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**United States Federal  
Government Agency**

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**Requirements for a Web Content  
Management System**

*For agency.gov*

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*For*

**Agency Name  
Address**

*Prepared By*

**Team Name**

**Date (Note: prepared in 2009)**

**Version #**

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## Abstract

*This document provides a detailed listing of the requirements that have been provided for the new content management system that will be implemented to replace the current content management system.*

## 1 Document Plan Identifier

Version	Date	Author	Reason for Changes
0.1			Initial Template
1.0	Start Date		Initial Draft.
1.1			Reviewed Draft.
1.2			Updated draft based on meeting Requirements Team Review.
1.3			Updated draft based on meetings with content team and contractor to add priorities into the document.
1.4			Applied the new document template.
1.5			Renumbered the requirements (Table 3) to match the RTM (Requirements Traceability Matrix).
1.6			Updated to highlight requirements that won't be implemented, and to take into account out-of-the-box CMS functionality.
1.7	End Date (18 months later)		Updated language based on meeting with Dev team. Marked additional requirements that were not part of the initial implementation.

**Table 1: Document Changes**

## 2 Related Documents

The following documents have been utilized in assembling this document.

Document Name	Version
INSERT DOCUMENT NAMES	

**Table 2: Documents Used as References**

## 3 Introduction

The **Requirements for a Content Management System (CMS)** document was produced by the Office of \_\_\_\_\_, of Agency. This collaborative effort presents the business requirements for a web content management system (CMS) that will be employed to support the production of the agency's primary website. The business requirements and processes are documented from the perspectives of content managers, the individuals responsible for the content of the site.

### 3.1 Agency.gov

The website is comprised of original content, along with related hyperlinks, categorized, qualified, described, and presented in a variety of different formats, e.g., arranged by topic, or alphabetically. Content may appear multiple times across the site, and in a variety of different formats (for example, in a list on a page, and as a clickable image in a sidebar box). In the current production environment, this is supported by an information "taxonomy" that is made possible by high customization of the CMS. We wish to implement a classification scheme, whereby content contributors can change content once and see that change ripple across the site to all components that contain that content, and we need a CMS that can perform this functionality with minimal customization. In addition, web technologies are evolving, and we want to use current technology (and other future web technologies as they are created) to improve the interaction between the citizen and the U.S. Government's web presence.

Content aggregations may change in the future, thus, the Content Management System must provide a means to create, maintain, and retire content groups.

### 3.2 Organization of the Document

The following section 2 contains an IDEF model of the business processes, derived from the perspective of a content manager. IDEF is the U.S. Government standard for business process modeling, and is FIPS-compliant.

The requirements for the Content Management System (CMS) are listed after the business process model in section 3. For each requirement, the business process that is associated with the requirement, or is supported by the requirement, or that the requirement supports, is noted.

## 4 Business Process Model

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INSERT PICTURES of your business process model (examples of some items you may want to include are listed below)

**Figure 1: A-0, Manage Website Portal**

**Figure 2: A-0, Manage Citizen Web Portal**

**Figure 3: A1, Manage URLs**

**Figure 4: A2, Manage Links**

**Figure 5: A3, Manage Webpages**

**Figure 6: A11, Create URL**

**Figure 7: A12, Edit URL**

**Figure 8: A21, Create Link**

**Figure 9: A22, Edit Link**

**Figure 10: A31, Create Page**

**Figure 11: A32, Edit Page**

**Figure 12: A33, Approve Page**

**Figure 13: A34, Publish Page**

Requirements for the Content Management System

No.	Requirement	Business Process	Priority <sup>1</sup>
<b>1.0</b>	<b>Content Types</b>		
1.01	The CMS must support the creation and utilization of content types. The current set of content types that are created and utilized, in both English and Spanish, and must be supported, includes: <ul style="list-style-type: none"> <li>• URLs</li> <li>• Links</li> <li>• Pages</li> <li>• Files (any type)</li> <li>• Articles (a block of HTML that is created via a WYSIWYG editor or by directly entering the HTML code)</li> <li>• Images</li> <li>• Common page – top left and bottom</li> <li>• Videos</li> <li>• Audio</li> <li>• Podcasts, mp3</li> <li>• RSS feeds</li> <li>• Events</li> <li>• Maps</li> <li>• Embedded code (gadgets)</li> <li>• Fixed and Variable Page Components</li> </ul>	A314, A324	3
1.02	The CMS must support the creation and utilization of fixed page component content types. Fixed page component content types are common navigation items on pages; they are fixed for a page template.	A314, A324	3
1.03	The CMS must support the creation and utilization of variable page components content types. Variable page components are specific areas of a page containing a combination of links and text. These components should be reusable and placeable anywhere on the page (in the right nav or in the main content area).	A314, A324	3
1.04	The CMS must support the creation and utilization of fixed and variable page components content types within the same webpage.	A314, A324	3
1.05	The CMS must support the ability to enter appropriate metadata and values for each of the content types in order to satisfy section 508 compliance.	A312, A322	3
1.06	The CMS must support the ability to revise existing content types and create new content types for internet phenomena that may not currently exist.	A3	3
1.07	The CMS must support the assignment of individual content items on multiple pages and components, e.g., place an individual link on multiple pages, in different places on the pages.	A213, A223, A315, A325	3
1.08	The CMS must support this assignment without having to open and manipulate each of the pages and their components.	A215, A225	3

<sup>1</sup> Priorities are ranked on the following scale:

Priority Description	Score
Must have	3
Want to have	2
Nice to have	1

No.	Requirement	Business Process	Priority <sup>1</sup>
1.09	The CMS must support authorized users to designate whether metadata values are entered via keyboard input or via a dropdown list of controlled vocabulary terms.	A123, A222, A322	1
<b>2.0</b>	<b>URLs</b>		
2.01	The CMS must support an authorized user to be able to create both internal and external URLs in the content management application. A URL is a unique instance of destination page. Internal URLs refer to specific pages, allowing staff to link the website visitors to internal pages from multiple locations on the site. External URLs refer to content on other websites.	A1	3
2.02	The CMS must accommodate URLs that have multiple associated Links throughout the website.	A213, A223	3
2.03	The CMS must support the requirement that URLs must be unique in the CMS repository	A111	2
2.04	The CMS must support a validity check for URLs upon entry but if this check fails, it should not prevent the user from saving the URL.	A111	3
2.05	The CMS must provide for the recording, retrieval and display of the identification of the last user to modify or add each URL.	A112, A125	1
2.06	The CMS must support the metadata items, as they are defined in the <a href="#">Table 2</a> (see below), to be associated with the content type of URLs.	A123	3
2.07	The CMS will automatically update the "last updated date" on a page when a URL contained on the page is edited.	A12	2
2.08	The CMS will support the division of URLs into referencing internal (to the website) and external sites.	A1	1
2.09	Editing an existing URL should cause any pages that contain links that utilize the URL to be automatically republished without approval.	A12	3
2.10	The CMS will generate text beneath links as specified in the HTML templates based on A URLs file type, For example, if a link is based on a URL marked as a PDF on an English page, the CMS will generate the message "(.PDF   requires Adobe Acrobat Reader)" where the phrase "Adobe Acrobat Reader" is a link to the website where users can download the Adobe Acrobat Reader if needed.	A1	3
<b>3.0</b>	<b>Links</b>		
3.01	The CMS must support an authorized user to be able to create links in the content management application. A URL may have multiple links. To the site visitor, a link is what they see displayed on the page to click on, and the URL is where they will be taken after they click the link. The CMS must support an authorized user to be able to create multiple links associated with the same URL, with the purpose of specifying alternate link text and other attributes.	A2	3
3.02	The CMS must provide for the recording, retrieval and display of the last user to modify or add a link.	A214, A224	1
3.03	The CMS must support the metadata items, as they are defined in the <a href="#">Table 3</a> (see below), to be associated with the content type of Links.	A211, A222	3

No.	Requirement	Business Process	Priority <sup>1</sup>
3.04	The system must allow the content manager the ability to associate a file with a link. If the file is an image, the image should be displayed next to the link, or instead of the hyperlink text, as determined by the HTML templates. The images should be made clickable for the users so that when they click on the image, they will be taken to the URL specified in the link. If the file is not an image but some other format (pdf, etc...) than the clicking of the link will take the user to the file specified for download or viewing.	A21, A22	3
3.05	When creating or editing a link, and the user searches for a URL to be associated with the link, the system should display all existing link titles for that URL.	A2	2
3.06	Links should be immediately published after being changed or added/removed from a published page. However, the following notification scheme must be followed: When creating or editing a link, and the content manager creating or editing the link is the page owner, the notification process is bypassed. When creating or editing a link, and the content manager creating or editing the link is NOT the page owner, the page owner must always be notified of the change via e-mail. This notification must include the page in question and the title of the link that changed, as well as the user name of the user who made the change and the time/date of the change. Only the affected page owners should be notified of the change. For example, if a link is being added to one page that already appears on two other pages, only the page owner of the page the link is being added to should be notified.	A2	3
<b>4.0</b>	<b>Page Types, Templates</b>		
4.01	The CMS must use page templates to generate webpages.	A31, A32	3
4.02	The CMS must support authorized users to be able to create, modify, register, maintain and apply page templates and types to individual pages, which will contain and display content developed and stored in the content management system.	A31, A32	3
4.03	The current set of page templates and types which must be supported by the content management and display systems are contained in the tables below, <a href="#">Table 4</a> and <a href="#">Table 5</a> (see below).	A31, A32	3
4.04	The CMS must support authorized users to be able to select page types and templates from a list when they are creating pages.	A31, A32	3
4.05	The CMS must support the creation, modification, placement, maintenance of various page components and component types, in order to differentiate page templates and types. {See component section for clarification. }	A314, A324	3
4.06	The CMS will provide the functionality to add new page types.	A3	3
<b>5.0</b>	<b>Pages (webpages)</b>		
5.01	The CMS must support an authorized user to be able to create new pages in the system, using the page types and templates. A page is a particular instance of a page type. It refers to a document that will be viewable by a visitor to the agency website at a user-selected internal URL.	A312	3
5.02	The CMS must support the designation of owners for all pages of the website. An owner is a specific, named system user.	A333, A334	3
5.03	The CMS must provide an automatic, default assignment of a page "owner", based on username login, with option for override.	A31, A32, A33	2

No.	Requirement	Business Process	Priority <sup>1</sup>
5.04	The CMS must support an authorized user to be able to place links in any narrative text (via HTML or a WYSIWYG editor), which displays on web pages, including, but not limited to link descriptions.	A0	3
5.05	The CMS must support the ability for authorized users to embed code and/or widgets within a page. This must include the ability to embed videos, widgets/gadgets, polls, quizzes, slideshows, comment forms, and any other content that can be included via iframes, javascript, Flash, or other standard browser plugins.	A3	3
5.06	The CMS must show these embedded objects when previewing a page exactly as the public would see them once the page is published.	A3	3
5.07	The current set of metadata associated with pages that the CMS must support are included in <a href="#">Table 6</a> (see below).	A312, A322, A334	3
5.08	The CMS must support authorized users to be able to publish web pages at will, without going through the normal approval process.	A34	3
5.09	The CMS must support users to be able to browse a complete list of pages.	A321	1 <sup>2</sup>
5.10	The CMS must support authorized users to be able to preview a page as it would appear to the website visitor.	A334	3
5.11	The CMS must provide for the generation of human-friendly internal URLs for all webpages generated.	A1	3
5.12	When editing a page, and the content manager editing the page is the page owner, the notification process is bypassed. If the content manager editing the page is not the page owner, a notification must be sent to the page owner via e-mail detailing which user changed the page and when the change was made. When creating or editing an unpublished page (the building metadata property of the page is set to "yes"), the page should not be automatically published until the building metadata property is set to "no". All page changes must be approved. Note: This requirement only applies to direct edits to a page (such as editing a page's headline) and does not apply to changes to components, links, or URLs that may indirectly affect a page.	A32	3
5.14	The CMS must enforce the following validation rules before publishing a page. If any of the rules below are violated, the page must be returned to the page owner with a note indicating which violation rule was violated and what action must be taken to resolve the issue before the page can be published.	A342	3
5.15	Every page must have at least one component on it before it can be published.	A342	3
5.16	Every page must be assigned a unique friendly URL before it can be published.	A342	3
<b>6.0</b>	<b>Files</b>		
6.01	The CMS must be able to accommodate any file type: <ul style="list-style-type: none"> <li>▪ all files must be publishable;</li> <li>▪ all files must be browsable by authorized users.</li> </ul>	A0	3
6.02	The CMS must support versioning of files, with all versions retrievable.	A0	1
6.03	The CMS must support the creation, modification, maintenance of metadata for files. The CMS must support the current set of metadata associated with files, which are described below in <a href="#">Table 7</a> (see below).	A0	3

<sup>2</sup> 1 based on search requirements being met, 3 otherwise

No.	Requirement	Business Process	Priority <sup>1</sup>
<b>7.0</b>	<b>Components</b>		
7.01	The CMS must support a page having multiple components, placed on a page in an order and in a location specified by the content manager. Components are areas on a page that contain a set of hyperlinks that share a common classification, one individual link, text, image or some HTML with a predefined look and feel.	A0	3
7.02	The CMS will support the appearance of a component being determined by: <ul style="list-style-type: none"> <li>▪ The type of page on which the component appears;</li> <li>▪ The location on the page on which the component appears;</li> <li>▪ The content of the component; and</li> <li>▪ The type of the component.</li> </ul>	A3	3
7.03	The CMS will support title styles to be designated by the content contributor for components.	A3	3
7.04	The CMS will support, at a minimum, three (3) available styles for the title of a component: hidden (not shown), section, and subsection.	A3	3
7.05	The CMS will support the following definition of a section title style: the title is rendered in a distinguishing HTML style, as specified by the page template. And, if the page is a Table of Contents page, the title must be included in the Table of Contents in the “on this page” box.	A3	3
7.06	The CMS will support the following definition of a subsection title style: the title is rendered in a distinguishing HTML style, as specified by the page template. And, if the page is a Table of Contents page, the title is NOT included in the Table of Contents in the “on this page” box.	A3	3
7.07	The CMS will support the following metadata attributes to be associated with a component: Title: The title of the component that’s displayed, as described in the HTML templates; Title Style: {see 7.12}; Translation: An English translation of the title that’s displayed as described in the HTML templates; Description: A description of the component that’s displayed as described in the HTML templates {see 7.16}; Description Style: {see 7.14}; More Link: {see 7.18}; Sort Order: {see 7.20}; Translation Style (see 7.15).	A3	3
7.08	The CMS will support a minimum of three (3) available description styles for the links generated in the component: hidden (not shown), right (descriptions are shown to the right of the link text, preceded by a “-“),and below (descriptions are shown below the link text).	A3	3
7.09	The CMS will support a minimum of two (2) available translation styles for the links generated in the component: hidden (not shown), visible (translations are shown below the link text and above link descriptions).	A3	3
7.10	The CMS will support a text entry field where HTML or text can be entered to be shown in the component. This field represents the component's description.	A3	3

No.	Requirement	Business Process	Priority <sup>1</sup>
7.11	The CMS will support the use of images, that is, an associated file that will be displayed for certain types of components as described in the HTML templates.	A3	3
7.12	The CMS will support the use of “more” links, that is, an associated link that will be displayed for certain types of components as described in the HTML templates.	A3	3
7.14	The CMS will support a sort order specification for the contents of component, alphabetical or manual (to be controlled by the content manager), but defaulted to alphabetical.	A3	3
7.15	The CMS will ignore prefix Spanish diacritical marks in links when sorting links alphabetically, for example, the upside down question mark.	A0	2
7.16	The CMS will support the reuse of components across different webpages of the websites.	A3	2
7.17	The CMS will support at a minimum the current set of components, as specified in <a href="#">Table 8</a> (see below).	A3	3
7.18	When editing content, and the content manager editing the page is the page owner, the notification process is bypassed, and the page with the change is republished immediately. If the content manager editing the component on a page is not the page owner, then the page should still be republished immediately, but with a notification sent to the page owner via e-mail detailing which user changed the component, what page the component appears on, and when the change was made. When creating or editing components on an unpublished page (the building metadata property of the page is set to “yes”), the page should not be automatically published until the building metadata property is set to “no”.	A324	3
7.19	The CMS must not render components on the webpage if there is no designated content. There needs to be approved and enabled content in the component for it to display. For example, if a box has no enabled links or content in its description, than it should not be rendered on the page	A334, A34, A341	2
<b>8. Standard Navigational and Fixed Page Components</b>			
8.01	The CMS must support the creation, modification, maintenance, and registration of standard navigational and fixed page components for the creation, modification and maintenance of page templates and types. The current set includes: <ul style="list-style-type: none"> <li>▪ Banner {with and without Search box}</li> <li>▪ Bottom Nav</li> <li>▪ LeftNav – {Multiple instances with different links; can be turned “on” or “off” depending upon page instance}</li> <li>▪ TopNav</li> <li>▪ Channels (the tab images with rollover effects)</li> <li>▪ Footer</li> <li>▪ Utilities box</li> <li>▪ GovDelivery button {each instance has a unique identifier}</li> </ul>	A314, A324	3
8.02	The CMS must support the use and repurposing of these components and component sets across multiple pages, specifically, to construct page templates and types.	A312, A322	3

No.	Requirement	Business Process	Priority <sup>1</sup>
8.03	The CMS must support an authorized user to be able to edit navigational and fixed page (both graphic- and text-based) components, lockout other users from editing these same components, and then associate them with a workflow for approval of their changes by the site manager or their proxy.	A314, A324	3
8.04	The CMS must support content contributors to be able to publish fixed page components on demand, and all pages using those components would republish automatically.	A314, A324	3
<b>9.0</b>	<b>Variable Page Components</b>		
9.01	The CMS must support the ability for all page types and templates to render content boxes/areas which could contain links, graphics or other file types.	A312, A322	3
9.02	The CMS must support the standardized design and placement of these content boxes/areas.	A3	3
9.03	The CMS must support the display of the boxes/areas in any combination thereof and anywhere on the web page.	A3	3
9.04	The CMS must support a user to be able to create and modify breadcrumbs.	A0	3
9.05	The CMS must support the ability of users to apply breadcrumbs to page templates. These would be pre-pended to the user-specified breadcrumbs, as specified in 9.13.	A312, A322	2
9.06	When setting properties for a component, the CMS will display the links that are to be displayed in the component (links with a matching classification) in the order that they will be displayed on the final page (alphabetical if that's the sort order, the manual sort order specified if that's the sort order, etc.).	A314, A324	3
<b>10.0</b>	<b>Full Website</b>		
10.01	The CMS must support content contributors to be able to publish the full website upon demand.	A34	3
10.02	The CMS must support human-readable URLs which are usable as navigational aids to end users.	A0	3
10.03	The CMS must support workflow.	A33, A341	3
10.04	The CMS must support the association of all page-level content to a workflow, for the copyeditor to review before publication.	A341	3
10.05	The CMS must support an authorized user to be able to create new workflows, and modify existing workflows in a graphical user interface.	A33, A34	2
10.06	The CMS must support automatic backup daily.	A0	3
10.07	The CMS must support an in-house administrator to be able to add and delete users and modify their permissions in the CMS, and reset users' passwords, and do it all through a graphical user interface.	A0	3
10.08	The CMS must support the creation and modification of user roles, content and approval permissions. The current set of user roles and the content and approval permissions include, in descending order of permissions: administrator, content contributors, and copy editors.	A0	3
10.09	The CMS must support the ability for the organization to create 508 and WCAG 2.0 compliant websites.	A0	3
10.10	The CMS must support spacer images (transparent and used for page layout architecting purposes only), with the alt tag having only a null ("") value.	A0	3

No.	Requirement	Business Process	Priority <sup>1</sup>
10.11	The CMS must support the generation, recording, printing and display to internal users only the following reports: <ul style="list-style-type: none"> <li>- A comprehensive list of all pages published by the CMS</li> <li>- A comprehensive list of all live links published by the CMS</li> <li>- An A-to-Z index of all unique links with A-to-Z headers in each section.</li> <li>- All pages, with page owners identified</li> <li>- All URLs</li> </ul> The user requesting the report generation shall be given the ability to choose which metadata fields will be displayed (and content showed in the reports filtered by) in the reports.	A0	2
10.12	The CMS must support the printing of the reports, and the export of the report data items into a *.csv format file.	A0	1
10.13	The CMS must support multi-lingual capabilities.	A0	3
10.14	The CMS must support the publication of both static and dynamic content.	A3	3
10.15	The CMS must be easy-to-use and provide an intuitive graphical user interface.	A0	3
10.16	The CMS integration team must provide content migration for the entire website, and provide dual-site operations during the migration to minimize content freeze. Impacts on content managers should be minimized.	A0	3
10.17	The resulting website must be available to the public 99.999% of the time (not including scheduled maintenance windows).	A0	3
<b>11.0 Content Search Function</b>			
11.01	The CMS should have one unified system for search, with all fields searchable.	A111, A121, A212, A221, A311, A321	3
11.02	The CMS must provide the ability to specify multiple operands and operators for a search, and must provide an ability to specify operands between search parameters.	A111, A121, A212, A221, A311, A321	3
11.03	The CMS should offer simplified search parameters (using item keywords, title, classification, URL or ID number), or the ability to configure search screens with simplified search parameters, without the operands, e.g., equal to, contains, less than, etc.	A111, A121, A212, A221, A311, A321	3
11.04	The CMS must support the ability of users to search by language.	A111, A121, A212, A221, A311, A321	3
11.06	The CMS must support the ability of users to search Spanish language content.		3
11.07	The CMS will provide a search interface that will allow users to search for Spanish language content without using html entity references.	A111, A121, A212, A221, A311, A321	3
11.08	The CMS search function will not be case sensitive, nor require diacritical marks when searching for content, e.g., searching for Espanol, espanol, Español, and español should all return the same results.	A111, A121, A212, A221, A311, A321	3
11.09	The CMS will provide the functionality for all available operations on content (delete, publish, etc.) to be available from the search results screen so that these actions can be taken based on content found during a search.	A111, A121, A212, A221, A311, A321	3
11.10	The CMS will provide configurable search results screens, such that metadata can be added or removed from display on the search results screen.	A111, A121, A212, A221, A311, A321	2

No.	Requirement	Business Process	Priority <sup>1</sup>
11.11	The CMS search interface must be keyboard accessible. Specifically, users must be able to tab to the next entry field.	A111, A121, A212, A221, A311, A321	2
11.13	The CMS will provide search functionality such that the order of the search terms entered by users should not matter. For example, searching for “house white” should return “white house”.	A111, A121, A212, A221, A311, A321	2
11.14	The CMS will show a preview of the image on the results screen, when searching for images and links.	A111, A121, A212, A221, A311, A321	1
11.15	The CMS will display the related URL in the results, when searching for links.	A221	2
11.17	When searching for content, within search results, the CMS must provide to the user a numerical count of the items returned, the title of the item, the description of the item (if applicable), and the elements of the search results must be clickable.	A221	3
11.18	The CMS must support the user to be able to click on an element of the search results, and the response should be to launch the edit process if a user is authorized to edit the object.	A22	3
11.19	When searching for URLs, the CMS must offer the option of displaying all related link titles for each URL in the results.	A212, A222	2
11.20	The CMS must support sub-string search.	A0	3
11.21	When searching for links, the CMS must show the URL used by the returned links as part of the results.	A221	2
<b>12.0</b>	<b>Overall CMS Functionality</b>		
12.01	When browsing for content in a repository, the CMS will allow the user to select how the content is sorted.	A3	2
12.02	The CMS will provide sorting options that include the metadata items, and must include by title, created date, and modified date.	A3	3
12.04	The CMS will provide a means for system users to see what it is currently published and what is waiting to be published.	A34	2
12.05	The CMS will provide functionality such that language is automatically selected (with an override option) based on the user logged in. That is, each user should be able to be associated with a default language that is then selected as the default option for content metadata.	A0	2
12.06	The CMS shall allow Spanish diacritical marks to be entered using the Windows alt-number keypad combinations, and/or the standard Microsoft Word way of using the control key, apostrophe and vowel or the letter n—. The CMS shall allow other Microsoft Word shortcuts, for example, the Microsoft Word shortcuts for the Spanish punctuation marks j and ç.	A0	3
12.07	The CMS will allow existing HTML templates to be edited and new ones to be created by authorized users.	A3	3
12.09	The CMS will provide the ability for content contributors to be able to create a web-shareable widget/gadget from a set of links associated with a classification, based on HTML templates.	A0	3
12.10	The CMS will support content contributors to be able to add widgets/gadgets from other websites to this system, and their webpages.	A0	3
12.11	The CMS will provide the ability for gadgets/widgets to be shared across (appear on) multiple pages.	A3	3
12.14	The CMS must provide users the ability to view the history of any content object or file.	A0	1

No.	Requirement	Business Process	Priority <sup>1</sup>
12.15	The CMS must be supported for content contributors 24 x 7 x 365, be accessible via the internet, and not require any additional software installations on the contributors' PCs.	A0	3
12.16	The CMS must keep an audit log of all changes to content (including additions, modifications, and deletions) so that administrators can determine what caused any specific change on the website to occur and assist in troubleshooting efforts.	A0	1
<b>13.0</b>	<b>Managing Pages, Components, Classifications</b>		
13.01	The CMS will provide the functionality for the page type of a page to be changed after a page is created.	A322	3
13.02	The CMS shall default page owner-related metadata, (e.g., Creator, Modifier, etc.) to the current user logged in, and the CMS shall provide the value for the page owner to be changed by the user logged in, via a drop down menu.	A333, A334	2
13.03	The CMS will provide the ability to generate an RSS feed from any set of links with a common classification.	A0	2
13.04	The CMS will provide the option for page owners to display the page utilities or not for each page.	A3	1
13.06	The CMS will provide methods of aggregating and syndicating content. {Syndicating – RSS feeds, widgets; aggregating – taking external content & putting on your pages – auto collections.}	A0	3
<b>14.0</b>	<b>Display of Content (in Preview)</b>		
14.01	The CMS preview function will allow content managers to do in-context editing.	A3	2
<b>15.0</b>	<b>Web X.0 Future Additions to the Websites</b>		
<b>16.0</b>	<b>Website Publishing</b>		
16.01	From the time the user publishes a piece of content, it is shown to the public in less than 30 minutes. The CMS must support authorized users to be able to specify the publication date down to the calendar date and ½ hour.	A0	3
16.02	The option to send a page to the copy editor for review and approval before publishing should be defaulted to yes if the page is newly created. Otherwise, the option should be defaulted to no.		1
<b>17.0</b>	<b>Archiving</b>		
17.01	The CMS must support content contributors to be able to specify the archive date of a link, page, or URL, down to the calendar date and ½ hour. Default archive date/time specification should be “never.” (Archiving means content stays within the CMS, but it is no longer displayed to the website visitor.)	A0	3
17.02	The CMS must support content contributors to be able to archive pages, in a system database, complete with its metadata attributes and its link designations. Default archive value should be “never”.	A3	2
17.03	Archiving content should have no detrimental affect on CMS performance.	A0	2
17.04	Archiving a page should not archive all content on that page.	A0	2
17.05	The CMS will provide functionality for individual instances of links on an individual page to be disabled, and thus not published.	A0	3
17.06	The CMS will provide functionality to archive external links and URLs, and their attributes indefinitely.	A0	3
17.07	For links, archiving a link will involve the removal of every instance of the link across the sites, and with the normal link change notification processes being followed.	A0	1

No.	Requirement	Business Process	Priority <sup>1</sup>
17.08	For internal URLs, archiving will involve the identification of the affected pages, removal of the pages from the website, all links to that page marked for archive, and those pages' published date changed, and the pages automatically published.	A0	1
17.09	For external URLs, archiving will involve the identification of the affected links and pages, the removal of the links from the pages, the pages' published date changed, and the pages automatically published.	A0	1
17.10	The CMS will provide functionality to UN-archive pages, links and URLs.	A0	3 <sup>3</sup>
17.11	The CMS will allow the user to choose to display archived items in the search results, and if so, those items will be flagged.	A0	1
17.12	The CMS must support the content contributors to be able to schedule the removal of a piece of content, or a content type from display to the website visitor, down to the calendar date and clock half-hour.	A0	2
17.13	If a piece of content is scheduled to be removed at a point in the future, then the page owners that have pages with content on it that is being archived will be notified via e-mail when the archiving is complete.	A0	3
<b>18.0</b>	<b>Cascade Delete</b>		
18.01	The CMS must allow a content contributor to cascade delete a URL from the CMS. That is, when a user cascade deletes a URL, the CMS will provide an impact statement that displays links (and the pages that those links appear on) that utilize the URL (including archived links and page). The CMS will then ask whether the content contributor would like to proceed with the deletion or not. If the content contributor selects yes, then the CMS will remove the URL and the associated links. Additionally, the pages that the links appeared on will be republished without any workflow notifications.	A12, A22	3
18.02	The CMS must allow a content contributor to cascade delete a page from the CMS. That is, when a user cascade deletes a page, the CMS will provide an impact statement that displays the links (including archived links) that link to the page (and the pages that those links appear on). The CMS will then ask whether the content contributor would like to proceed with the deletion or not. If the content contributor selects yes, then the CMS will remove the page (and any associated components that do not exist on any other page) and the associated links to the page, as well as the internal URL used by the page. Additionally, the pages that the links to the page appeared on will be republished without any workflow notifications.	A32	3
18.03	When deleting a link, the CMS must check if the URL used by the link is used by any other links. If no other link uses the URL, then the results of this analysis must be presented to the user with an option to delete both the link and the URL. In either case, any pages with the link on it should be republished without any workflow notifications without the link after the link is deleted.		3

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No.	Requirement	Business Process	Priority <sup>1</sup>
18.04	When deleting a link, the CMS must check if the URL used by the link is used by any other links. If no other link uses the URL, then the results of this analysis must be presented to the user with an option to delete both the link and the URL. In either case, any pages with the link on it should be republished without any workflow notifications without the link after the link is deleted.		3

**Table 3: Requirements for the CMS and Associated Business Processes**

Metadata Field Name	Field Description	Spell Check Field	Mandatory Field?	Controlled Vocabulary	System Generated
Language	Language designation of the content object.	N	Y	Y {English, Spanish; default language associated with username}	Y – associate language default with username
Modifier	Last modifier of the URL	N	Y	Y {username}	Y
Archive Date	Date content object is removed from publication and into archives.	N	N	N {default Never}	N
Created Date	Date URL was created	N	Y	N	Y
Description	Brief description of the content. Summary.	N	N	N	N
URL	URL	N	Y	N	N
File Type	File type; used to show users a standard link to download viewers; language to be used would be in the HTML templates.	N	Y	Y {PDF, MS Word, MS Excel, RSS feed; default HTML}	N
Comments	Free form text field	N	N	N	N
Modified Date	Last date modified	N	Y	N	Y
Creator	Content contributor who created this URL; defaulted to logged in user	N	Y	Y {username}	Y

**Table 4: URL Metadata Items**

Metadata Field Name	Field Description	Spell Check Field	Mandatory Field	Controlled Vocabulary	System Generated
Link Title	Hyptertext value for link	Y	Y	N	N
Flyover	Field that provides additional information for links and is rendered as the title attribute of the link's <a> element.	Y	N	N	N
Link Translation	Text field which allows user to type in other language translation. This is displayed to site visitors at the discretion of the content manager based on the metadata of the component where the link is displayed.	Y	N	N	N
Language	Language of the content object.	N	Y	Y {English, Spanish; default language associated with username}	Y
Creator	Content contributor who created this hyperlink	N	Y	Y	Y
Created Date	When this hyperlink was created	N	Y	N	Y

Metadata Field Name	Field Description	Spell Check Field	Mandatory Field	Controlled Vocabulary	System Generated
Modifier	Content contributor who last modified this hyperlink	N	Y	Y	Y
Modified Date	Last modified time and date	N	Y	N	Y
Review Date	Scheduled date for hyperlink to be reviewed; email should be automatically sent to the page owners of the pages the link appears on, on this date.	N	N	N	N
Scheduled Publication	Date and time the hyperlink is scheduled for publication	N	N	N {default none}	N
Archive Date	Date content object is moved removed from publication and into archives.	N	N	N	N
Keywords	Additional terms, not in taxonomies, which content specialists believe are important for retrieval. In the future, if site visitor tagging is used on the website, this field would accommodate storage of the tags. Storage of tags may automatically kick off a workflow for approval/moderation.	Y	N	N	N
Description	Brief description of the content. Summary. Displayed to the site visitors at the discretion of the content manager based on the metadata of the component where the link is displayed.	Y	Y	N	N
Locations	Locations this content is related to.	N	N	Y {Zip code database ISO 3166 country codes and state abbreviations}	N
Comments	Free form text field	N	N	N	N
URL	Content manager should select one URL, from the URLs entered into the system; see URL content type.	N	Y	Y	N
Classifications	Content manager should select one or more classifications. This will then be matched to the classification term selected in a component to determine which links should appear in that component.	N	N	Y	N

**Table 5: Link Metadata Items**

Page Type	Description or URL Example
Put in bookmarks to examples; Make sure names match.	
<a href="#">Link List</a>	2-4 columns
<a href="#">A-Z Index (same page)</a>	http://www.agency.gov/Topics.shtml - link placement should be automated based on page intelligence not taxonomy reference

Page Type	Description or URL Example
Put in bookmarks to examples; Make sure names match.	
<a href="#">A-Z group (different pages)</a>	http://www.agency.gov/Agencies/index.shtml = click on letter to see different pages – link placement should be automated based on page intelligence not taxonomy reference.
<a href="#">50 State index</a>	Page template should be pre-populated and should be turned on and off at the page instance level
<a href="#">2 column internal table of contents</a>	
On this page table of contents	http://www.agency.gov/pages.shtml
<a href="#">Link list with description</a>	
Common Page	Includes “banner only” pages
<a href="#">Home page</a>	
<a href="#">JSP</a>	
<a href="#">Narrative</a>	

**Table 6: Page Types**

Screenshot	Examples & Defining Features
INSERT SCREENSHOTs	<p><b>Homepage/Gateway</b>  <b>Examples</b>  <b>Defining Features</b>                      Styles used in generated HTML (see HTML templates)</p>
	<p><b>Bulleted Link List</b>  <b>Examples</b>  <b>Defining Features</b>                      Styles used in generated HTML (see HTML templates). Specifically, links titles are not bolded and have bullets.</p>
	<p><b>Two Column Link List</b>  <b>Examples</b>  <b>Defining Features</b>                      Styles used in generated HTML (see HTML templates). Specifically, link titles are in bold and lists of links do not have bullets. Please note, it is not necessary for the links to appear in two columns.</p>
	<p><b>Table of Contents</b>  <b>Examples</b>  <b>Defining Features</b>                      Styles used in generated HTML (see HTML templates). Additionally, the CMS must automatically generate the “On This Page” box at the top of the page with anchor links to each area of links denoted as “section”. Areas denoted as “subsection” should not have anchor links created in the “On This Page” box.</p>
	<p><b>A-Z</b>  <b>Examples</b>  <b>Defining Features</b>                      Styles used in generated HTML (see HTML templates). The CMS must automatically break a single set of links into separate areas by the first letter in the link title. Additionally, each section that contains links should be linked to from the A-Z links at the top and bottom of the page as shown in the screen capture above. Sections without links should not be links.</p>
	<p><b>Narrative</b>  <b>Examples</b>  <b>Defining Features</b>                      Narrative pages contain blocks of arbitrary HTML (articles) that are used to highlight unique content.</p>

**Table 7: Page Types & Templates**

Metadata Field Name	Field Description	Spell Check Field	Mandatory Field	Controlled Vocabulary	System Generated
Page Headline	Title of Page	Y	Y	N	N
Page Intro	Introductory text on a page	Y	N	N	N
Headline Translation	A English translation of the page headline	Y	N	N	N
Browser Title	The title of the Web page If web content, the value within the <Title> tag.	Y	Y the default ending is auto-populated based on the content manager	N	N
Language	Language of the content object.	N	Y	Y {English, Spanish; default language associated with username}	Y
Modifier	Username of person who last modified this page	N	Y	Y drawn from list of users	Y
Page Owner	The name of who is responsible for the content (but may not necessarily create or produce it).	N	Y	Y drawn from list of users	Y
Modified Date	Date content object was last modified or revised.	N	Y	N	Y
Scheduled Publication Date	Effective date that the content can be published to the production site. Will be used later to have a Last Revised date on each page of Web site. Should reflect last published date whether or not page has gone through a workflow.	N	Y	N	N
Review Date	Date content object is scheduled for content freshness review	N	Y	N default values six months	N
Archive Date	Date content object is moved from publication and into archives.	N	Y	N default value is "never"	N
Created Date	Date content was first released to production	N	Y	N	Y
Keywords	Additional terms, not in taxonomies, which content specialists believe are important for retrieval.	Y	Y	N	N
Description	Brief description of the content. Summary.	Y	Y	N	N

Metadata Field Name	Field Description	Spell Check Field	Mandatory Field	Controlled Vocabulary	System Generated
Page Type	Entry template used to generate a type of page or other content object.	N	Y	Y based on available page type templates	N
Tagline	Deck heading (tagline or brief description) below the heading at the top of a Main Content Area.	Y	N	N	N
Channels	Large audience segments which are hard coded into the web site (content group & subgroup aggregations).	N	Y	Y { See Section 1.1 for a listing of groups that should be in the controlled vocabulary }	N
Comments	Text field for user comments	N	N	N	N
Toggle Button	Allows users to associate Spanish and English pages, where there exist pages in the other language for the particular topic.  The content manager should be able to search for the associated page's internal URL to enable the toggle button to appear on the page. When a page is associated to another page through a toggle button, both pages should be generated with a toggle button. The associated page's toggle button should become automatically associated with the partner page's internal URL.	N	N	N	N
URL	The content manager should be able to search for one internal URL that will then be the final URL for the page when its published.	N	Y	Y (internal URLs)	N
Components (both fixed and variable)	The components that will appear on the page, from the component types that exist	N	N	Y	N
GovDeliveryID	The id used by GovDelivery links to popup GovDelivery subscription service, pre-located to the specified id. The HTML template contains the necessary code to implement this.	N	N	N	N
Last Published Date	The date this page was last published. This is displayed at the bottom of each page, see the HTML templates.	N	Y	N	Y
Building	Used to specify if a page is in the process of	N	Y	Y	N

Metadata Field Name	Field Description	Spell Check Field	Mandatory Field	Controlled Vocabulary	System Generated
	being built and thus should not be automatically published, even if the page owner is the content manager making the change.			{ Yes, No, with Yes being the default }	

**Table 8: Page Metadata**

Metadata Field Name	Field Description	Spell Check Field	Mandatory Field	Controlled Vocabulary	System Generated
Language	Language of the content object.	N	Y	Y	N
Creator	Creator of file	N	Y	Y	Y
Modifier	Username of last modifier	N	Y	Y from logged in user	Y
Modified Date	Time and date of last modification	N	Y	N	Y
Archive Date	Date content object is moved removed from publication and into archives.	N	N	N	N
Created Date	Date content was first released to production	N	Y	N	Y
Description	Brief description of the content. Summary.	Y	Y	N	N
Comments	Text block for user notes	N	N	N	N
Width	Image width	N	N	N	N
Height	Image height	N	N	N	N
Alt	Image's alt attribute	Y	N	N	N
Longdesc	Image's longdesc attribute	Y	N	N	N
File Type	Application producer/reader	N	Y	Y	N
Path to File	Path to file	N	Y	N	Y

**Table 9: File Metadata**

Screen Shot	Component
INSERT SCREENSHOTS	Shorttext
	News and Features box

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Screen Shot	Component
	Link
	Link Area
	Box
	Emergency box

**Table 10: Example of Current Components**

## 5 Appendix 1: Business Process Diagrams

This appendix includes the original business process diagrams developed that were then used as the basis for the full text and IDEF diagrams in this document. They are included as a reference in case this representation of the requirements is useful.

INSERT SCREENSHOTS

**End of Document**