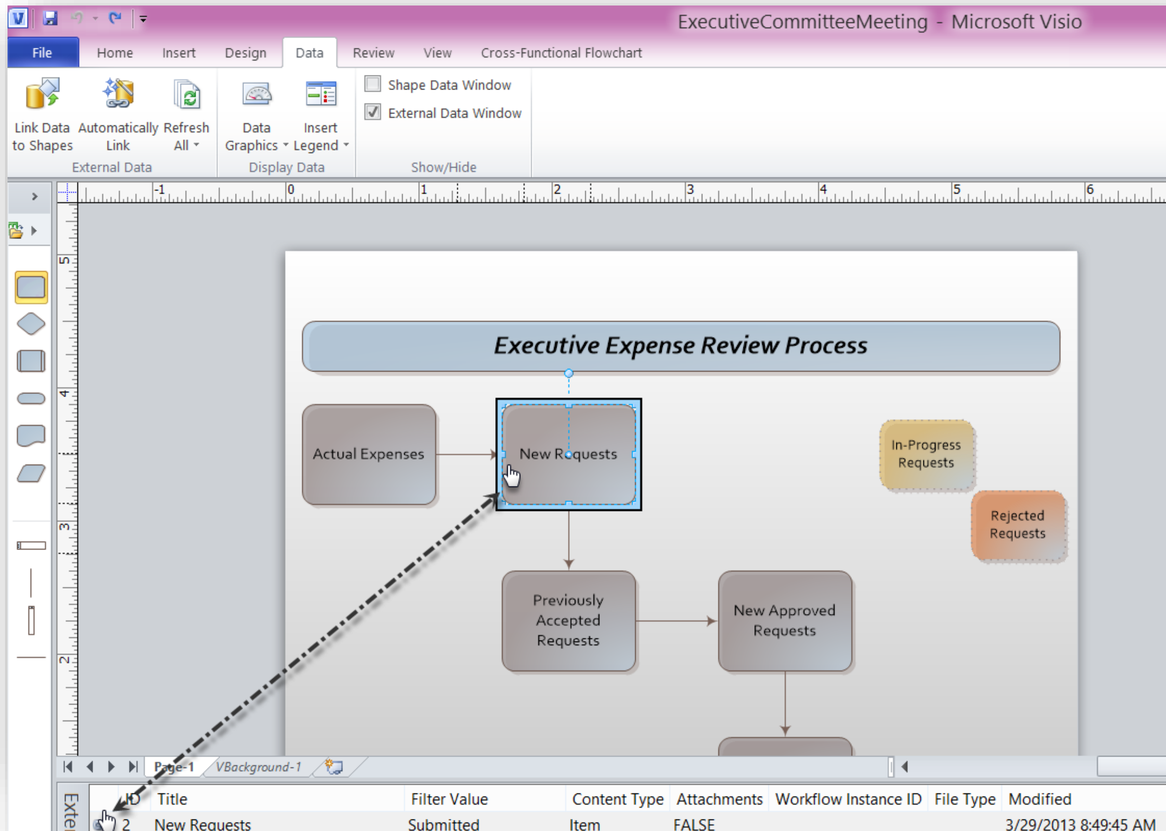
Making it Work

- Create a Custom List for Process Phases
- Add a Lookup Column to Each Associated List or Library
- Connect Process Phases List with Visio Diagram



Data connections

Our Total Solution: Part 3

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Part 1: The Form

Part 2: Visio Services

Part 3

Goals!

- Automate Manual Process
- Provide Easy Access

Our Final Solution

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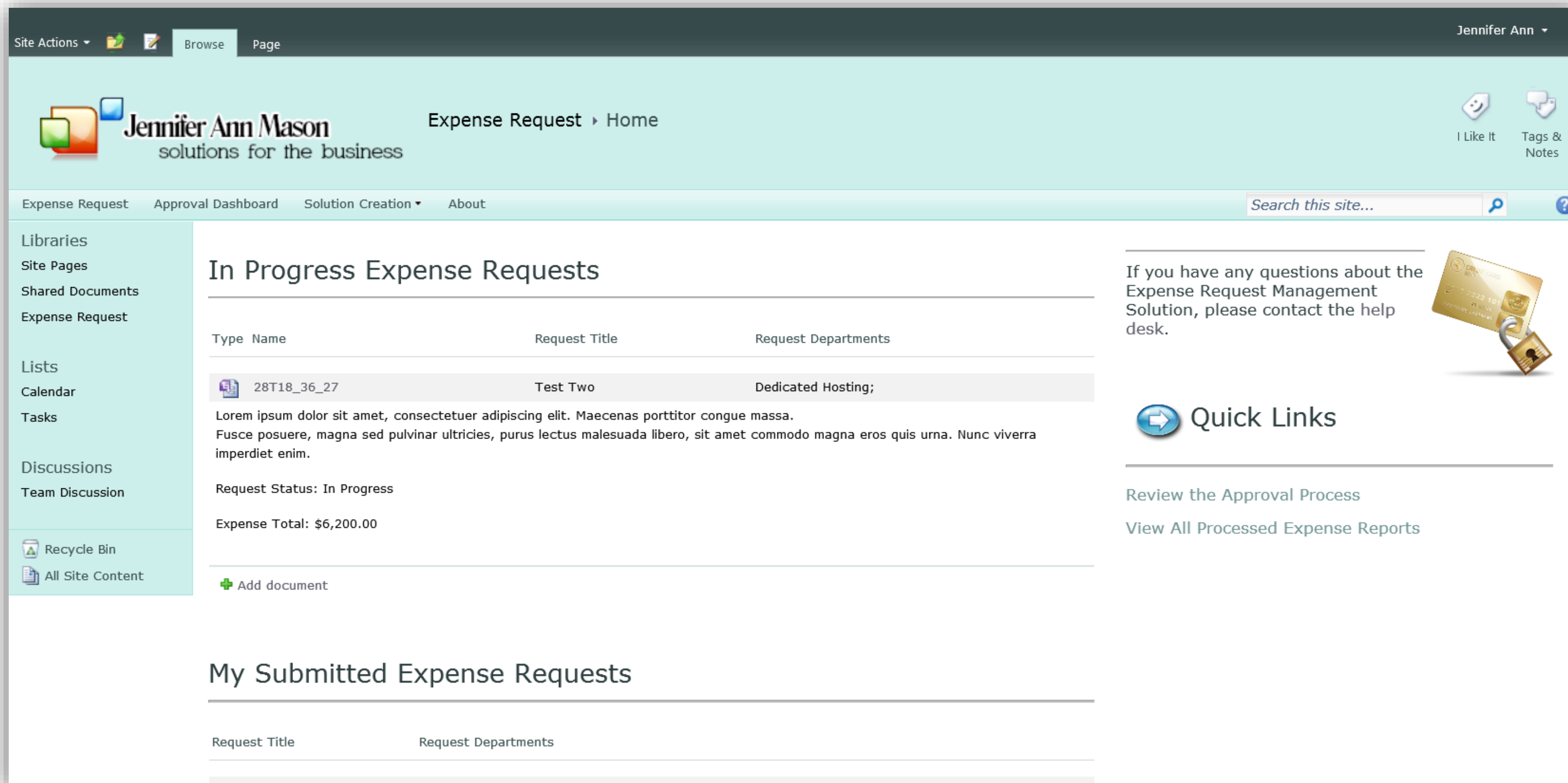

Single Management Location

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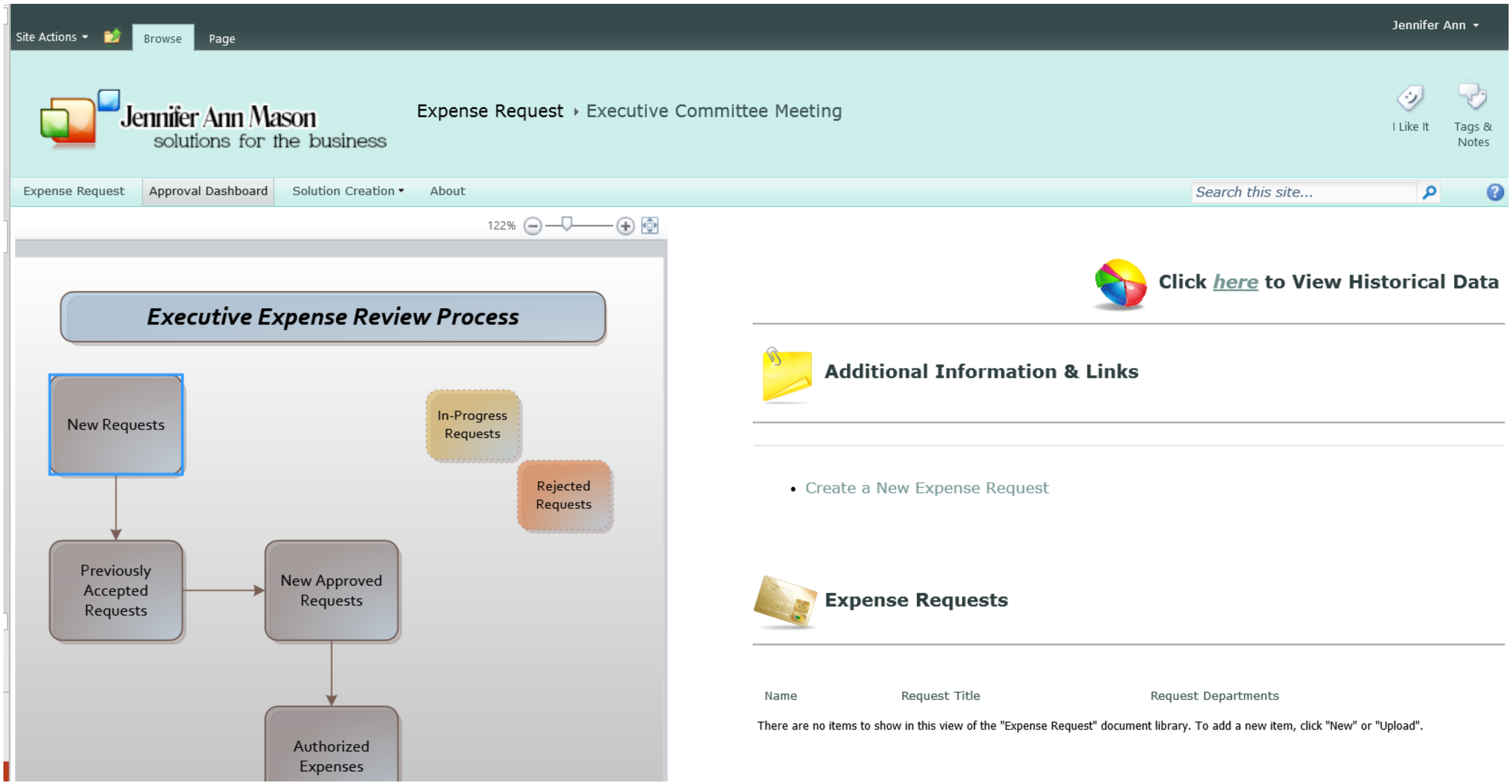

Automating Process

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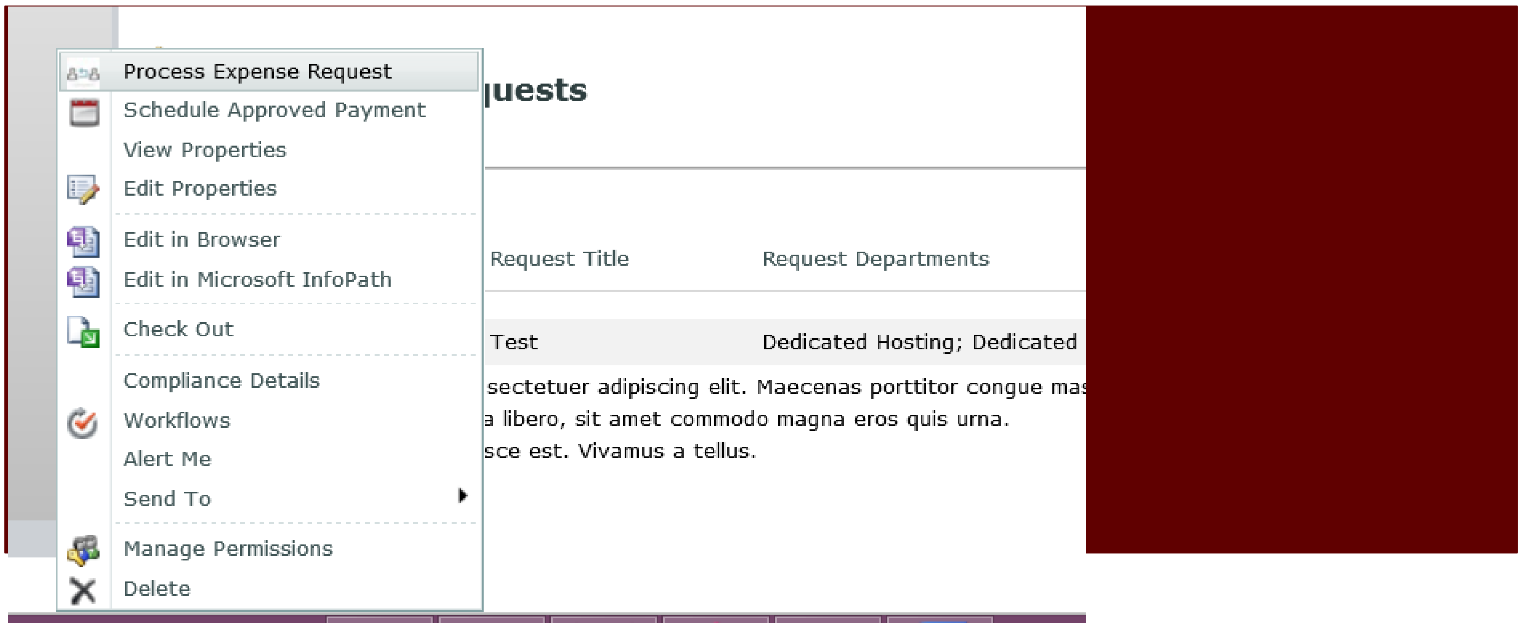

Introduction to Workflow

Triggers

- Manual, on Creation, on Change

Conditions

- If WHAT then do something

Actions

- This is the something that happens according to the condition

Steps

- The order of progression of the workflow

Impersonation

- Running workflows with elevated permissions

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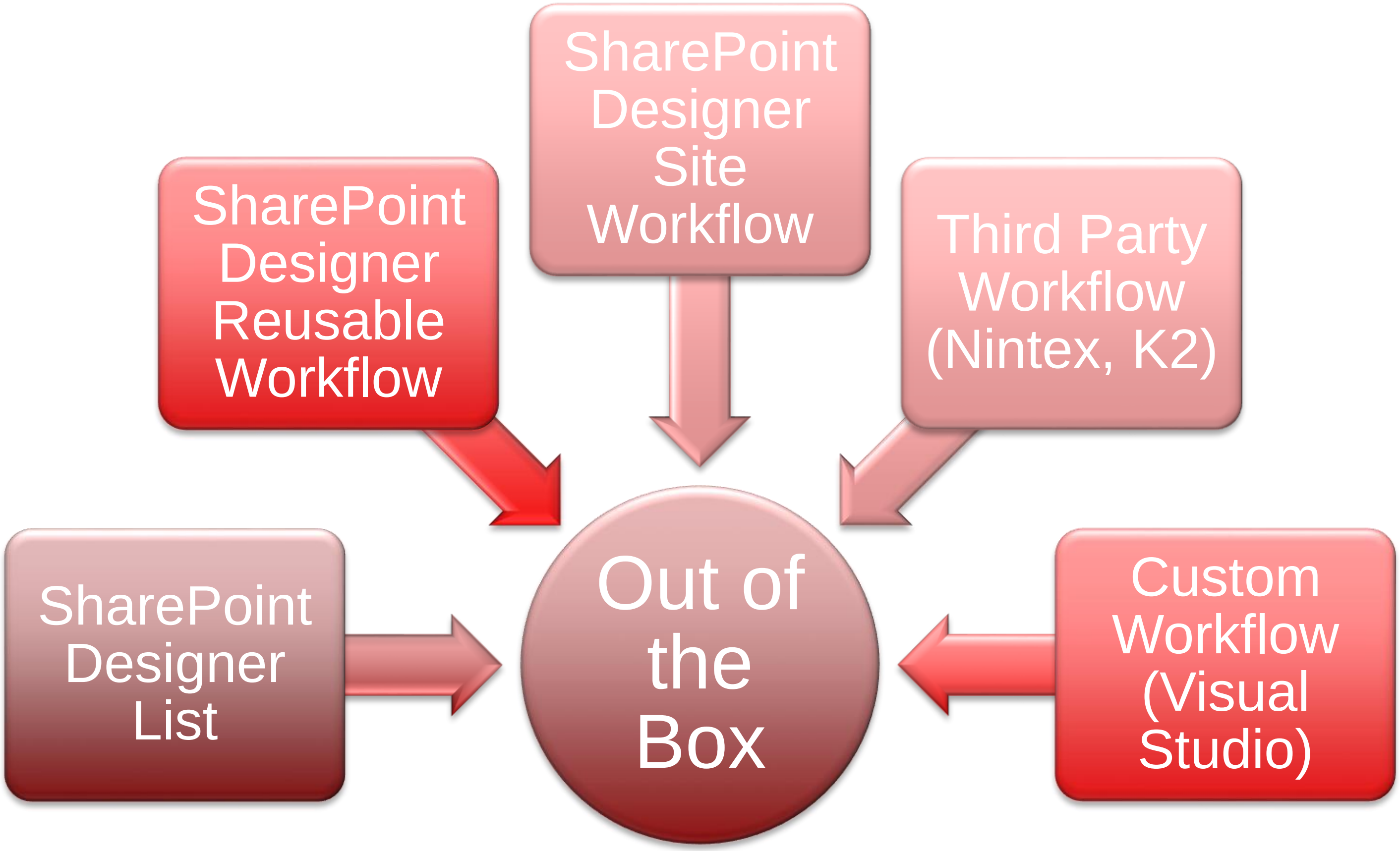
Workflow Options



Remember…….

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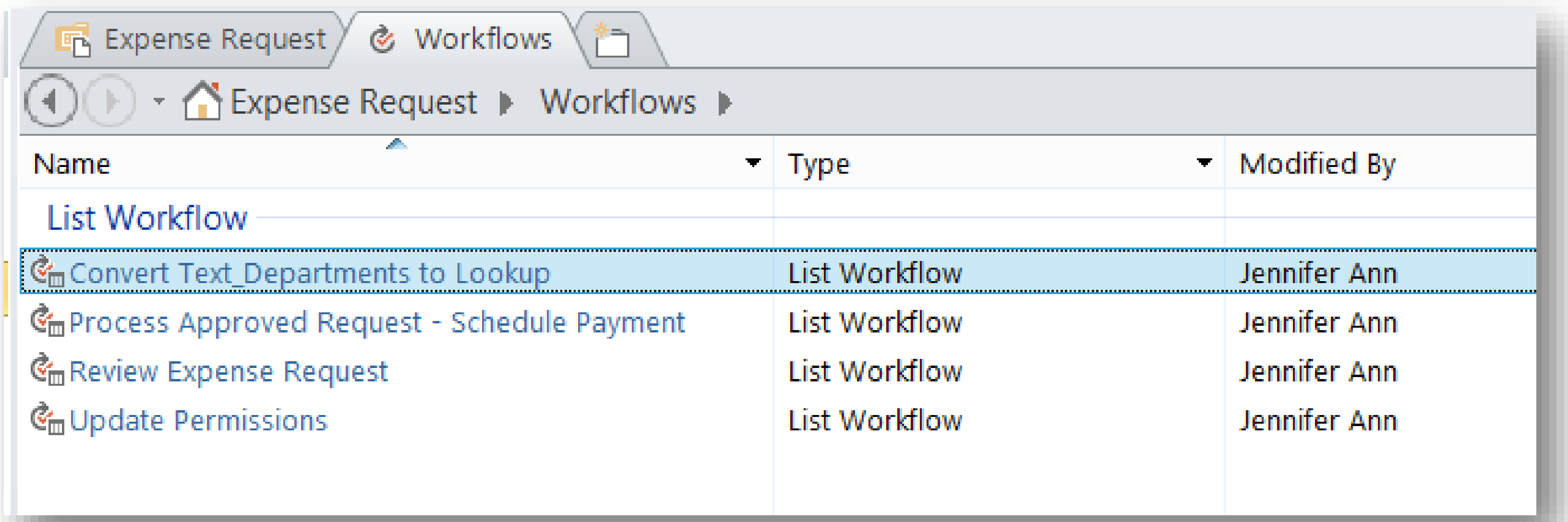
- Just because you have a hammer, it doesn't make everything a nail!

- Workflow is a powerful feature set, but the best advice is to use it within its limitations.

- Go custom, when custom makes sense!

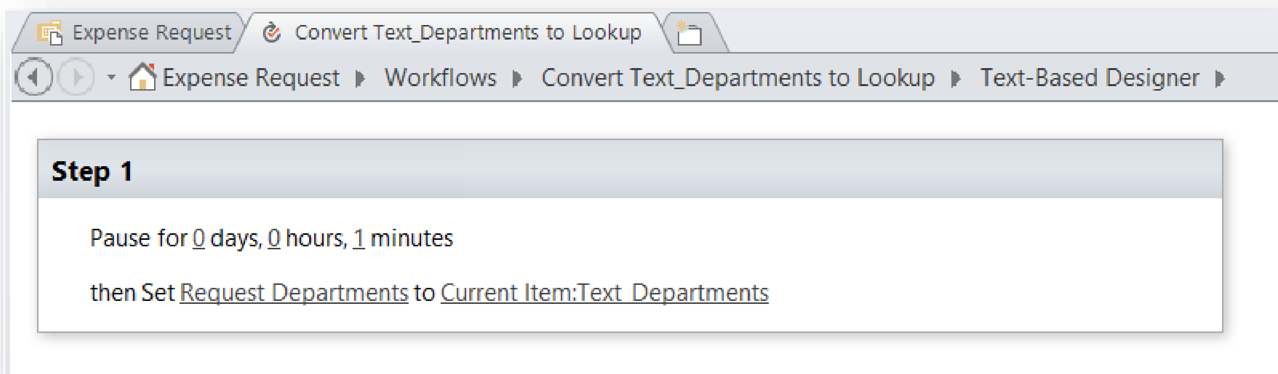
List Workflow

Our Examples



Example 1

- Convert Text_Departments to Lookup
  - InfoPath doesn't recognize lookups the same way as a SharePoint list. To work around this limitation, we have created a workflow that will convert what we publish from InfoPath to the lookup column in the list.



Pause

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- Tool for troubleshooting workflow errors
- If you have multiple operations happening at once, a pause can help ensure the order of operations.
- Remember!
  - “SharePoint Minute” != “Minute”

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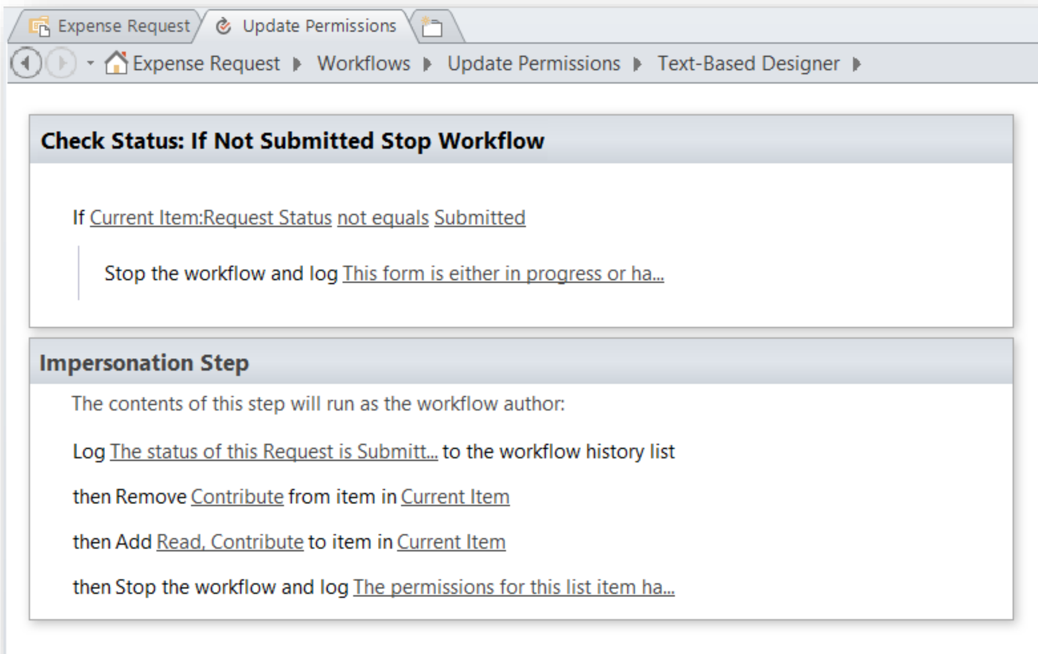
Example 2

- Update Permissions
  - Whenever an item is submitted, the permissions will be updated to ensure only those with the permissions to review have edit access.



Impersonation Steps

- By default, workflows run under the context of the current users. This means the workflow can only do things that the current user can do. If the current user cant write to a list, the workflow can't write to that list.
- Impersonation steps allow the workflow to run in the context of the person who published the workflow. This means if the publisher can write to the list, so can the workflow.

Example 3 & 4

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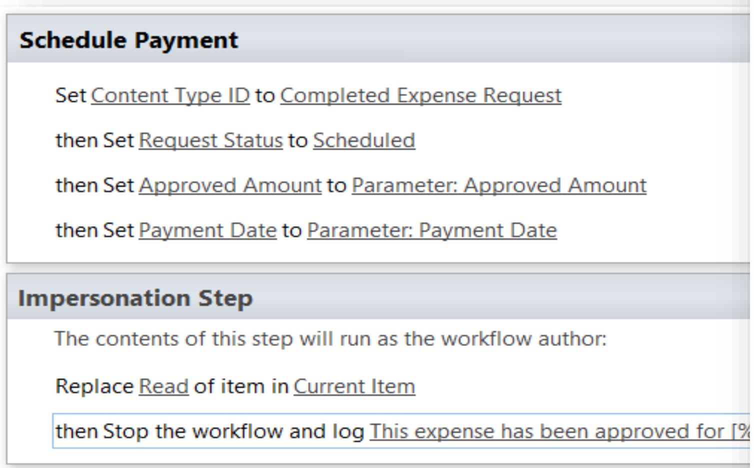
- Custom Automation
  - Workflows that “do something” based on specific needs.


Schedule Payment

Set Content Type ID to Completed Expense Request

then Set Request Status to Scheduled

then Set Approved Amount to Parameter: Approved Amount

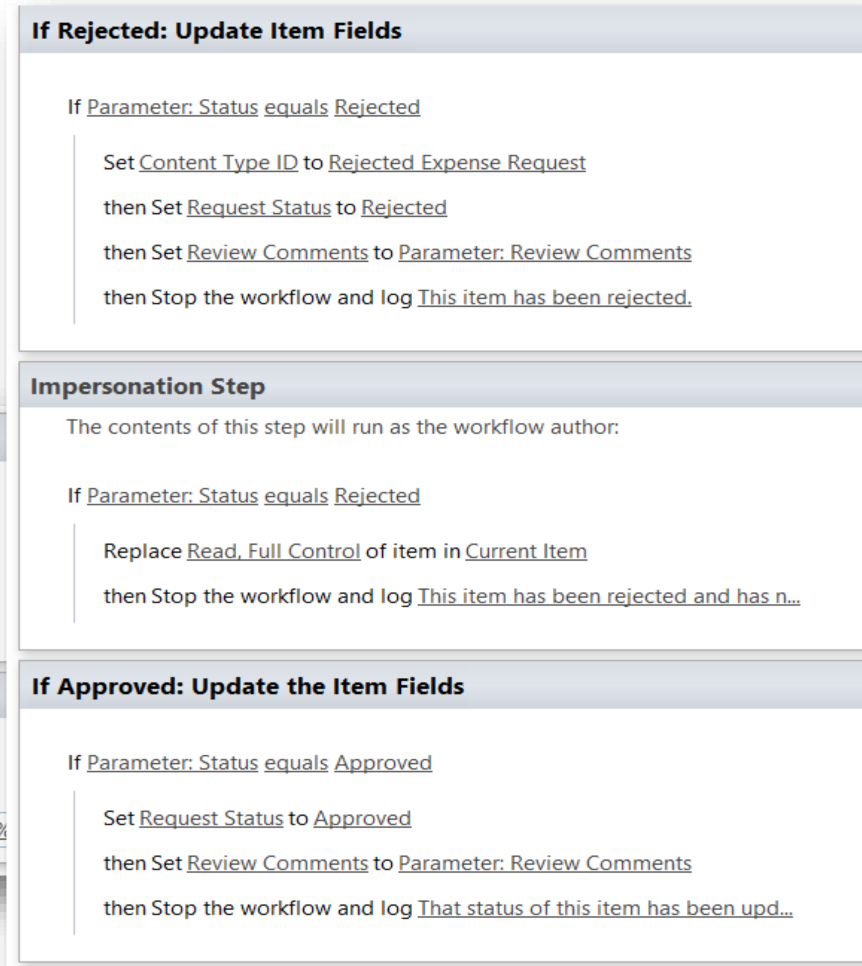
then Set Payment Date to Parameter: Payment Date

Impersonation Step

The contents of this step will run as the workflow author:

Replace Read of item in Current Item

then Stop the workflow and log This expense has been approved for [%


If Rejected: Update Item Fields

If Parameter: Status equals Rejected

Set Content Type ID to Rejected Expense Request

then Set Request Status to Rejected

then Set Review Comments to Parameter: Review Comments

then Stop the workflow and log This item has been rejected.

Impersonation Step

The contents of this step will run as the workflow author:

If Parameter: Status equals Rejected

Replace Read, Full Control of item in Current Item

then Stop the workflow and log This item has been rejected and has n...

If Approved: Update the Item Fields

If Parameter: Status equals Approved

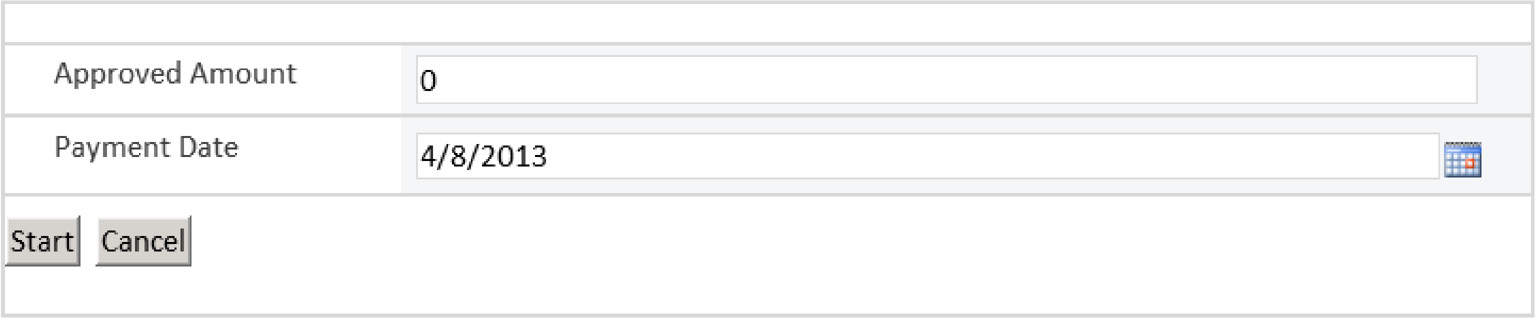
Set Request Status to Approved

then Set Review Comments to Parameter: Review Comments

then Stop the workflow and log That status of this item has been upd...

Initiation Parameters

- Initiation Form Parameters are collected from a user when the workflow starts. This is one way for you to collect data from users. Without entering this information, the workflow won't start.



- This is just one option, you can also assign tasks within the workflow to collect data from users.
- Many options….pick the best for your solution!

Tips & Tricks: Log!

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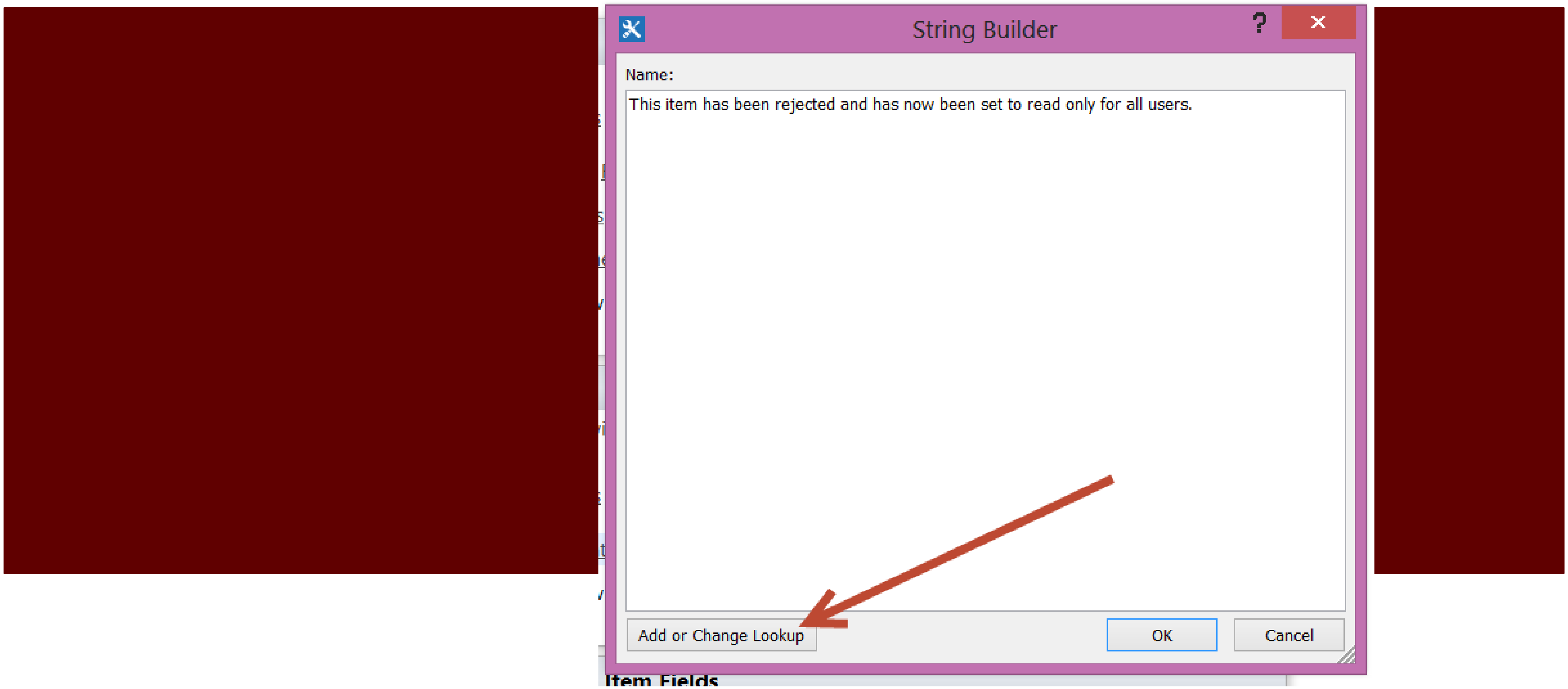
- By using the “Log to History” workflow action you can track items throughout the workflow process.



Customized Workflow Forms

Add Design & Format Elements

- Create a Rich User Experience by customizing the Workflow Forms

- Remember!
  - *Just because you* can, *doesn't mean you* should.

Our Total Solution: Part 4

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Part 1: The Form

Part 2: Visio Services

e Design

Goals!

- Build an Inviting User Interface with No Code!
- Do More with Less

Our Final Solution

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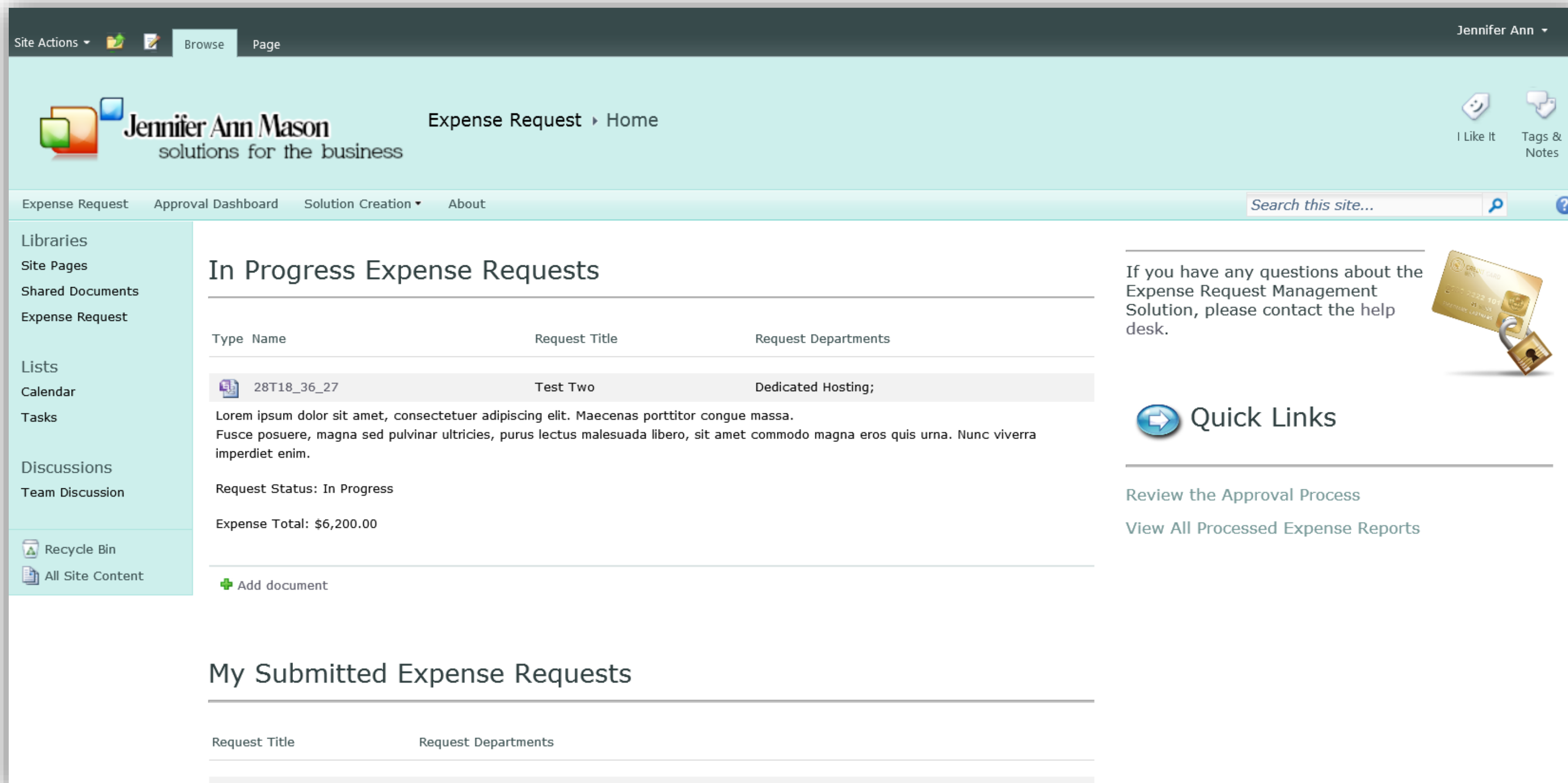

Available Tools

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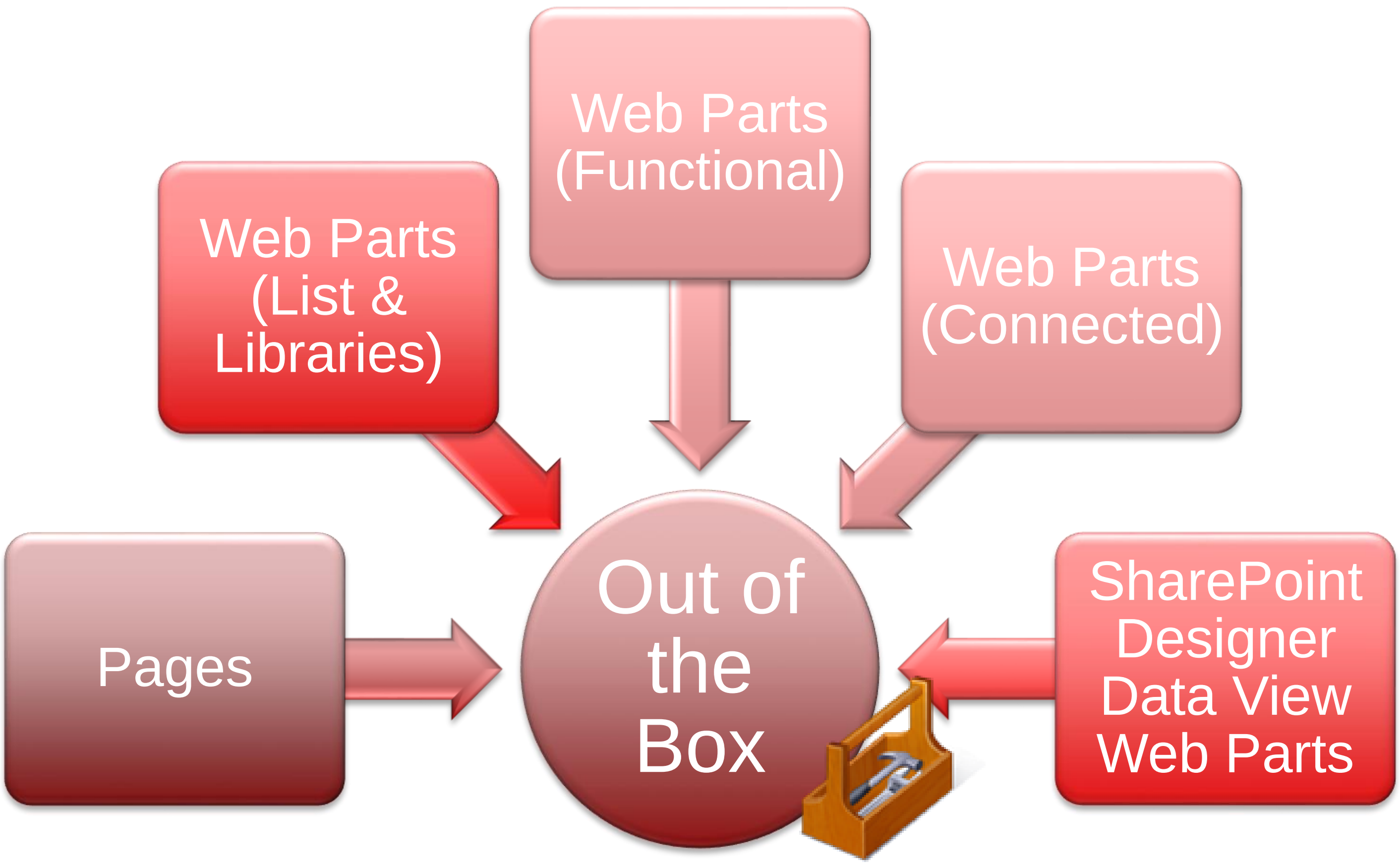

Remember…….

- Just because you have a hammer, it doesn't make everything a nail!

- DVWP can be powerful, but can also cause issues. Go custom, when custom makes sense!

Dashboards

Defining Dashboards

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Data + Context = Action

Complexity

- As easy as it can be, as complex as needed!

- The most important thing is to consider the user!
  - *What do they need?*
  - *What is the best tool to create what they need?*

Review Meeting Dashboard

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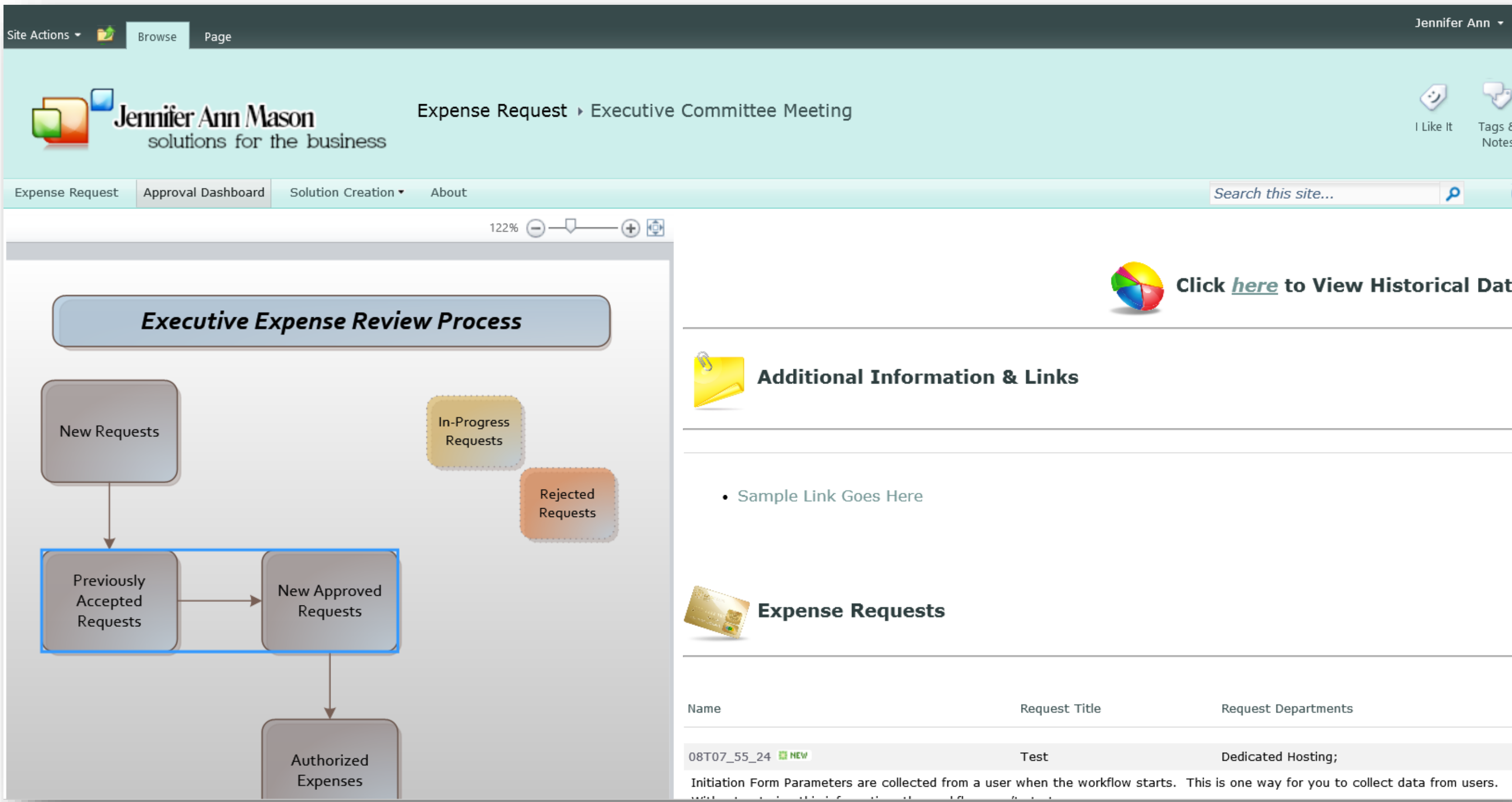

Historical Data Dashboard

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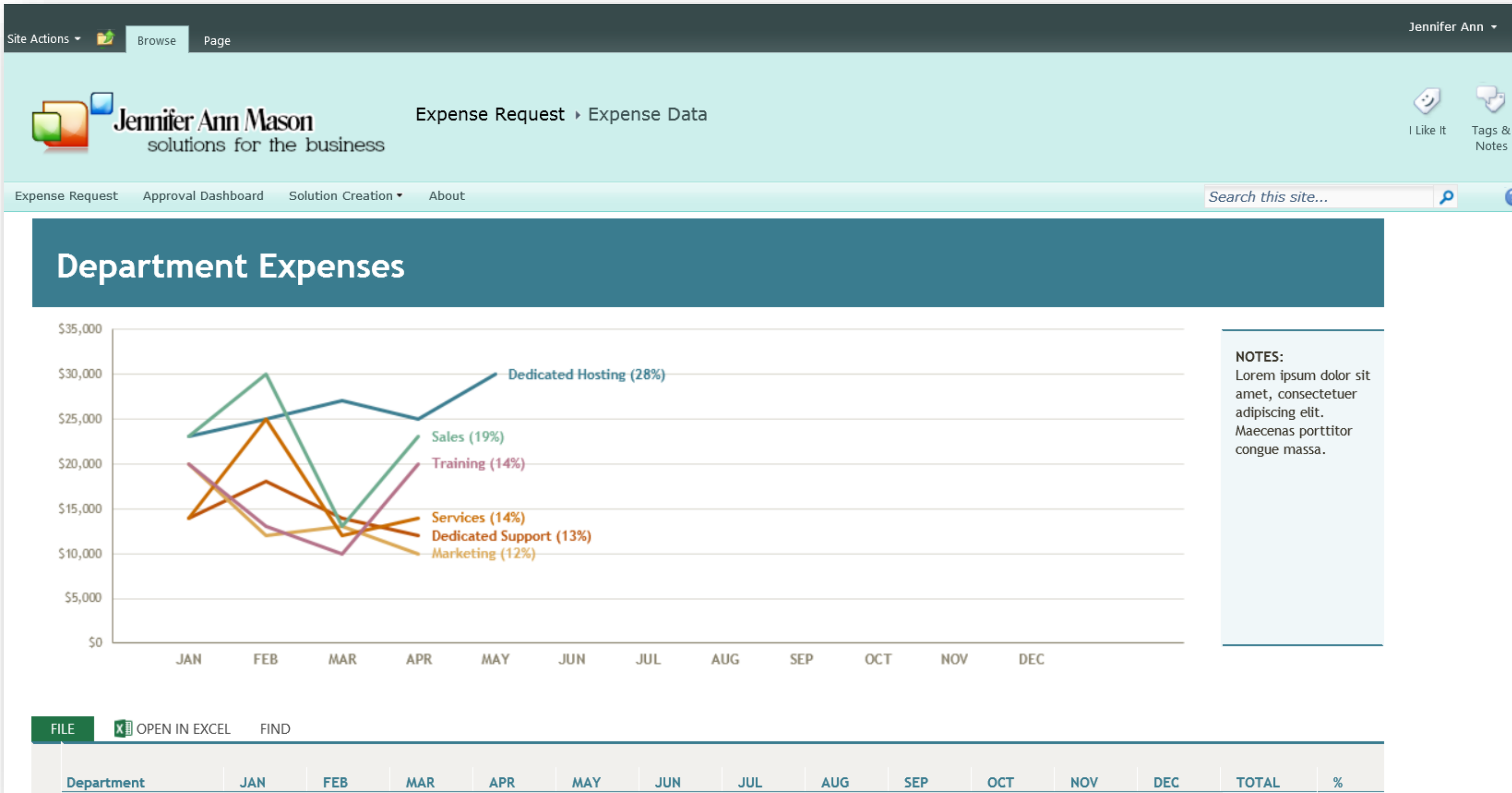

Creating Pages

Web Parts

- *List Web Parts* display “something”
  - Every list or library you create will have an associated Web Part
  - You can add multiple versions of a list web part to a single page

- *Functional Web Parts* do “something”
  - Users interact with functional web parts to do various things:
    - Search Web Parts
    - InfoPath Form Web Parts
    - Excel Services Web Parts
    - Filter Web Parts
  - Available web parts depend on your licensing and active feature set

Building Dashboards

Building the Dashboard

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1. Create Lists
2. Create List Associations (Lookup Columns)
3. Create Custom Views
4. Create Page
5. Add & Configure Web Parts on Page
6. Configure Web Part Connections

Remember…….

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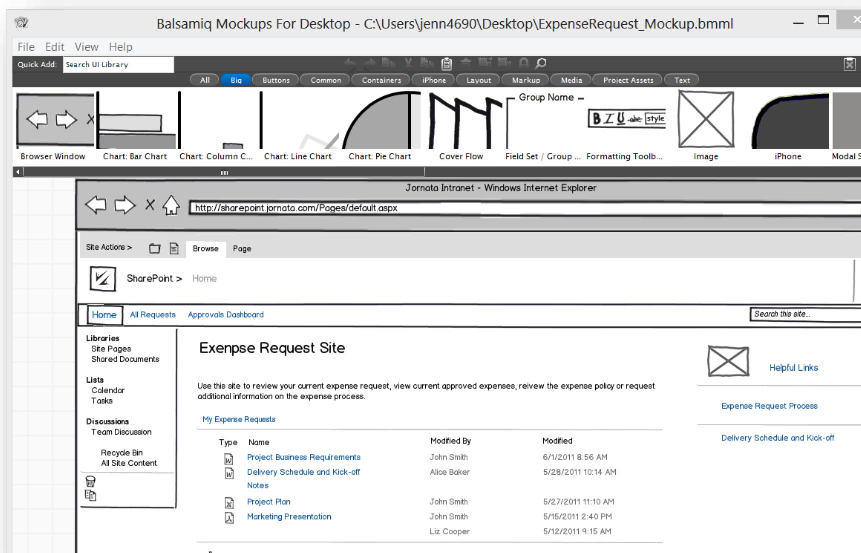
- Save time by creating mockups of potential site layout *before* spending any time building the solution



Connected Web Parts

Thanks for Coming!

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Jennifer Ann Mason
solutions for the business

- Don't Forget to Visit My Blog
  - http://www.jenniferannmason.com

- Sign Up for Office Hours at SPTechCon!
  - See me after the session for remaining available times!