

Planning Content Types in SharePoint

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Summary

One of the most common problems in any organisation today relates to the management of large amounts of information and documentation. Information workers find it difficult and time consuming to find what they are looking for, content owners struggle to keep content up to date, version control is a nightmare and processes are inefficient.

Microsoft aims to address some, if not all, of these issues through the introduction and continuous improvement of SharePoint.

This paper introduces the concept of content types in SharePoint and explains why an organisation may choose content types to assist with information and process management. The paper outlines key factors to consider when planning for content types, the aim being to provide the reader with a logical approach to planning content types in the SharePoint environment. Finally, the paper addresses three of the most commonly used content type settings – metadata, templates and workflow – and details how each of these settings can assist an organisation with the management of information and information-related processes.

Audience

This paper is targeted at both business and technical stakeholders involved in the deployment of Microsoft Office SharePoint Server.

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1. CONTENT TYPES DEFINED

1.1. What Are Content Types?

A content type is a centralised, reusable package of settings that can be applied to content throughout your SharePoint site collection. Each package of settings (i.e. each content type) may include:

- Metadata
- Information Management Policies
- Workflow
- Templates
- Custom display, edit and new forms
- A custom document information panel (DIP)

Content types allow an organisation to:

- Give content a 'business context' that means something to both the organisation and end users.
- Store the same type of content in multiple locations.
- Store different types of content in the same location.
- Categorise content, giving richer search results for end users.
- Define behaviour (i.e. approval, feedback, expiration) for different types of content.
- Reduce administrative overhead by centralising settings.

1.2. Why Use Content Types?

To understand why your organisation would want to use content types, try jotting down some of the different types of content your organisation plans to store in SharePoint.

Your list might include:

- Letter
- Fax
- Contract
- Invoice
- Proposal
- Meeting Minutes
- Policy
- Procedure

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This is not an exhaustive list, as most organisations can come up with at least 50 types of content during the initial brainstorm.

You may never have considered it, but for every piece of business content, there are associated actions and events that occur. Take a 'policy' for example. How does your organisation deal with policies?

- Is there a formal approval process for new policies or changes to policies?
- Do you have a standard template and format for your policies?
- Do you or would you like to capture the division or department that owns and is responsible for each policy?
- Is there or should there be a formal review process in place to keep policies up to date?

Now look at the other types of content you listed and think about the different actions and processes associated with each.

The types of content you have defined and the associated actions that occur around these types of content are specific to your business. If you went down the road, knocked on your neighbour's door and asked them these same questions you would probably get a completely different set of answers. Indeed, every business has different types of content and different requirements for managing that content.

Ultimately, content types allow you to define the different types of content and the different requirements for your business, resulting in your content having a business context that means something to both the organisation and your end users.

2. PLANNING YOUR CONTENT TYPES

Think about the process for building a house. First of all we must have a plan. We also need to involve various stakeholders such as the home owner, tradesmen, the council, even the next-door neighbours. A builder would never agree to start building a house without these things in place. Similarly, you should never begin creating content types before you have mapped out a plan and gathered all the required information from affected stakeholders.

The steps taken to create a new content type will always be the same (and are quite simple) but the level of planning required will vary depending on many different factors. Below are some things that you should consider before creating your content types.

2.1. Brainstorm Types Of Content

The easiest way to start planning your content types is to make a list of all the different types of content you plan to store in SharePoint. Gather stakeholders from the various teams in your organisation and ask for their input. You may also like to go through existing document stores to gain a better understanding of what content currently exists.

At this point you should also define the teams in your organisation who plan to use each content type. Some content types may be used by every department throughout the whole organisation, while others may be specific to just one or two departments.

Having an understanding of the affected stakeholders will help you call upon the right people at the right time as you move forward with the project.

Tip: Map out a list of all your content types in a spreadsheet to help with planning and ongoing management.

2.2. Agree on Terminology

Clarification and standardisation of terminology is hard to do in any organisation, especially large organisations. Let's take the term 'department' for example. Some companies despise the word department and prefer 'team', others like 'division' and some favour 'business unit'. This is just one example of the many terms that need clarification.

Often confusion occurs simply because different groups within an organisation use different terms for the same things. When planning your content types, this type of confusion can cause your project to fail later down the track. If you don't agree and standardise terminology one of two things may occur:

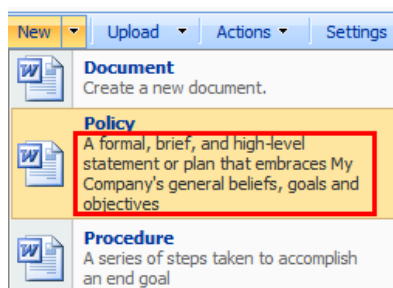
- Users don't use the content types because they don't know what they are for; or
- Users embrace the content types but use the wrong content types for the wrong purpose.

Both of these reduce the effectiveness of content types in any organisation.

This confusion can easily be prevented by agreeing on terminology up front. While this seems like common sense, too many times organisations gloss over or rush this step, thinking everyone knows the corporate lingo. If you spend the time getting this right, the pay-off is huge (not only for content types but also for corporate governance). If you don't spend the time, and get it wrong, your project may fail.

For terminology relating to content types, you should consider and agree on:

- The content type name.
- The content type description. The description for each content type appears on the new menu in a library. The description should be brief but at the same time provide the user with enough information to make an educated decision about which content type to use.



Tip: Develop an organisation glossary of terms to help with maintaining the agreed standards of terminology.

2.3. Define Actions and Processes

The next step is to start thinking about the type of actions and processes associated with each type of content in your organisation. Back in Section 1 of this paper, I asked you these questions in relation to a policy:

- Is there a formal approval process for new policies or changes to policies?
- Do you have a standard template and format for your policies?
- Do you or would you like to capture the division or department that owns and is responsible for each policy?
- Is there or should there be a formal review process in place to keep policies up to date?

By answering these questions you realised there are various actions that occur or should be occurring for every new and existing policy in your organisation.

Understanding the actions associated with each type of content will help you identify the types of settings (i.e. metadata, templates, workflow, information management policies) to apply to each content type.

So what settings might be needed for the policy content type?

- Metadata: Record the name of the department that owns the policy.
- Document Template: A standard policy template with company header and footer etc.
- Workflow: Approval workflow for new policies or changes to existing policies.
- Information Management Policy: Expiration policy to annually review the policy content.

Be aware that not all content types need to use all settings - some may only use one or two.

Tip: Create a planning worksheet for each content type to record the content type name, description, stakeholders and any applicable settings.

2.4. Understand Relationships Between Content Types

Every SharePoint site collection has 'out of the box' site content types that are created during the SharePoint installation. Whether you're aware of it or not, each piece of content in SharePoint (documents, pages, forms, list items) is defined by a content type. 'Out of the box' site content types are grouped in the top level site content type gallery under one of the following headings:

- Business Intelligence
- Document Content Types
- Folder Content Types
- List Content Types
- Page Layout Content Types
- Publishing Content Types
- Special Content Types

Tip: Avoid making changes to out of the box content types as this may have unforeseen effects on the behaviour of content in your SharePoint site collection.

All content types have a hierarchical relationship referred to as the 'parent-child relationship' in which the settings from one content type (the parent) are inherited by another content type (the child).

Figure 1 illustrates the hierarchical relationship of the out of the box site content types. You can see that ultimately all content types originate from the 'grandfather' content type – System. The item content type and those inheriting from it (excluding document) are available for use in **lists** throughout SharePoint. The document content type and those inheriting from it are available for use in **libraries** throughout SharePoint.

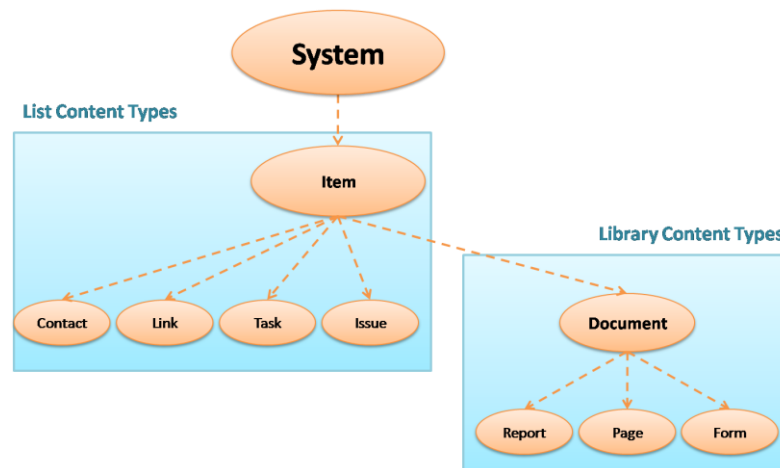


Figure 1

Planning Content Types in SharePoint

The hierarchical relationship allows you to reuse the settings defined in one content type in other content types if you so choose, therefore centralising settings and making maintenance simpler. A child content type will inherit all settings from the parent content type. Separate settings can also be applied to the child content type if required. Any changes made to the parent content type will be 'pushed' down to child content types. However, changes made to the child content type can never be 'pushed' back up to the parent.

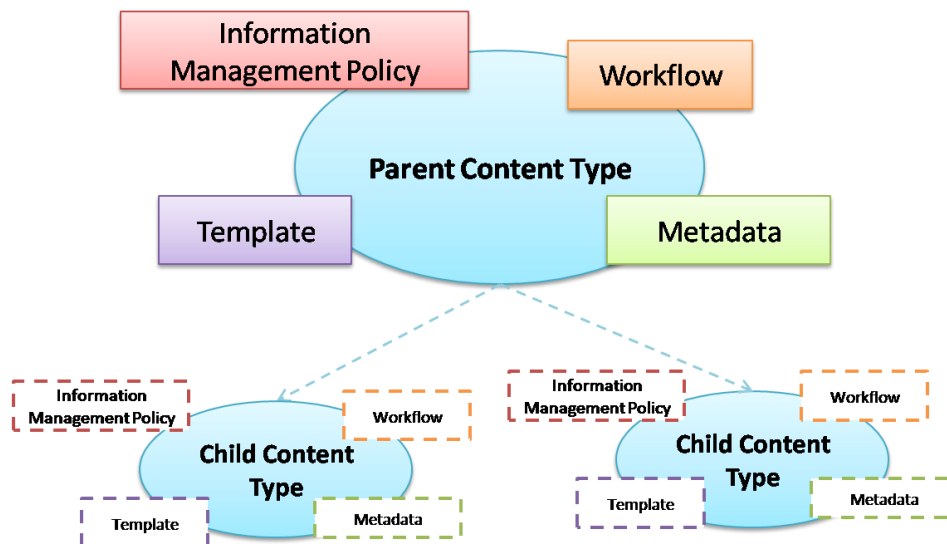


Figure 2

When defining your content types you should try to identify those that share similar settings (i.e. metadata, workflow, templates) and group them together using a parent content type. In doing so, the settings only need to be established and applied once (to the parent content type) but can then be used multiple times in child content types. Knowing how to group your content types correctly can be difficult and requires a lot of forward thought and planning.

Figure 3 shows the child content types 'policy' and 'procedure' inheriting the information management policy, metadata and workflow from the parent content type 'Corporate Governance Document'. However, it also shows the templates for the 'policy' and 'procedure' content types are not inherited (most likely because there would be a different template for a policy and a different template for a procedure).

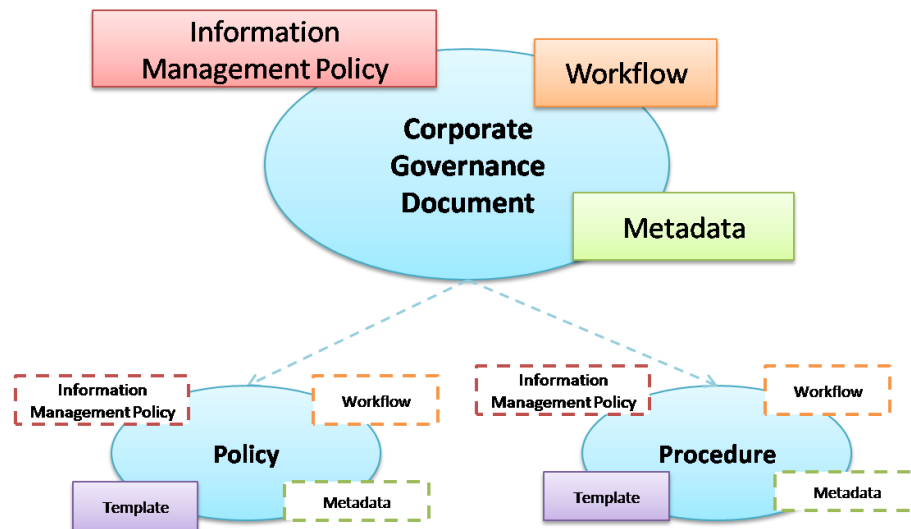


Figure 3

By structuring the content types in this way, settings are centralised against the 'Corporate Governance' content type. Later, if changes are required, the change can be made once against the 'Corporate Governance' content type and this change will instantly flow through into both the 'policy' and the 'procedure' content types.

2.5. Determine Physical Storage Location for each Type of Content

Another requirement to gather during the planning phase is the physical storage location for each type of content. Some types of content (i.e. letters, faxes etc) may be spread throughout your site collection in several different locations. Other types of content (i.e. contracts) may be stored in one particular list.

For the policy content type you have a couple of options. Firstly, you could store all the policies (regardless of department) in one central location. Or you might choose to store the relevant policies in the site of the department that owns that particular policy. Your decision will be based on the requirements outlined by your organisation.

By understanding the physical storage location for each type of content you will be able to determine:

- The scope of your content type; and
- Which lists and libraries require which content types.

2.6. Scope of a Content Type

The scope of a content type (i.e. where the content type can be used) is determined by the site level at which the content type is created.

Figure 4 and Figure 5 below demonstrate the hierarchical relationship of sites within SharePoint.

Figure 4 illustrates that when creating a content type at the top level site, the content type becomes available for use in all sites within the site collection.

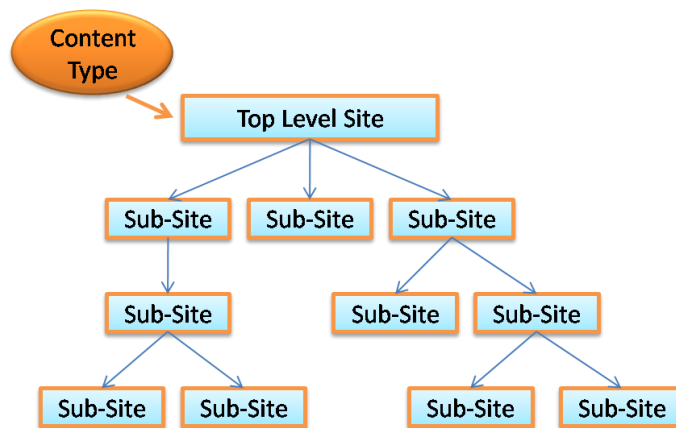


Figure 4

Figure 5 illustrates that when creating a content type at a sub-site level the content type will only be available for use in that sub-site and sub-sites below the given site. It will not be available in sibling sites, children of sibling sites or any higher level sites (including parent sites).

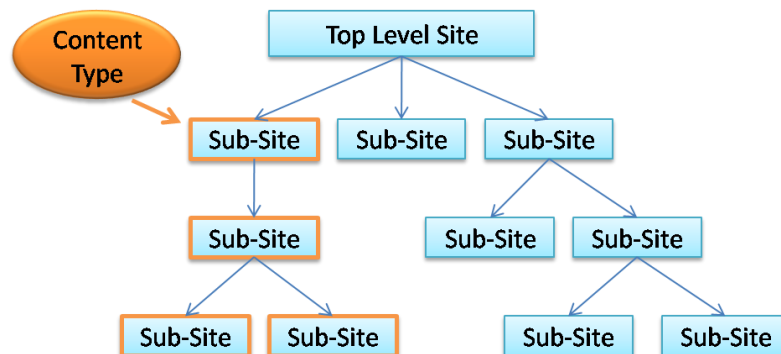


Figure 5

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You should now have an understanding of who will use this content type and therefore at what level in the site collection it should be created. If you are still unsure you might like to consider:

- Who uses this type of content and where do they wish to store the content?
- Is there a possibility in the future that others will be creating the same or similar types of content?

If you are uncertain, the safest option is to create the content type in the top level site.

2.7. Content Types at the List and Library Level

Content types can be categorised into two different levels:

- Site Content Types
- List Content Types

Site and list content types also share a 'parent-child relationship'. Site content types are initially defined at the site level. They are then applied to various lists and libraries throughout SharePoint for use by end users. When applying the site content type to a list or library, a copy of that content type is created locally at the list / library level – this local copy is known as a 'list content type'.

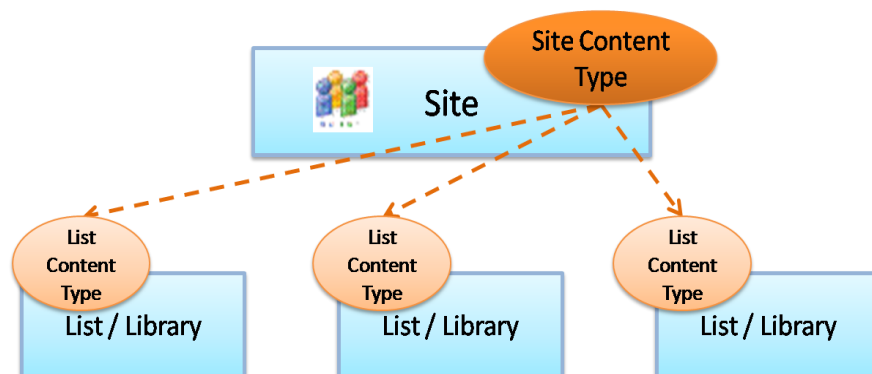


Figure 6

A list content type inherits all of the settings from the site content type. Separate settings can also be applied to the list content type if required. Any changes made to the site content type can be 'pushed' down to list content types. However, changes made to the list content type can never be 'pushed' back up to the site content type.

2.8. Ownership of Content Types

After reading the previous pages, you can understand that the creation of a new content type should not come lightly; a level of planning and consideration is always required. If anyone and everyone were allowed to create content types a variety of different issues would arise.

These issues include:

- Different content types being used for the same purpose.
- Ambiguous metadata.
- Standardisation of terminology lost.
- Relationships between content types not formed correctly.
- Scope of content types not defined correctly.
- Redundant and duplicated content types and site columns

Ultimately these issues all have a negative impact on the integrity of the content stored in SharePoint. The old saying 'too many cooks spoil the broth' is indeed true for this scenario - too many content type creators definitely spoil the content.

So who should be responsible for content types?

It is a mistake to immediately think that the IT department should be responsible for the creation of content types. To understand this more clearly think about a HR system. While an IT department will often provide support for the HR system, it is most likely that the HR department owns and manages this system. This is because the HR department has certain business knowledge that helps them to understand the types of information and processes required in order for the organisation to get the most value out of the system.

Similarly, your IT department (or certain members of the department) will be involved in the planning of some, or all, content types. However, this does not necessarily mean that the IT department should be responsible for creating and managing those content types. Sure, your IT department understands SharePoint, but does the IT department have enough business knowledge and vision to assist with making educated decisions about the various content types and associated settings required?

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In reality, every organisation is different and therefore the best person (or people) elected to manage content types will vary. Some organisations have specialised teams that work with knowledge management or information architecture. Some organisations delegate the content type management and design to key individuals in each department. You need to pick the method that best works for your organisation and in doing so, try to find someone who has broad and strong business knowledge, and a strong understanding of the process required to create a content type.

Tip: Uncontrolled creation of content types = less effective content types

After all this planning you should now have:

- A full list of all the types of content in your organisation.
- Standard terminology for each content type name and description.
- Details of the different actions and processes for each type of content.

And you should be clear on:

- The types of settings each content type will use.
- The relationship between your content types.
- The physical storage location for each different type of content.
- Who owns and manages content types.

You've come a long way but the planning is not over yet. You now need to plan and prepare the settings for each of your content types. The following sections outline three common settings used with content types and why you might choose to use these settings in your organisation.

3. CONTENT TYPES AND METADATA

Metadata is just another fancy word for document properties. You may have already recorded metadata against some or all of your documents without even realising. All office documents come with some default document property fields. These include:

- Title
- Author
- Subject
- Keywords
- Category
- Status
- Comments

Regardless of whether you are using SharePoint or not, these property fields are always available to be filled in. When you fill in these fields, you are recording metadata about that particular document.

With the introduction of SharePoint, you now have the ability to use content types and site columns to customise and create your own document property fields. In doing so you can capture meaningful business-specific metadata against all content saved into SharePoint.

But why would you want to do this?

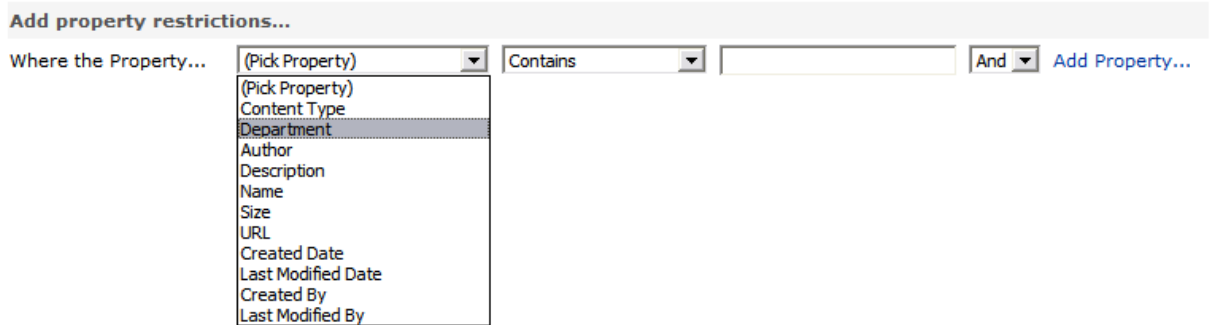
Firstly, search results are enhanced. Metadata supplements the already existing information found in the bulk of a document. By adding additional information to a document the chances of that document being returned in applicable search results will be higher.

Take a policy for example. The HR manager writes an Anti-Discrimination Policy and saves the policy into SharePoint. Without content types and metadata in place anyone performing a search, for 'Human Resources Policy' or something similar, would be relying on the name of the document and the content within the document being enough to bring back the relevant search result.

On the flip side, if the HR manager tagged the Anti-Discrimination Policy with the 'Policy' content type and then also specified as metadata, 'Human Resources' for the department that owns the policy, there would be a much greater chance that this policy would be returned in the search results.

Planning Content Types in SharePoint

Secondly, metadata can assist with restricting search results. One of the common concerns in most organisations today is the time it is taking for information workers to find what they are looking for. The advanced search tool in SharePoint and other third party search tools can easily be tailored to incorporate content types and metadata.



This gives your users the ability to limit and control the type of content returned in search results, making it much easier for them to find what they are looking for. Because content is now easy to find, users become inspired to save content into SharePoint. The overall benefit is that corporate knowledge is secured in the SharePoint environment instead of being stored on hard drives and network drives.

Another good reason for using metadata in your organisation relates to viewing content. When saving content into SharePoint, the metadata is exposed through columns in a list or library.

The screenshot shows the 'Policies Library' in SharePoint. The breadcrumb navigation is 'Intranet > Corporate > Policies > Policies Library'. The title is 'Policies Library'. Below the title is a message: 'Publish a Corporate Policy by adding it to this document library.' There are four menu items: 'New', 'Upload', 'Actions', and 'Settings'. Below the menu items is a table with the following columns: 'Type', 'Name', 'Divisions', and 'Category'. The table contains the following rows:

Type	Name	Divisions	Category
	Account Management Policy	Information Technology	Policy
	Account Provisioning Checklist	Information Technology	Checklist
	Account Provisioning Procedure	Information Technology	Procedure
	Account Security Policy	Information Technology	Policy
	BAS Checklist	Finance	Checklist
	BAS Procedures	Finance	Policy
	Corporate Budgets Policy	Finance	Policy
	Corporate function Procedure	Administration	Procedure

By exposing the metadata out into columns, your users have the ability to sort, filter and group the content in any way they choose.




Planning Content Types in SharePoint

Intranet > Corporate > Policies > Policies Library

Policies Library

Publish a Corporate Policy by adding it to this document library.

New ▾ Upload ▾ Actions ▾ Settings ▾

Type	Name	Modified	Modified By
[-] Divisions : Administration (8)			
[-] Category : Checklist (3)			
	Phone Setup Checklist	10/12/2008 7:12 PM	MYCOMPANY\Administrator
	Kitchen Facilities Checklist	10/12/2008 7:12 PM	MYCOMPANY\Administrator
	New Office Checklist	10/12/2008 7:12 PM	MYCOMPANY\Administrator
[-] Category : Policy (2)			
[-] Category : Procedure (3)			
[-] Divisions : Finance (11)			
[-] Divisions : Information Technology (18)			

Finally, metadata may also be useful for assisting with automating business processes. Section 5 discusses workflow in more detail but it is important to note that without metadata some business processes may not be possible. For example, if you did not capture the name of the department that owns a policy, it would be hard to later assign an approval workflow without knowing who the owner of that policy is.

Overall, metadata allows you to capture business-specific supplemental information against any content saved into SharePoint. This information can then be used to enhance search, create various views and direct business processes.

Tip: Standardisation of metadata terminology is just as important as the terminology you developed for your content types.

4. CONTENT TYPES AND TEMPLATES

In most organisations, templates are stored somewhere on a network drive for any user to access freely. While it is relatively simple to create a template and save it to a network drive, managing the templates can be painful and finding a template can be even harder.

Common complaints about templates from template owners include:

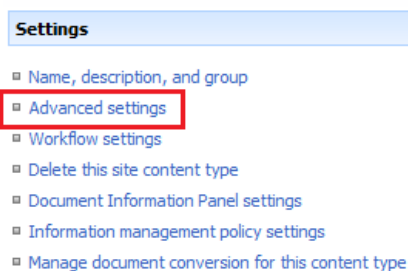
- It is difficult to update and make corporate wide changes to templates.
- Users have created duplicate copies of templates by saving them on hard drives and in the wrong places on the network drives.
- Users have accidentally overwritten corporate templates.
- Users have created their own versions of templates that do not comply with the corporate style guide and corporate policy.

Common complaints about templates from information workers include:

- Templates are too hard to find.
- Someone else has overwritten the template.
- Templates are not up to date.

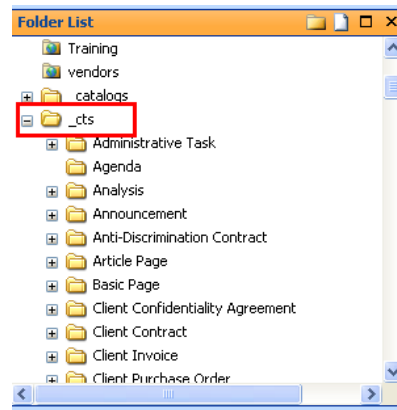
By using content types to manage your templates most, if not all, of these problems can be eradicated.

When creating your content types, you can choose to upload a template to a content type via the 'advanced settings' page.



Any templates uploaded and applied to a content type are stored in a secure, hidden library in your SharePoint site. Only users with full control of a site can access the templates for that particular site, either via the content type gallery or by using SharePoint Designer and navigating to the '_cts' folder.

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Once the template has been applied, whenever the user selects that particular content type from the new menu on a library the relevant template will open.

While you can't stop users from creating their own templates or saving copies of templates on hard drives, you can encourage them to use other methods. Generally users want to do the right thing but only revert back to bad habits when other methods prove too hard or take too long. If you can make the templates easily accessible and trouble free, with a little training, it's likely your users will accept the change.

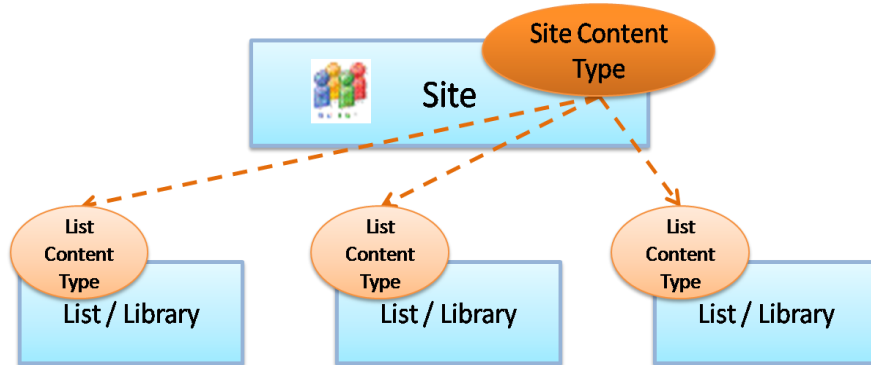
Because content types allow you to surface templates directly off the 'new' menu on a library, your users don't have to go hunting through layers of folders to find a template. They also know the template is the most up to date version and because all templates are protected they cannot be overwritten by someone accidentally hitting 'save' instead of 'save as'. These factors should help your users accept the new technology.

However, content types don't just make your users' lives easier; they can make the ongoing management of templates a lot easier too. Without content types in place, changes to templates can be a nightmare, especially changes that involve updating all templates (such as a change to the corporate style guide or corporate logo).

As mentioned above, when you upload a template to a site content type, a copy of the template is stored in a secure, hidden library. The template is then made available at all libraries where a list content type has been applied. Sometime in the future, when you wish to make a change to a template, all you need to do is update the template in the hidden library.

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The 'parent child' relationship between site content types and list content types ensures that the change made to the template at the site content type level is 'pushed' down to all list content types, instantly updating all templates throughout the site collection.



By using content types to manage your templates you can provide your users with easy access to corporate templates, whilst ensuring that templates adhere to the corporate style guide and remain up to date.

Tip: You should always test your templates thoroughly once applied to a content type to make sure they are working correctly. Even small errors can discourage users from taking advantage of the content types and most likely will cause them to revert back to saving files on their hard drives.

5. CONTENT TYPES AND WORKFLOW

Every day in every business hundreds and thousands of processes occur. Some are complicated, lengthy processes with many steps that may affect various parties both internal and external. Other processes are small and uncomplicated; they occur so often we may not even think of them as a process, for example, reviewing a document and providing feedback. The common denominator between the complicated processes and the not-so-complicated processes is the inefficiencies, hidden beneath the surface, that are wasting valuable time.

SharePoint offers a foundation in which various processes, both complicated and uncomplicated, can be defined and made more efficient through the use of workflow. When the workflow is combined with content types, you have the added benefit of ensuring the correct process and actions are initiated for the right types of content regardless of where they are created in your SharePoint environment.

While it is unreasonable to think that every process in your organisation could be automated with workflow, there are likely many inefficient processes that would benefit from this functionality.

Take a look at the policy example we have been using. There is most likely a formal process that exists in your organisation to approve new policies or changes to existing policies. If this process is manual, there are probably small manual inefficiencies that could be identified and eliminated. Common inefficiencies in an approval workflow include:

- Following up uncompleted approval requests – normally the initiator of the request has to continually chase the approver via email or phone calls if the approval request has not been completed in an expected time-frame.
- Lost hard copies – hard copies of documents tend to get lost in ‘in and out trays’.
- Employee absences – absences can result in a workflow being delayed or halted completely.
- Employee confusion – unclear processes and changes to roles of individuals can cause delays.

Perhaps some or all of these inefficiencies are occurring in the approval process for policies in your organisation.

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These inefficiencies were quite easy to identify as they are very common. However, there are probably other inefficiencies in your policy approval process that you are unaware of. So how do you gain awareness?

The easiest way to identify problems in any process is to map the process out. Some organisations may choose to enlist the help of a business analyst during this phase. Using a tool such as Visio, develop a flow-chart of the current process. It is also helpful to speak with employees who are involved in the process to get their perspective and to highlight any other issues that may need consideration.

Once the current process has been mapped out on paper, a trained eye should be able to identify any areas requiring improvement. From here you can begin to map out the proposed, more efficient version of the process and gain approval from relevant stakeholders. With the process mapped out and approved you are ready to enter the building phase.

Often organisations underestimate the importance of both the 'current process map' and the 'revised process map'. The current process map helps you to identify problems in the existing process. The revised process map can be used by the workflow designer to choose the best workflow tool for the job and to build the workflow. Process maps are also a great benefit to the organisation as end users can refer to them to gain an overview of the process and a better understanding of their role within that process.

A common mistake is to move straight into building the workflow without developing these maps first. Building a workflow before you have mapped it out is like trying to put the walls up on a house before you have laid the foundation. Eventually you'll have to knock it down and start all over again which is, of course, a complete waste of time.

The main purpose of introducing workflow into any organisation is to make the inefficient efficient. The workflow tool used for this purpose will vary depending on the process in question and the requirements of a particular organisation. However, an organisation should understand that a level of planning is always required to ensure the final product achieves the desired results.

Tip: When trying to automate a business process it is not the workflow alone that makes the process more efficient. It is rather a combination of both the workflow and an analysis of the current process, identifying any areas of improvement, which eventually results in a success.

6. USER ADOPTION

While planning for content types assists with achieving required results, the success of your project is ultimately determined by the people who actually use the content types – your end users. Many users have become attached to the familiarity of a network drive and are hesitant to learn a new way of working. Helping users to understand the advantages of using document libraries and content types over a network drive (or personal drive) can sometimes assist.

Of course, training is also essential as most users will refuse to embrace new technology unless they understand how to use it.

Finally, you might like to consider engaging influential stakeholders from various departments during the initial planning and implementation phases. These stakeholders can provide you with important feedback from their teams and can also act as advocates by spreading the word, helping to generate an overall positive corporate attitude towards content types.