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Leaders in SharePoint Solutions

**ISACA Toronto Chapter
SharePoint – Taming a Giant
Risks and Controls**

October 9, 2012

Agenda

- Introductions
- SharePoint
  - Background and Overview
  - Governance
  - Auditing Support
  - Infrastructure
- Wrap-Up

Peter Carson

- President, Envision IT
- SharePoint MVP
- Virtual Technical Specialist, Microsoft Canada
- peter@envisionit.com
- http://blog.petercarson.ca
- www.envisionit.com
- Twitter @carsonpeter
- VP Toronto SharePoint User Group
- Iron SharePoint Chairman

Envision IT Services Overview

Focused on complex SharePoint solutions, Envision IT is the "go-to" partner for Microsoft SharePoint, building integrated public web sites, Intranets, Extranets, and web applications that leverage your existing systems anywhere over the Internet.

Microsoft Partner

Gold Digital Marketing
Gold Portals and Collaboration
Silver Content Management
Silver Search
Silver Independent Software Vendor (ISV)

2010 IMPACT AWARDS — Microsoft Partner Network — WINNER

CANADIAN IT SECURITY AWARDS WINNER

CDN CHANNEL ELITE AWARDS — 2009 SILVER WINNER — BEST GREEN SOLUTION

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Products

- Easy delegation of user management to business

- Self-registration, approvals, forgotten password reset

- Single URL and sign-on for AD

- Stream video smoothly from a variety of sources
- Simplifies embedding videos in SharePoint web content

![Envision IT ImageRotator for SharePoint]

- Web part to support rotating banners
- Supported on iPad and mobile devices
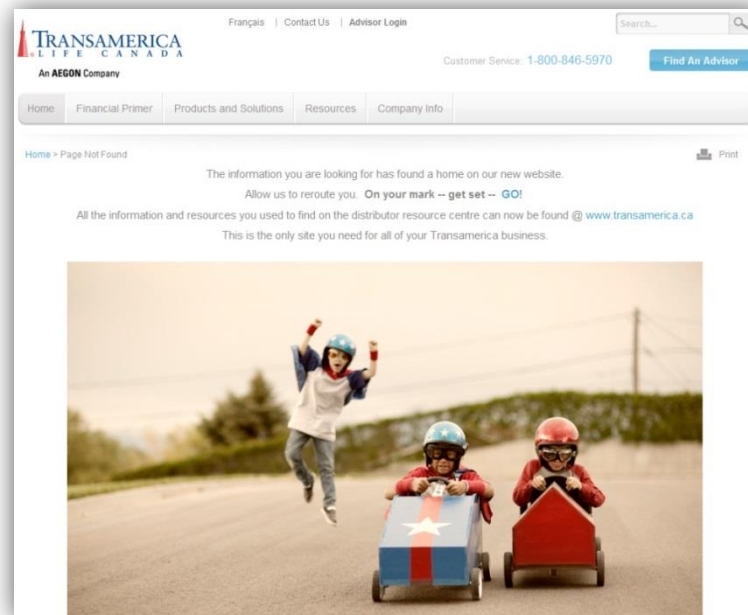- Easy for content authors to update

- Rich display of photographs on a web page
- Easy for content authors to update
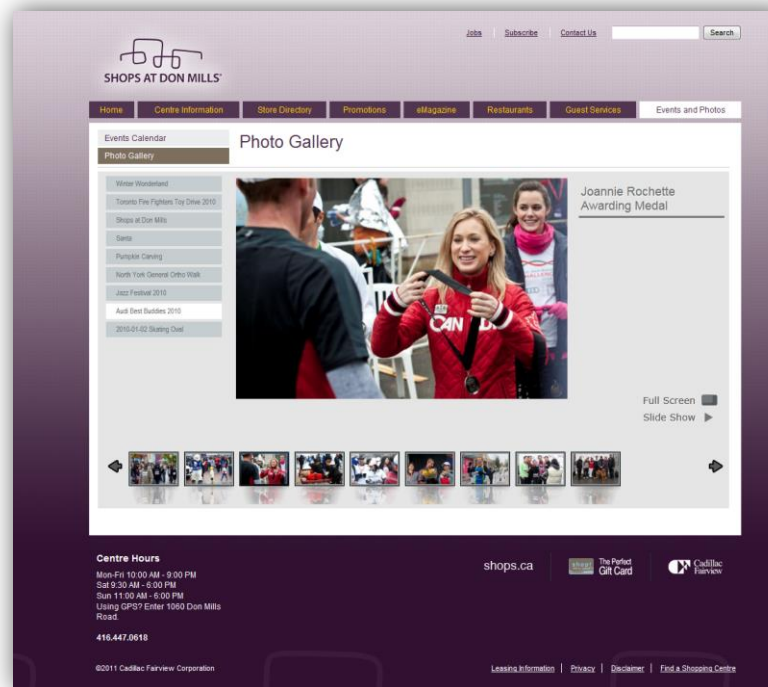
- Eliminate ugly page not found errors
- Make sure external links still work on your new site
- Support shortened URLs

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Overview of SharePoint Server 2010

- What is SharePoint?

  - A web based **platform** enabling organizations and people to connect to the **information** they need

  - A place to **share, store, collect, organize and find** information such as documents, pictures, and lists

Microsoft®
SharePoint 2010

Why Use SharePoint?

- Inefficient use of email as a means of collaboration and information sharing
- File shares can only contain files, and keeping track of the current version is problematic
(i.e. V1, V2, Final, V2Final)
- Copies of files and information are scattered on personal hard drives, network drives, emails
- Powerful search capabilities
- Make items easier to find and have them better organized through the use of **Metadata**
- Files shares are only for files

More Reasons

- Approvals
- Workflows
- Retention Schedules
- Available from anywhere with an internet connection
- Offline capabilities
- Securable objects
- Photo libraries, tasks, calendars, issue tracking, blogs, wikis, and MANY more…….

Single Infrastructure for Intranet, Internet, and Extranet Portals

Internet

Extranet

Enterprise

Division

Team

Individual

Business Applications

Single Infrastructure for Intranet, Internet, and Extranet Portals

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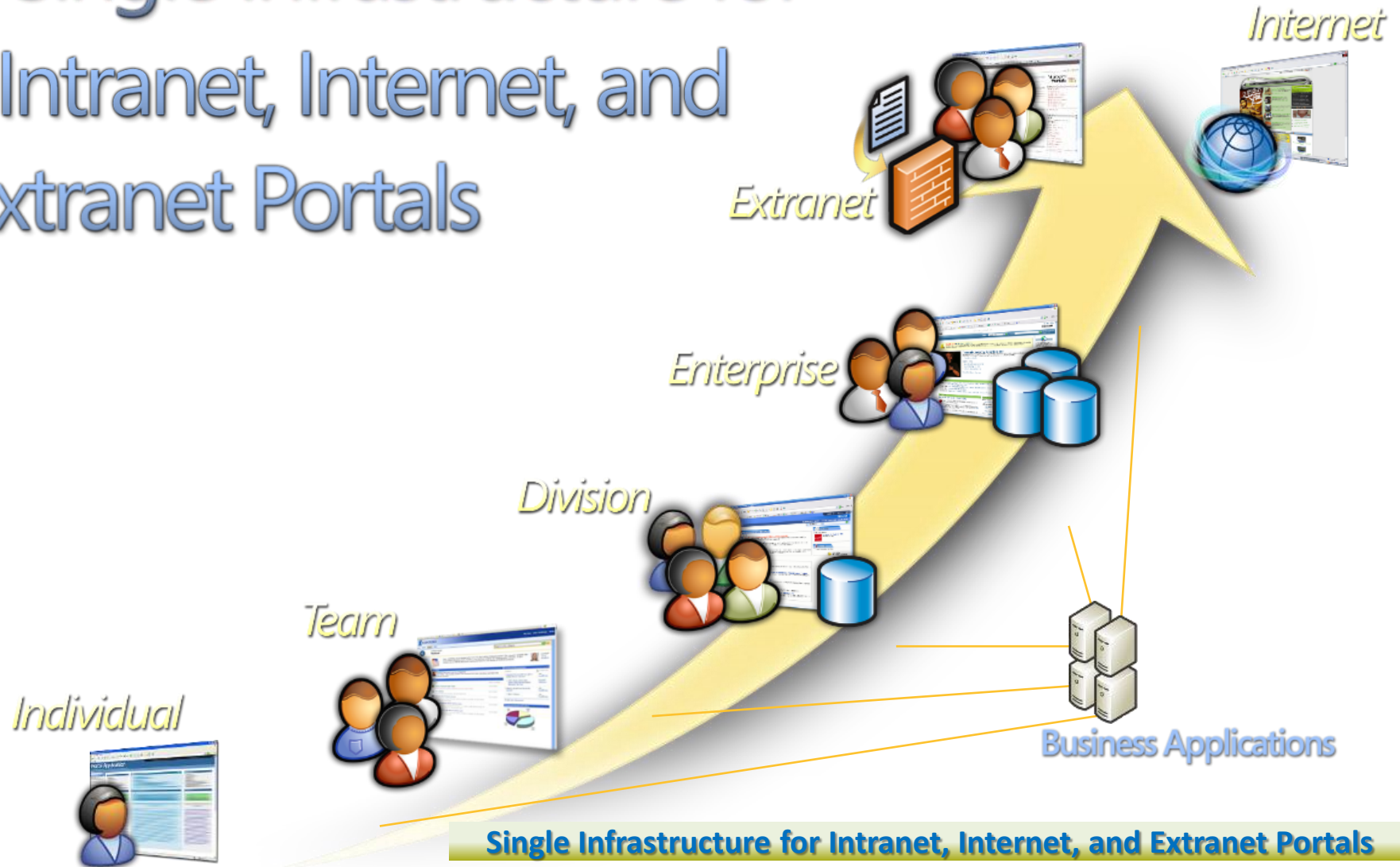
SharePoint Feature Areas

Business Connectivity Services
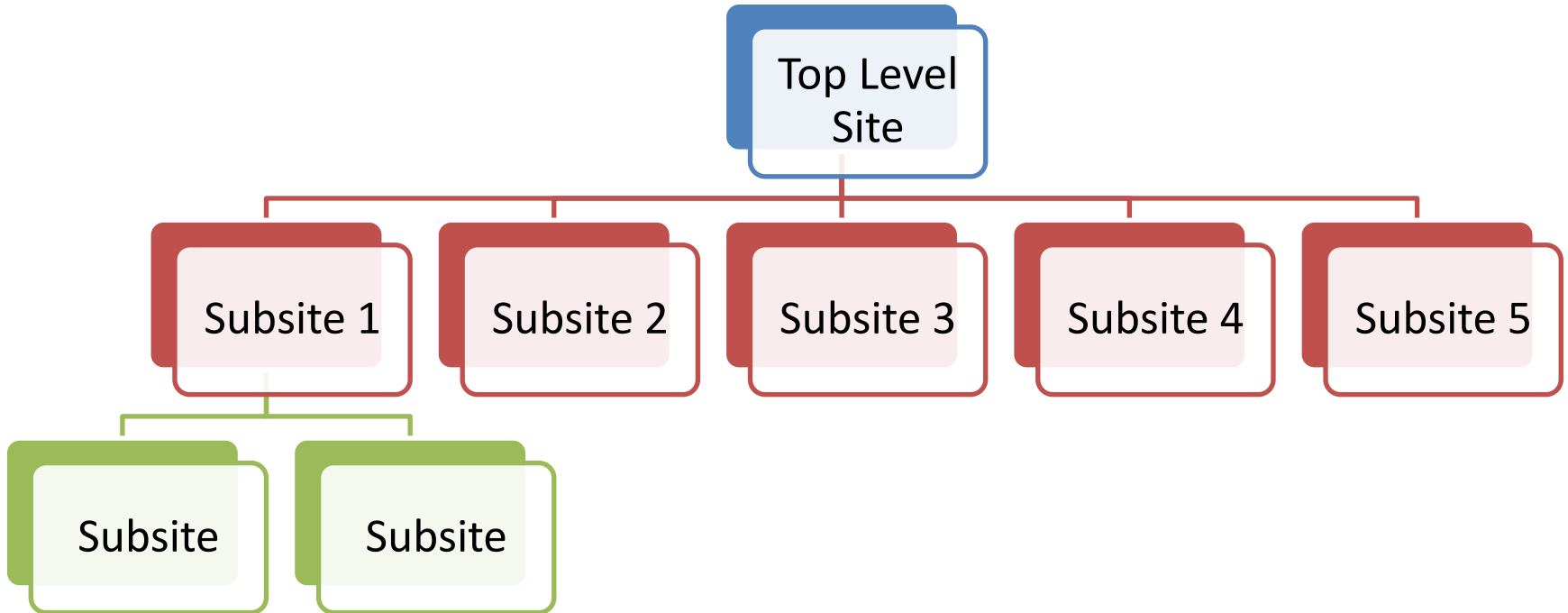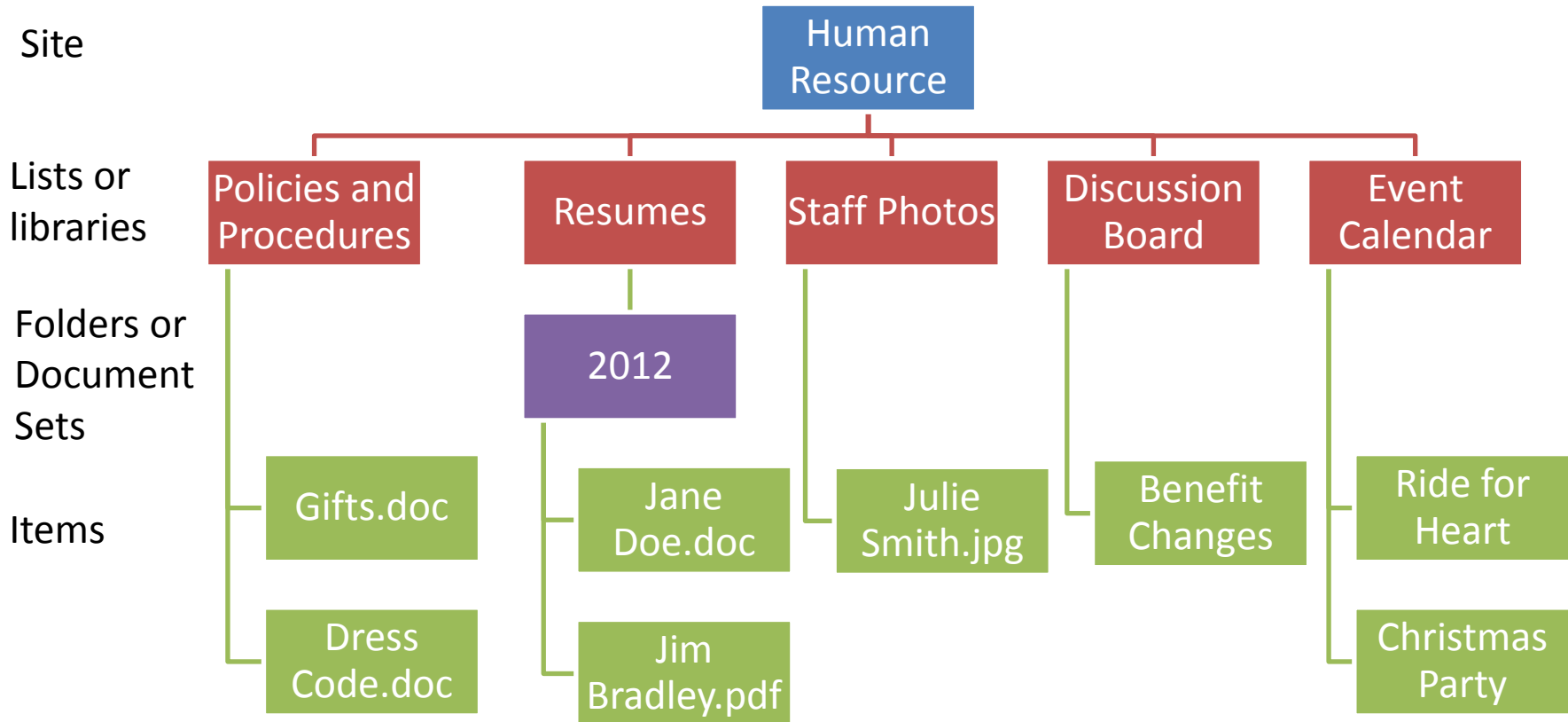InfoPath Form Services
External Lists
Workflow
SharePoint Designer
Visual Studio
API Enhancements
REST/ATOM/RSS

Ribbon UI
SharePoint Workspace
SharePoint Mobile
Office Client and Office Web App Integration
Standards Support

Tagging, Tag Cloud, Ratings
Social Bookmarking
Blogs and Wikis
My Sites
Activity Feeds
Profiles and Expertise
Org Browser

PerformancePoint Services
Excel Services
Chart Web Part
Visio Services
Web Analytics
SQL Server Integration
PowerPivot

Sites

Composites

Communities

Microsoft®
SharePoint

Insights

Content

Search

List Enhancements
Audio and Video Content Types
Enterprise Content Types
Metadata and Navigation
Document Sets
Document IDs
Multi-stage Disposition
Records

Social Relevance
Phonetic Search
Navigation
FAST Integration
Enhanced Pipeline

SharePoint Information Architecture

SharePoint Information Architecture

Site

Human Resource

Lists or libraries

Policies and Procedures | Resumes | Staff Photos | Discussion Board | Event Calendar

Folders or Document Sets

2012

Items

Gifts.doc

Dress Code.doc

Jane Doe.doc

Jim Bradley.pdf

Julie Smith.jpg

Benefit Changes

Ride for Heart

Christmas Party

Metadata

Metadata

- All list and libraries contain metadata

- Metadata = Columns = Fields

- Medata is data about the data
  - For example, if we have a task we have data about the title, start date, due date, priority, etc

- Documents can have metadata
  - A contract could have a Contract Number, Contract Start Date, Vendor Name, Amount

Why is Metadata Important?

- Help us **Find**, **Sort**, **Group**, **Filter** and **Search**
- Helps us **store** items in a way that makes them easier to find and manage
- Allows us to take actions, set rules, create web parts based on metadata
  - i.e. if Contract Date older than 5 years > delete
- Eliminates or minimizes use of folders
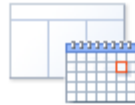- …and much more

Working with Lists

What is a List?

- Data is stored by filling in a form
- No documents are uploaded
- Can be used instead of spreadsheets
- Pre-defined templates or custom lists
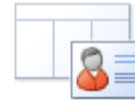- Many features to sort, filter, group, export

Types of Lists
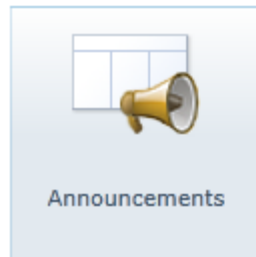
Document Libraries

Document Libraries

- Add, Modify and Delete Documents
- Working with Metadata (columns)
- Working with Document Versioning And Document History
- Document Approvals and Workflows

Add Documents

Unlike lists, you must upload a document to a library. There are several ways to do this.

Create a new document, or Upload an Existing Document:
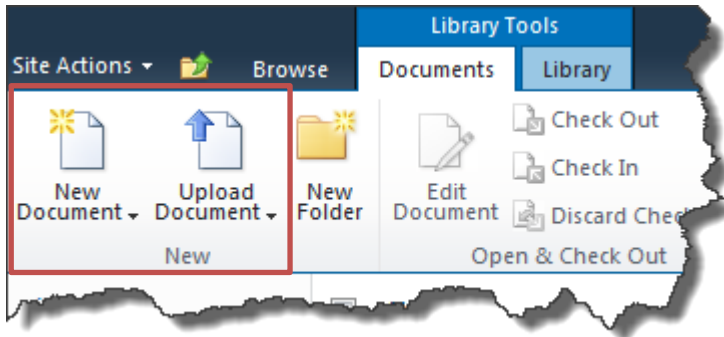
- **New Document** typically only provides a blank Word document, but other templates can be configured
- **Upload Documents** means that the document must exist somewhere already. You should always avoid having two or more copies of a document.

Add Documents

**You can save from most MS Office applications directly into SharePoint:**
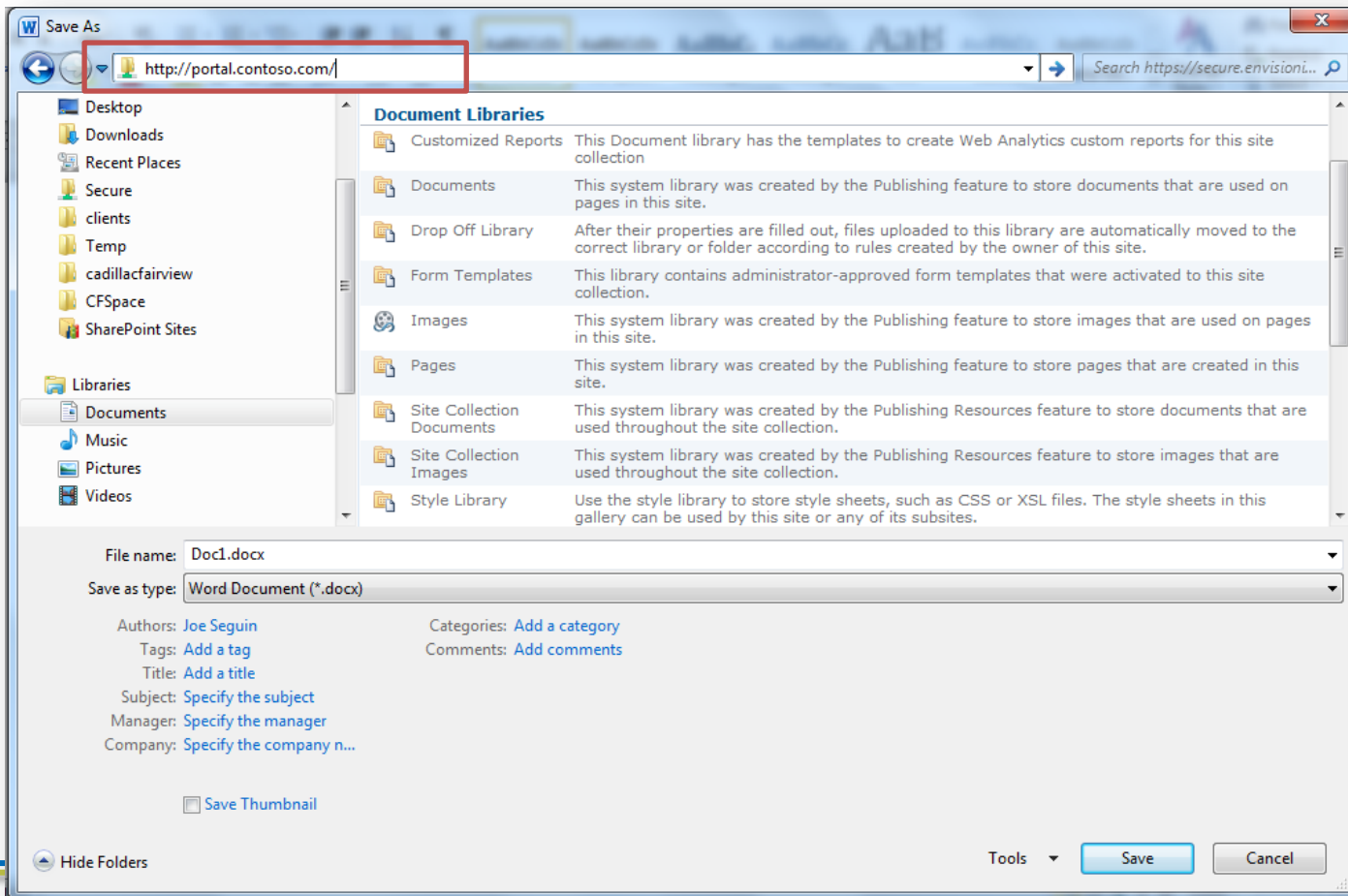
Check In and Check Out

- Check out documents before editing:
  - Prevents other users from editing at the same time
  - Will prompt you for comments upon check in to be stored in version history
  - Can check out to a local drafts folder for offline editing
- Do not check out if you want to use multi-author editing in Word or PowerPoint
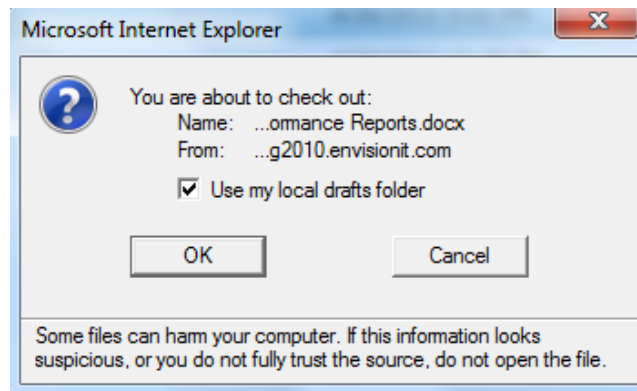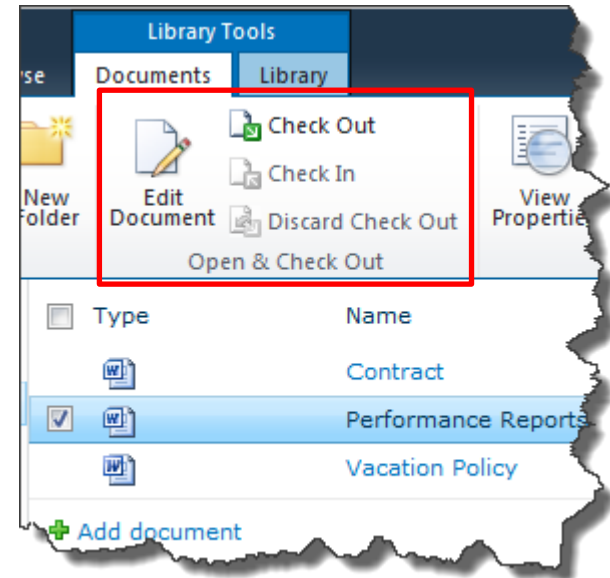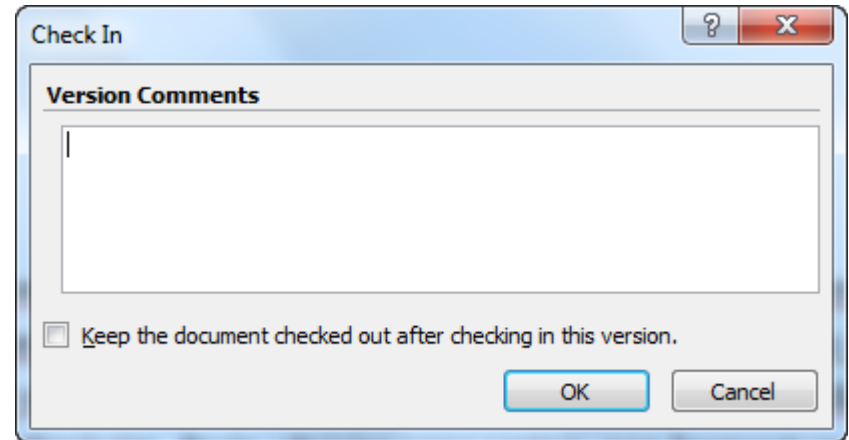
Check In Options

MS Office Applications will prompt you to check in when you exit the application.
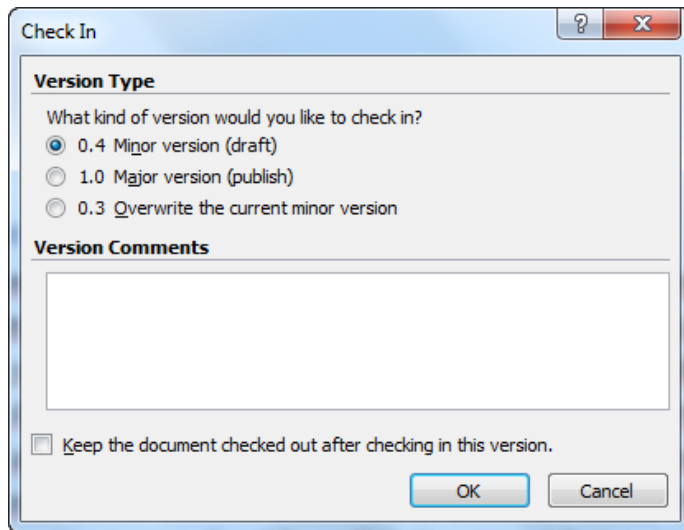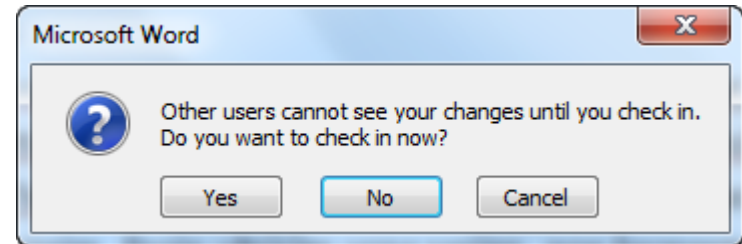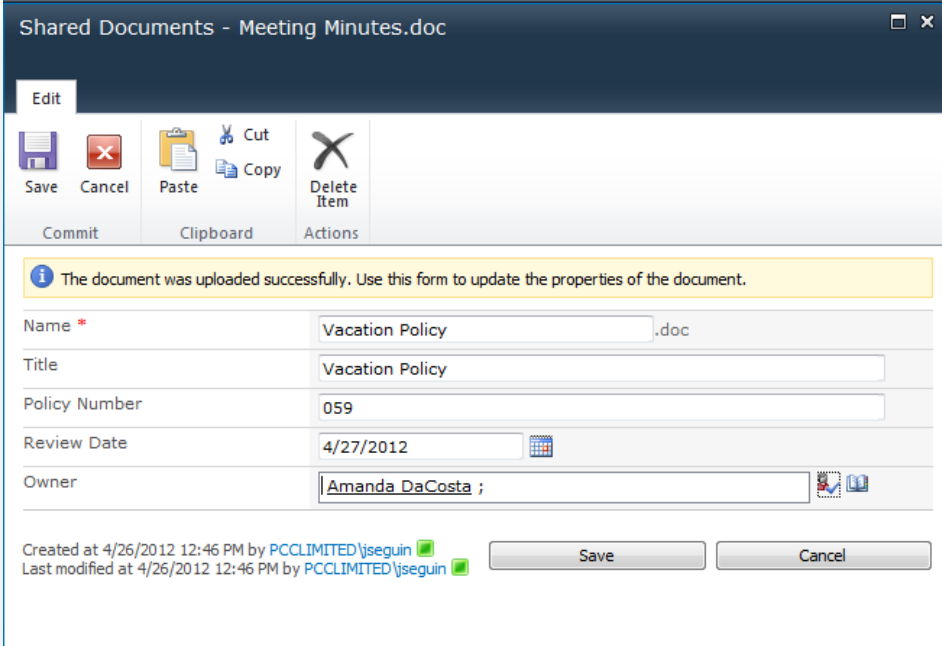

Major and Minor Versioning

Major Versioning or No Versioning

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Adding Metadata

You maybe prompted for metadata when uploading a document if the library contains additional columns.

Metadata may or not be required.
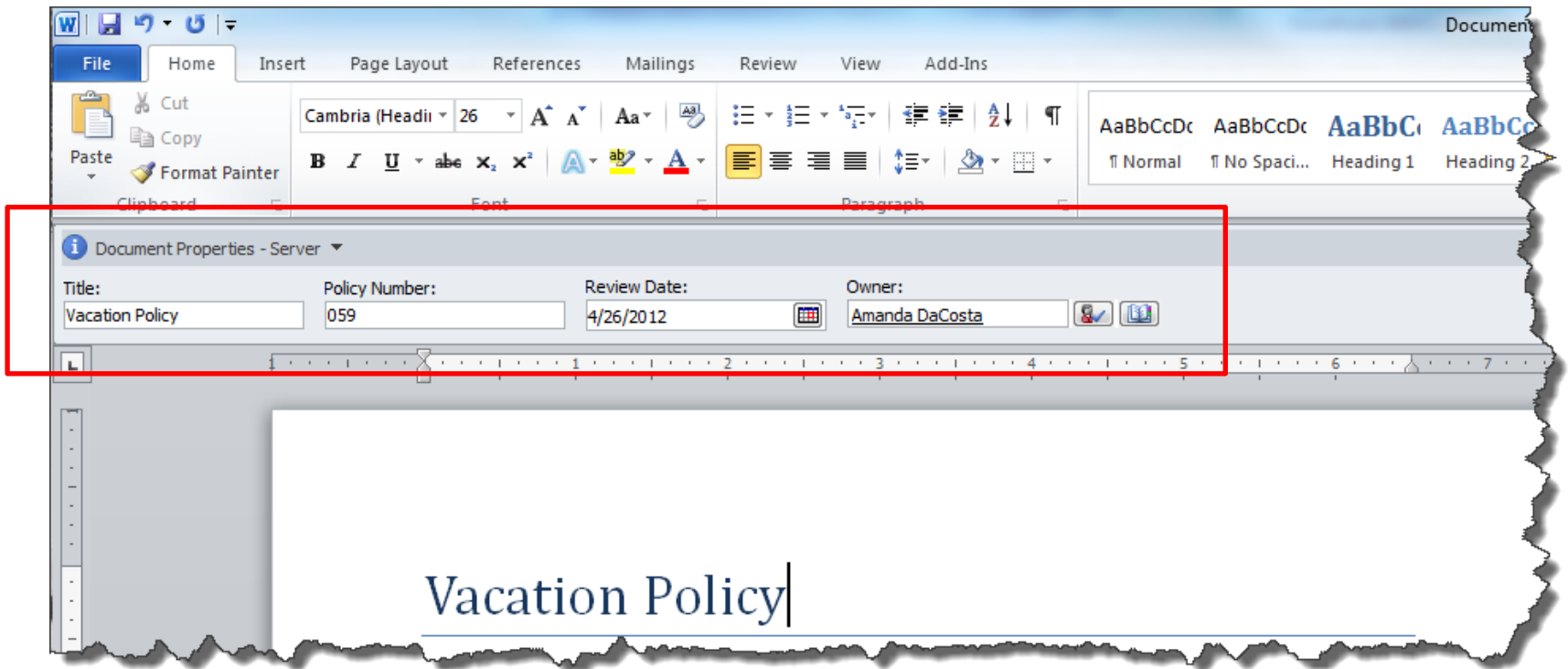
Adding Metadata

Metadata can also be entered in the **Document Information Panel** for some office applications

View/Edit Metadata

Use the **View Properties** or **Edit Properties** button to view or edit the metadata

View/Edit Metadata

- In MS Office, click **File > Info**
- Click **Properties > Show Document Panel** to re-open the DIP

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Overview

1. What is a Governance Plan
2. Why should you care about Governance
3. Governance planning top 10 topics
4. Appendix A: Sections of your Governance Plan
5. Appendix B: Tools

What is a Governance Plan?

- The Governance plan describes how your SharePoint environment will be managed;

    - Roles, responsibilities and ownership of both business and technical teams as it relates to the system

    - Rules applied to the back end(hardware, farm, application, database configuration and maintenance)

    - Rules applied to the front end (information architecture, taxonomy and user experience)

- It is a living, breathing document!

SharePoint success is not just about technology

20%

Technology

Deployment

Communications

Support

Policies

Documentation

Training

It is easy to make mistakes...

- No Policies
- Not Enough Training
- Letting Users manage Security too early
- Forgetting SharePoint = Enterprise Application
- Forgetting Information = Enterprise Asset
- No Plan for Scale and Growth
- Not managing as a Centralized service
- Not testing backup

Planning is Important!

- Avoid sprawl (unmanaged site or content)
- Ensure quality
- Deliver a great user experience
- Clear decision making authority
- Align with business objectives
- Comply with record retention guidelines
- Communicate best practices

Why should you care about Governance

- The best planned intranet can eventually become out of control
- Deployment can become unmanageable
- Disorganized collection of sites
- Unmanaged projects leads to multiple deployments
- User experience becomes unpleasant and inconsistent
- Poor architecture leads to the value of the intranet users almost entirely lost
- Brand inconsistency results in confusion across the organisation's Intranet, Extranet and Internet

Governance Planning Top 10

1. Identify an Inclusive team
2. Start with "Framing" decisions
3. Determine your deployment model
4. Define a clear vision
5. Identify roles and responsibilities
6. Develop guiding principles
7. Decide your organizational comfort level with social computing
8. Define Policies and Guidelines or "Best Practices"
9. Document the Plan
10. Socialize and Promote

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1. Getting Started – Be Inclusive

- Small team to frame
  - Team must be able to make decisions
  - Reach out where appropriate
- Then engage a larger governance committee to review decisions
  - IT
  - Training
  - HR
  - Communications
  - Knowledge Management
  - Legal
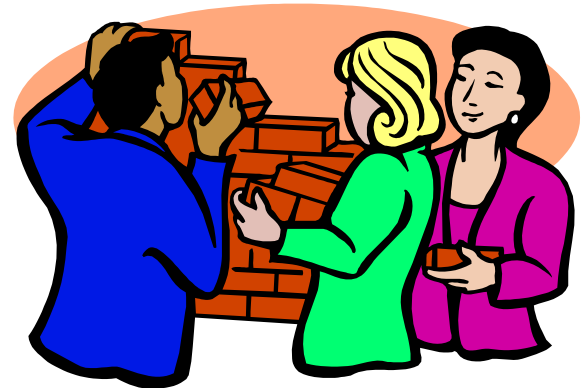
2. Start with Framing Decisions

- Who creates new sites?
- Who manages navigation?
- Can site-owners re-design? How much?
- Who controls branding?
- Who manages metadata?
- What is the default access?
- What happens with non-compliance?
- Who maintains the Governance Plan?

3. Determine Your Model – Governance based on "reach"

Corporate Portal

Permanent
Business Intelligence
Business Process Management
Applications

Controlled
Tightly governed
Push content

Divisional Portals

Departments & Team Sites

Permanent
Knowledge Management
Information Sharing

Ad Hoc
Loosely governed
Push / Pull content

Project Team Sites

Short Lived
Collaboration

Permanent
Personal Information
Public / Private Views

Personal My Sites

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4. Establish a Clear Vision

- Business Goals
  - Improve collaboration
  - Share best practices
  - Replace shared drives
- Business Outcomes such as;
  - Easier information access
  - Move work between entities
  - "One stop shop for authoritative information
  - Capture knowledge of retiring employees

Sample Vision Statement

- The vision for [the intranet] is to become the online work environment for [our Organization]

5. Roles & Responsibilities – Identify the key players

- Put the right team together … early
- Communicate roles
- Don't assume existing resources

Enterprise Roles: Typical

- Strategy Team

Executive Sponsor

Steering Committee

Business Owner

IT Solution Administrator

Technology Support

Power Users

Metadata Manager

Enterprise Roles: Best Practices

Communication

Center of Excellence

Change Management

Training
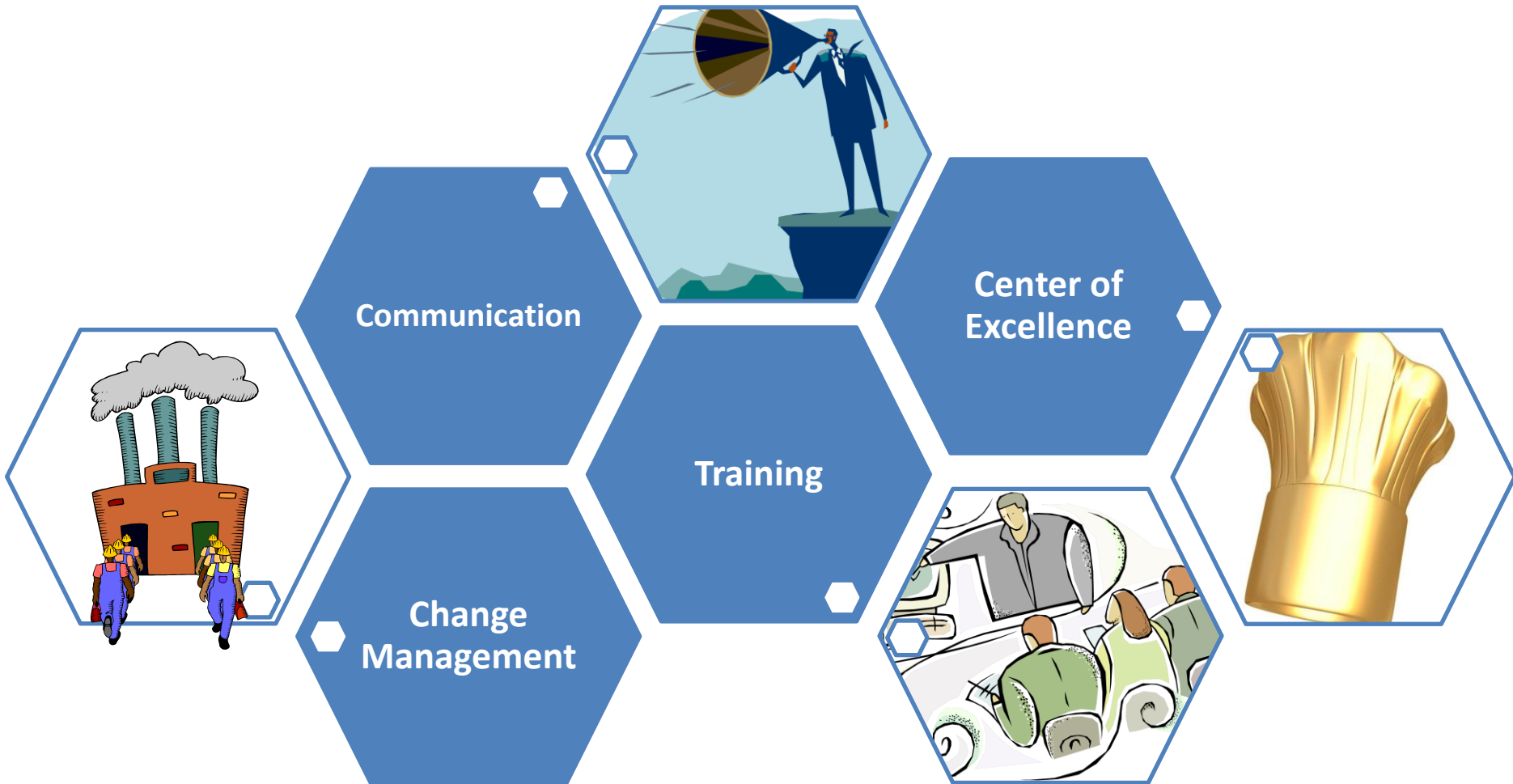
Site Roles

- Site Sponsor/Owner
- Site Designer
- Site Steward/Manager
- Site Users
  - Member
  - Visitor
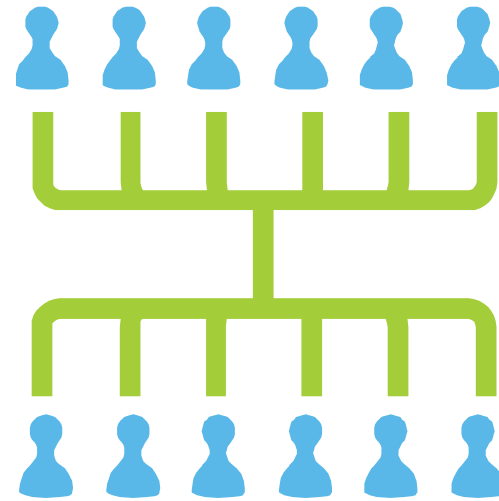
The Owner is accountable, but we're all responsible!

6. Guiding Principles

- Guiding principles define organisational preferences that support the vision.
  - Reflects best practices
  - Make them memorable
  - Several types:
    - General
    - Content
    - Design
    - Security

Guiding Principles Examples

- ## General
  - Even though SharePoint maybe a new vehicle for collaboration, SharePoint is governed by all general policies pertaining to the use of IT resources including privacy, copyright, records retention, confidentially, document security, etc.

- ## Content
  - All content is posted in one place. Users who need access to content should created links to the document to access it.

- ## Design
  - Provide a consistent user experience to ensure consistency and usability across collaboration sites.

- ## Security
  - Role-based security will govern access control and permissions on each area of the portal.

7. Social Computing

- What does "social" mean to your executives?

- Some benefits are;

    - Can be used to solve a business problem

    - Social "tags", ratings ,blogs and wikis

    - Can encourage collaboration and sharing

- Be prepared to respond to barriers

8. Policies and Guidelines

- Design
  - Creating new sub-sites
  - Page layout and organisation
  - Content types and metadata
  - Content-specific guidelines/policies
  - Security
  - Branding
- Content
  - Posting content to existing pages or sites
  - Posting content to the home page
  - Content auditing and review
  - Records retention
  - Social tagging and ratings

9. Document the Plan

- Make it "consumable"

- Keep it alive

- Deliver in context

- Include:
  - Vision statement
  - Roles and responsibilities
  - Guiding principles
  - Policies and standards

10. Socialize and Promote

- Recruit champions to promote Governance
- Communicate regularly
- Be responsive to feedback

Appendix A: Sections of your Governance Plan

Overview	• Explain the vision and why governance is important. (All Users)
Guiding Principles	• Describes the overall governance model and how it is applied for each site type and the guiding principles. (All Users)
Roles & Responsibilities	• Describes the key roles required to ensure success. (Users with a key role)
Content Authoring Policies and Guidelines	• Describes policies and best practices for content publishing. (Content Authors)
Design Policies and Guidelines	• Describes what must be done (policies) and best practices (guidelines) for site configuration. (Site Designers)
Processes and Procedures	• Describes key processes (request or de-commission a site). (Site Owners)
Operational Governance	• Describes the technical processes required to manage the infrastructure. (Infrastructure Team)

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Appendix B: Tools

- Cheat sheet of your most important guiding principles

- Laminated card or magnet with your vision statement

- Individual brief job descriptions for each core role

- Record retention "ad campaign" that will help users remember and internalize this important content

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Versioning

Versioning

Versioning allows you to:

- View version history

- Restore from previous versions

- Compare Versions (for Word Documents)

- Be aware of what is a draft vs. an approved document

- Secure items by not allowing users with read only access to view drafts

Document Versioning

No Versioning	Major Only	Major and Minor*
No version numbers	1.0, 2.0, 3.0	0.1, 0.2, 0.3, 1.0, 1.1, 1.2, 2.0, etc

- Major versions end with .0
- Major Versions have Status = Approved
- Minor Versions have Status = Draft or Pending
- Read Only users may be restricted to have no access to drafts

*Lists cannot have major and minor versioning; only libraries can.

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Approvals and Workflows

Approvals and Workflows

- Approvals
  - Items <u>may</u> require an approval
  - An item may have an approval status of
    - Draft
    - Pending
    - Approved
  - Users may be restricted and not allowed to view document unless approved

Approval Settings

Require content approval for submitted items?
- ◉ Yes   ○ No

Create a version each time you edit a file in this document library?
- ○ No versioning
- ○ Create major versions
  Example: 1, 2, 3, 4
- ◉ Create major and minor (draft) versions
  Example: 1.0, 1.1, 1.2, 2.0

Optionally limit the number of versions to retain:
- ☐ Keep the following number of major versions:

- ☐ Keep drafts for the following number of major versions:

Who should see draft items in this document library?
- ○ Any user who can read items
- ○ Only users who can edit items
- ◉ Only users who can approve items (and the author of the item)
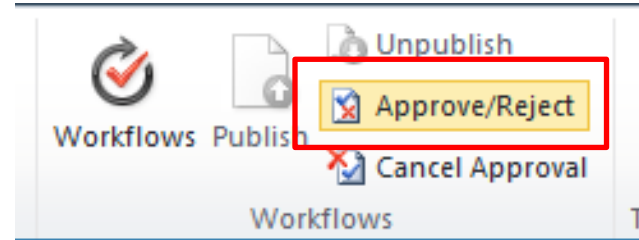
Approvals Required?

Versioning Settings

Who can see drafts?

Approving an Item

Approving is easy, but how does a person know they need to approve an item?

With no workflow, an item awaiting approval is pending approval, but a notification is not sent.

Workflows

A workflow supports the approvals by creating tasks, assigning them to users, notifying users, and once the workflow is complete, the status of the item is updated to Approved.

| Initiate Workflow | Create Tasks | Notify Workflow Participants | Complete Tasks | Update Item Status | Complete Workflow |

Most workflows will start automatically when you publish a major version of a document.

Workflows may also be manually started.
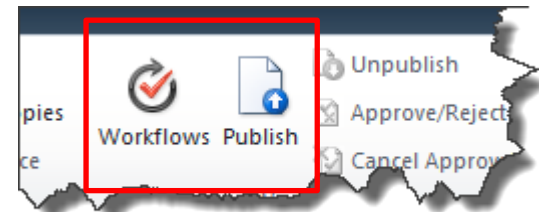
Start a Workflow

- Often starts automatically when publishing a major version, if major/minor versioning is used

- Can start manually, if enabled

- Can start as soon as an item is created or changed

Typical Approval Workflow Form

Audit Settings

Audit Settings

Audit Log Trimming

Specify whether the audit log for this site should be automatically trimmed and optionally store all of the current audit data in a document library. The schedule for audit log trimming is configured by your server administrator. Learn more about audit log trimming.

Automatically trim the audit log for this site?

○ Yes   ● No

Optionally, specify the number of days of audit log data to retain:

[   ]

Optionally, specify a location to store audit reports before trimming the audit log:

[   ]   Browse...

Documents and Items

Specify the events that should be audited for documents and items within this site collection.

Specify the events to audit:

☑ Opening or downloading documents, viewing items in lists, or viewing item properties

☑ Editing items

☑ Checking out or checking in items

☑ Moving or copying items to another location in the site

☑ Deleting or restoring items

Lists, Libraries, and Sites

Specify the events that should be audited for lists, libraries, and sites within this site collection.

Specify the events to audit:

☐ Editing content types and columns

☐ Searching site content

☐ Editing users and permissions

[OK]   [Cancel]

Audit Reports

Content Activity Reports

Content modifications
This report shows all events that modified content in this site.

Content type and list modifications
This report shows all events that modified content types and lists in this site.

Content viewing
This report shows all events where a user viewed content in this site.

Deletion
This report shows all events that caused content in this site to be deleted or restored from the Recycle Bin.

Custom Reports

Run a custom report
Manually specify the filters for your Audit Report.

Information Management Policy Reports

Expiration and Disposition
This report shows all events related to the expiration and disposition of content in this site.

Policy modifications
This report shows all events related to the creation and use of information management policies on content in this site.

Security And Site Settings Reports

Auditing settings
This report shows all events that change the auditing settings of Microsoft SharePoint Foundation.

Security settings
This report shows all events that change the security configuration of Microsoft SharePoint Foundation.

Information Management Policies

Information Management Policies

- Can set retention policies on documents to move/delete or take other actions based on a time period

- Example: delete document 1 year after date created

Information Management Policies

- Access via library settings
- Policies are per content type
- Provide a description and policy statement (optional)
- Add a Retention Stage

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Retention Stage

- Select a time period
- Decide on Actions
- Some actions are more advanced and may require other configuration or workflows to be created
- Runs on a timer job; action may not take place immediately when the time period is reached. May only run weekly but can be set by administrator

Groups and Permissions

Overview

- Sites, Lists, Libraries, Folders, Documents, and Items can all be secured at a granular level

- By default, any object will inherit the permission settings of its parent object

- There are many permission levels than can be granted to a person, or a group, on each securable object

Best Practices

- Keep it as simple as possible
- Manage by Groups
  - Put people in groups
  - Give permissions to those groups
  - **Do not give permissions to individual people!**
  - If a person's permission level should change, just add/remove the person from the right group(s), otherwise you may have to change permission settings on many items
- Avoid settings permissions on individual documents or list items if at all possible; use separate libraries or set permissions on folders instead

Permission Levels

Permission Level	Description
Full Control	Has full control.
Design	Can view, add, update, delete, approve, and customize.
Contribute	Can view, add, update, and delete list items and documents.
Read	Can view pages and list items and download documents.
Limited Access	Can view specific lists, document libraries, list items, folders, or documents when given permissions.
Approve	Can edit and approve pages, list items, and documents.
Manage Hierarchy	Can create sites and edit pages, list items, and documents.
Restricted Read	Can view pages and documents, but cannot view historical versions or user permissions.
Records Center Web Service Submitters	Submit content to this site using Web Services.

- Full Control, Contribute and Read are most common

- Approve used if items need approvals

Do Not Assign Permission to Individuals

- Becomes very difficult to manage

- No way to check permissions for a person without checking every item
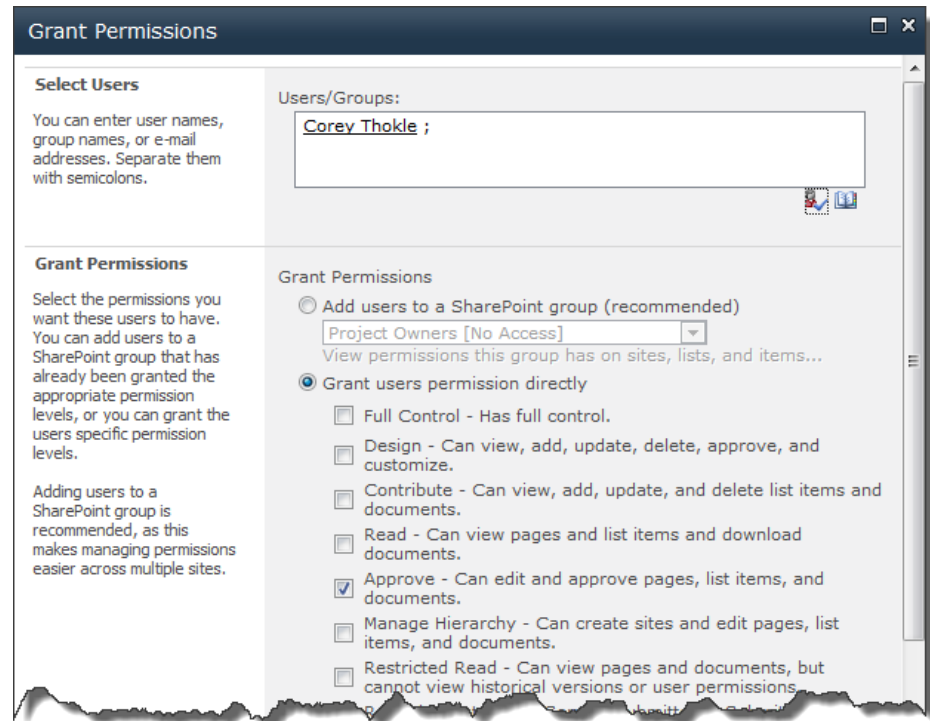
Office 2013

- Microsoft acquired Prodiance Spreadsheet IQ June 2011
- Inquire Excel add-in
  - Compare files
  - Workbook analysis and relationships
- Microsoft Office 2013 Audit and Control Management Server Preview
  - Change management for Excel and Access
- Microsoft Office 2013 Discovery and Risk Assessment Preview
  - Scans an organization's network shares and SharePoint document libraries into a master inventory
  - Evaluated for complexity, financial impact, risk, and errors

Inquire Add-In
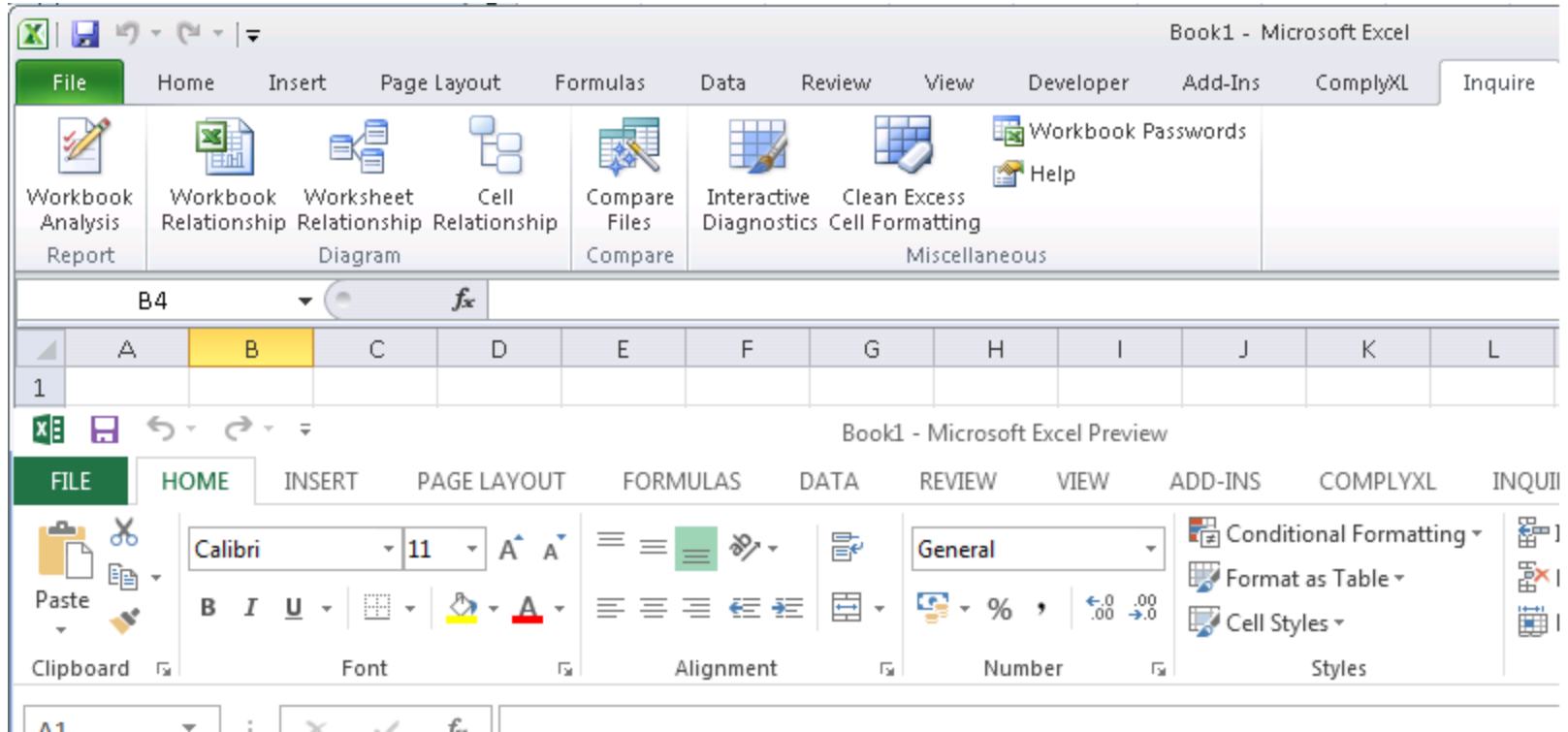
Worksheet Relationships
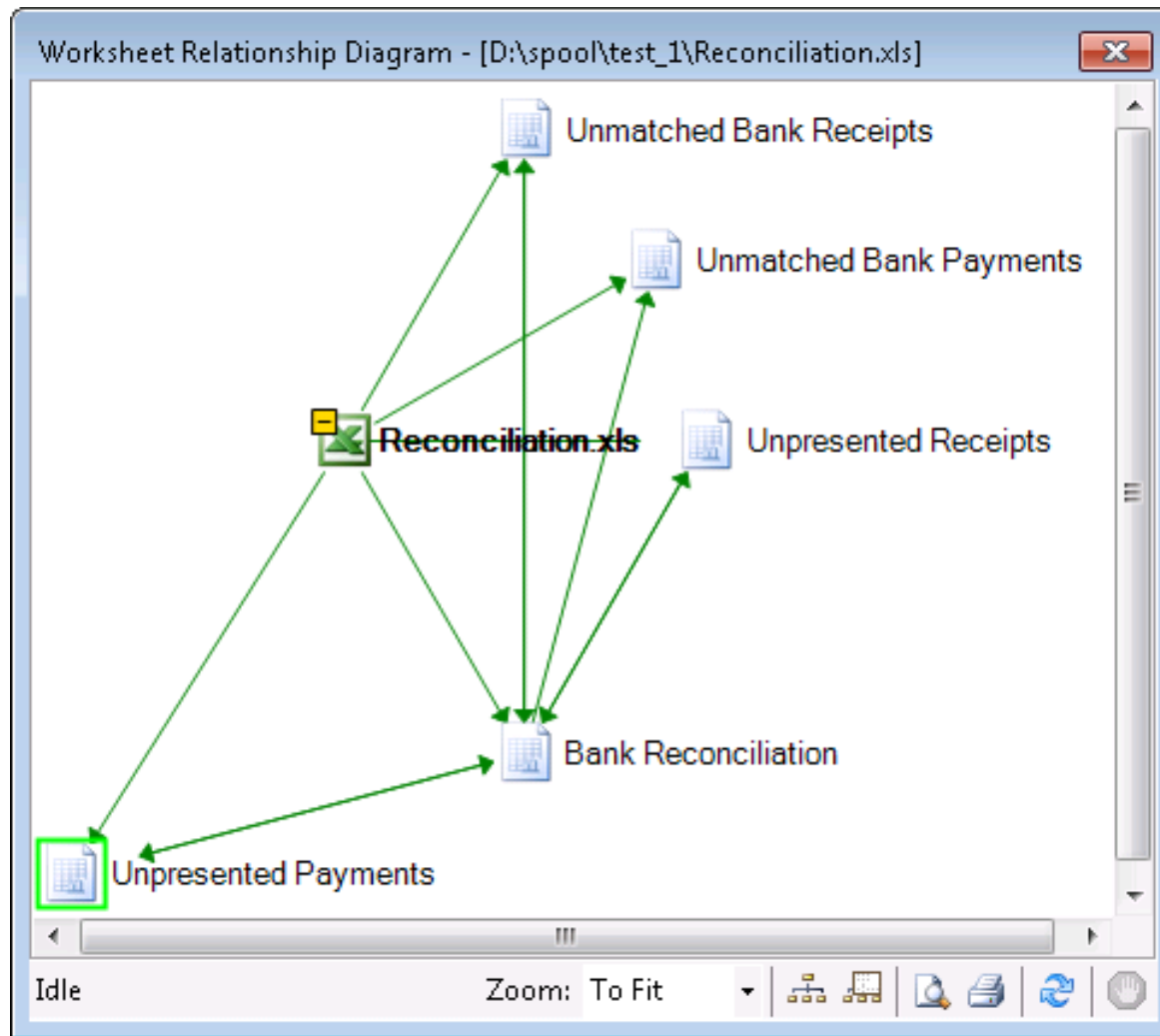
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Capacity Planning Decisions

- Understand the concepts behind effective capacity management.
- Define performance and capacity targets for your environment.
- Select the appropriate data architecture.
- Choose hardware to support the number of users and the features you intend to deploy.
- Test, validate, and adjust your environment to achieve your performance and capacity targets.
- Monitor and adjust your environment to match demand.

Capacity Management

- Capacity Management Model
  - Model
  - Design
  - Pilot, Test, Optimize
  - Deploy
  - Monitor and Maintain
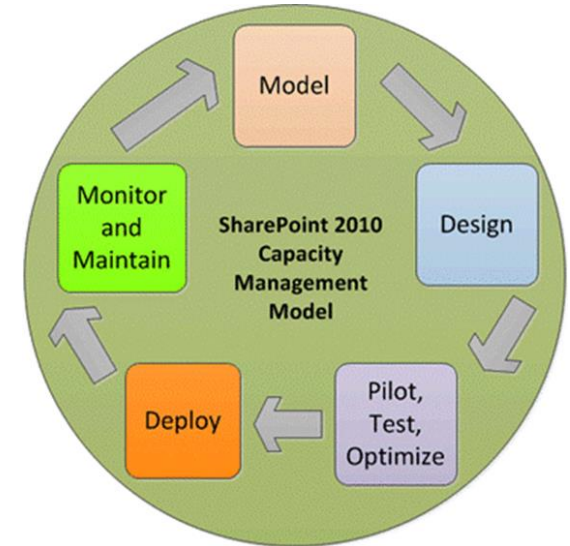
Model: Understand Expected Workload

Workload

- Workload describes the demand that the system will need to sustain, the user base and usage characteristics. The following table provides some key metrics that are helpful in determining your workload. You can use this table to record these metrics as you collect them.

Workload Characteristics	Value	
Average daily RPS		
Average RPS at peak time		
Total number of unique users per day		
Average daily concurrent users		
Peak concurrent users at peak time		
Total number of requests per day		
Expected workload distribution	No. of Requests per day	%
Web Browser - Search Crawl		
Web Browser - General Collaboration Interaction		
Web Browser - Social Interaction		
Web Browser - General Interaction		
Web Browser - Office Web Apps		
Office Clients		
OneNote Client		
SharePoint Workspace		
Outlook RSS Sync		
Outlook Social Connector		
Other interactions(Custom Applications/Web services)		

Model: Workload Distribution

A typical daily Load distribution of requests and users
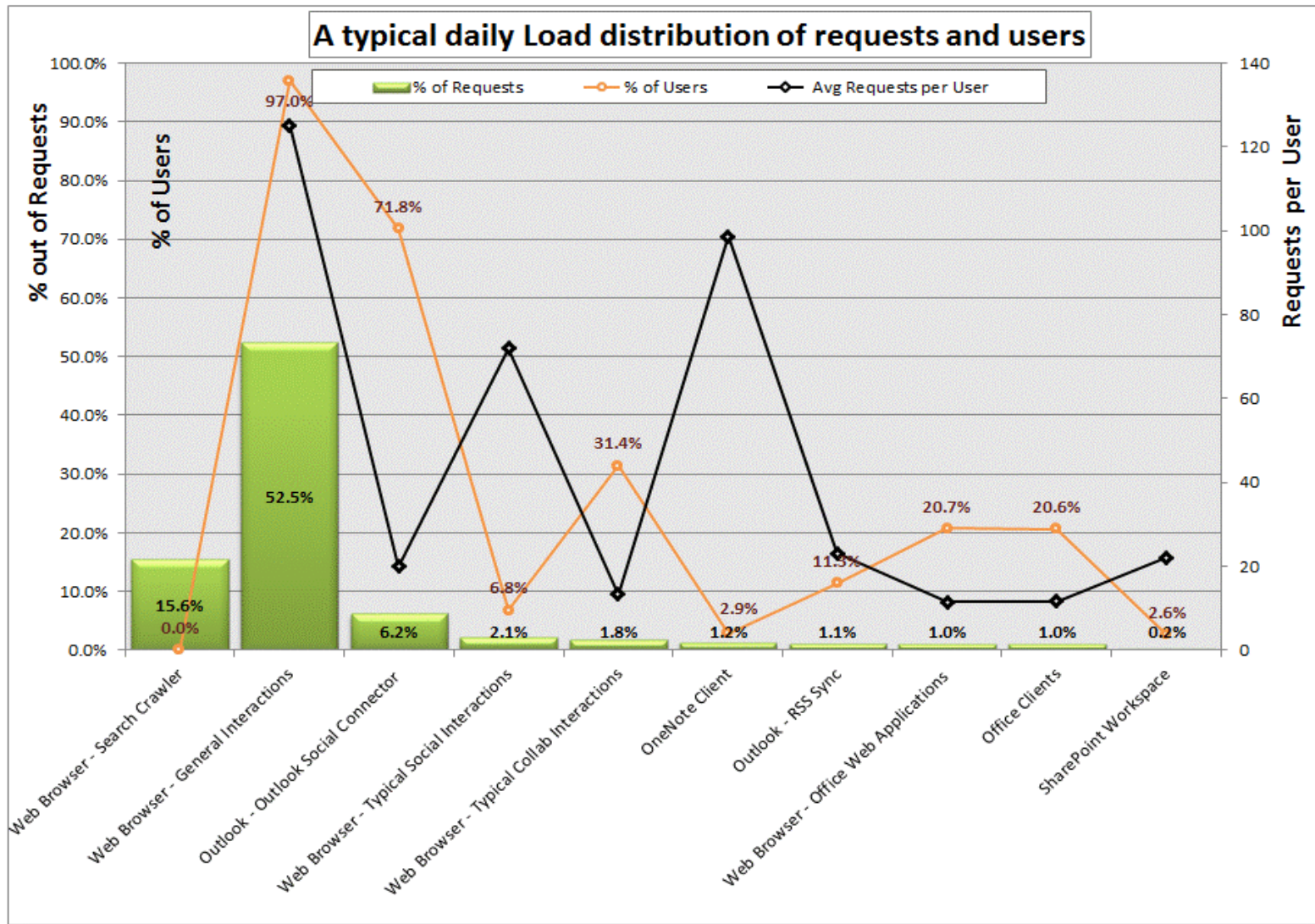
Model: Analyzing SharePoint Server 2010 IIS Logs

- To discover key metrics about an existing SharePoint Server 2010 deployment, such as how many users are active, how heavily they are using the system, what kind of requests are coming in, and from what kind of clients they originate, it is necessary to extract data from ULS and IIS logs.

- One of the easiest ways to acquire this data is to use Log Parser, a powerful tool available free for download from Microsoft. Log Parser can read and write to a number of textual and binary formats, including all the IIS formats.

Model: Understand Expected Dataset

- Dataset describes the volume of content stored in the system and how it can be distributed in the data store. The following table provides some key metrics that are helpful in determining your dataset. You can use this table to record these metrics as you collect them.

Object	Value
DB size (in GB)	
Number of Content DBs	
Number of site collections	
Number of web apps	
Number of sites	
Search index size (# of items)	
Number of docs	
Number of lists	
Average size of sites	
Largest site size	
Number of user profiles	

Model: Farm Performance and Reliability Targets

- One of the deliverables of the Model is a good understanding of the performance and reliability targets that best fit the needs of your organization. A properly designed SharePoint Server solution should be able to achieve "four nines" (99.99%) of uptime with sub-second server responsiveness.

Performance and Reliability		Targets
Server availability		%
Server responsiveness		Sec.
Server spikiness		Sec.
System resource utilization	CPU	%
	Memory Available	%

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Model Infrastructure
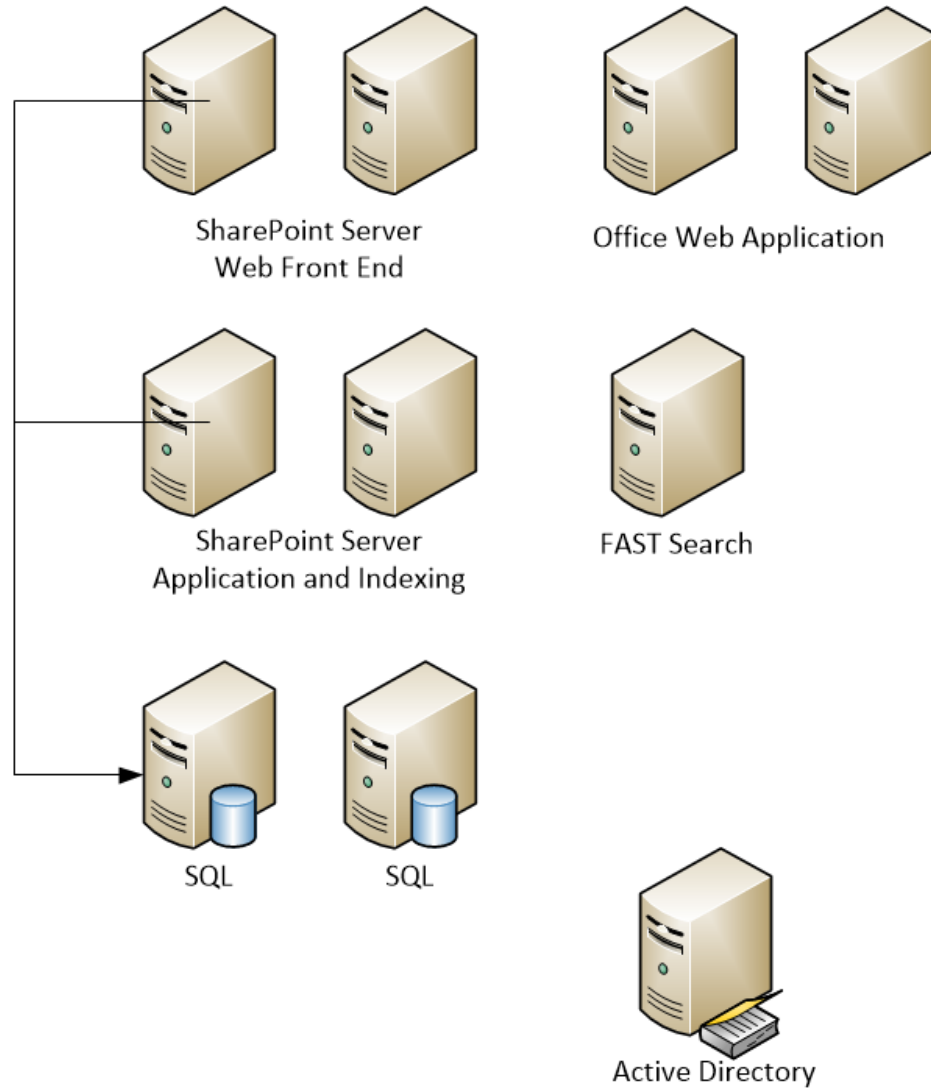
Extranet Technologies

Microsoft®
SharePoint Server 2010
for Internet Sites Enterprise

Microsoft®
SharePoint Server 2010
for Internet Sites Standard

Core Technologies

Microsoft®
SharePoint Designer 2010

Microsoft®
SharePoint Foundation 2010

Enabling Technologies

Microsoft®
Forefront™
Protection 2010 for SharePoint

Microsoft®
Forefront™
Unified Access Gateway

✓ Enterprise Content Management
✓ Web Publishing
✓ Out-of-the-box Workflows
✓ Social Networking (for authenticated users)
✓ Search
✓ InfoPath Services
✓ SharePoint Business Intelligence
  (Excel Services and PerformancePoint)
✓ Access Services
✓ Visio Services
✓ Rights for FAST Search for SharePoint
  (for use outside the firewall)***

✓ Blogs
✓ Business Data Connectivity Service
✓ Claims-Based Authentication
✓ Discussions
✓ Mobile Connectivity
✓ Multilingual User Interface
✓ Permissions Management
✓ Ribbon and Dialog Framework
✓ SharePoint Workspace
✓ Streamlined Central Administration
✓ Wikis
✓ Workflow

✓ Virus protection
✓ Block inappropriate content
✓ Multiple Antivirus engines – keyword filtering
✓ Configurable alerts
✓ Single point security controls for access policies
✓ Access control based on user identity, role and device
✓ Inactivity timeouts and re-authentication
✓ Clean up cache\temp files at session termination

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Microsoft® SharePoint® Server 2010 for Internet Sites Standard

Product Details

The ideal solution for **small to medium-sized businesses** to reach their customers on the internet with **easy-to-use** Web Content Management and compliance for **single domains***.

Features

SharePoint Standard CAL Features

- ✓ Enterprise Content Management
- ✓ Web Publishing
- ✓ Out-of-the-box Workflows
- ✓ Social Networking (for authenticated users)
- ✓ Search

Licensing

- ✓ Single Domain License for Internet or Extranet Use
- ✓ A license is required for every server (WFE, SSA, Index) providing standard capabilities
- ✓ Step-up SKU to Enterprise is available to customers with active SA**

Microsoft® SharePoint® Server 2010 for Internet Sites Enterprise

Product Details

The ideal solution for **enterprise customers** with **multiple domains**, across many geographies who want to provide high availability to their site visitors combined with a **powerful search experience.**

Features

SharePoint Standard CAL Features

- ✓ + Enterprise CAL Features
- ✓ Enterprise Content Management
- ✓ Web Publishing
- ✓ Out-of-the-box Workflows
- ✓ Social Networking (for authenticated users)
- ✓ Search
- ✓ InfoPath Services
- ✓ SharePoint Business Intelligence (Excel Services and PerformancePoint)
- ✓ Access Services
- ✓ Visio Services
- ✓ Rights for FAST Search for SharePoint (for use outside the firewall)***

Licensing

- ✓ Multiple Domain License for Internet or Extranet Use
- ✓ A license is required for every server (WFE, SSA, Index) providing enterprise capabilities
- ✓ Customers will require a completely new license of FIS Enterprise if a customer only purchased the license to FIS Standard

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Microsoft® FAST Search Server 2010 for Internet Sites

Product Details

FAST provides the platform for driving high-volume commerce and content experiences uniquely personalized to the individual. For **highly tailored search solutions** or highly personalized experiences for 'top tier' websites, FAST Search for Internet Sites provides the **industry leading solution.**

Features

- ✓ FAST ESP 5.3
- ✓ FAST Search Designer
- ✓ Interaction Management Services (IMS)
- ✓ Content Transformation Services (CTS)
- ✓ Languages (all)
- ✓ Connectors (all)

Links

- [Microsoft Office 2013 Audit and Control Management Server Preview](#)

- [Microsoft Office 2013 Discovery and Risk Assessment Preview](#)

- http://www.lyquidity.com/devblog/?p=209