[Business Function Analysis]

[CMC Features]

[Amer]

[Alaan TV]

1. Why a CMS:

Websites have gone from simple business card style static HTML to dynamic extensions of a company's image. A website is much more now than ever before. A website can be critical to
attracting and keeping customers as well as it can be the business for a company.

The task of managing a website has grown in size as well, going from an IT supporter with flair for HTML managing a handful of pages to dozens or hundreds of non-IT practitioners adding, editing, deleting and arranging content on multiple domains simultaneously.

It is therefore no surprise that the demands for systems to manage the web content have grown, too. Today, content management systems (CMS's) can be as vital to a company's web strategy as the ERP system is to the internal running and management of the company itself.

2. What does a content management system do?

A typical CMS aims to help users manage information efficiently. The principle functions of most CMS applications include:

a. storing
b. indexing
c. search and retrieval
d. format management
e. revision control
f. access control
g. publishing
h. **reporting**

3. Popular web CMS features

A web content management system is typically capable of performing core CMS functions mentioned above. On top of this, however, web CMS may also include the following features:

i. SEO-friendly URLs
j. customizable templates to manage content presentation
k. permission-based access control
l. user and group functionality
m. content organization structures
n. content virtualization
o. versioning and workflow management
p. collaboration platform
q. delegation between user groups
r. language or user support

s.   integrated file managers

t.   integrated audit logs

u.   install and upgrade wizards

v.   compliance with website and accessibility standards

One of the most user-friendly CMS features is the WYSIWYG editor, or 'what you see is what you get' text-editing tool which works like Microsoft Word. This tool allows you to manipulate the webpage code without having to know the underlying programming language (HTML).

Beyond the creation and publishing of HTML content, you can also set up a CMS to:

w.   support your online marketing campaigns

x.   integrate with your customer relationship management system

4. Why Dee.CMS

Dee.CMS a content management system built for media companies, to provide easy deployment and pluginable system for news and TV sites, scalable and reliable system, it's focused on user experience, and offers precise control for designers and developers, built on Amazon Web Services AWS.

4.1. Features :

o   A fast, attractive interface for editors

o   Configure content types front-end through layout engine

o   Simple, configurable permissions

o   Workflow support

o   Multi-site and multi-language support

o   Full template support and customizable templates

5. Purpose of this Document

This deliverable aims at providing sample methodology and models to carry out the Business Function Analysis required either for describing them "as is" (current model of organization and operation) or the "to be" (desired model).

6. Business Function Analysis Documents and Modules:

Document	Level	Modules

User Requirements		CMS features, Business Process
Detail Analysis Documentation		Class Diagram, Interface interaction design

7. Scope/Exclusions:

It is in the scope of this document to provide a brief description of the methodology and modelling of Business Functions.

8. Assumptions:

It is assumed that the readers of this document are familiar with CMS systems design and management. Adequate knowledge of designing Organization charts, Dataflow Diagrams, etc. is also assumed.

9. Users and Security:

ID	Actor	Actor Goals	Actor Goal Description	Related Business Processes
1	Editors			
2	Authors			
3	graphical designers			
4	Content editors			
5	Website administrator			
6	Administrator			

10. Work areas and Business Process:

The work areas of this chapter contain tasks that are used in the CMS on a regular basis. Most of the functional requirements will be in this chapter. All the processes are divide by category as showing below:

10.1. Business Process category:

ID	Business Process category	Frequency	Users
BPC-1	Manage templates	Rarely once set up	Website administrator, graphical designers
BPC-2	Add/edit/delete content item	Daily	Administrators, editors and authors

ID	Business Process category	Frequency	Users
BPC-3	Review and approve content	many times, a day	Content editors
BPC-4	Publish content	many times, a day	Content editors
BPC-5	Manage media library	many times, a day	Administrator, Editors and Authors
BPC-6	Manage site structure	many times, month	Administrator
BPC-7	Workflow management	Rarely once set up	Website administrator

10.2. Business proceses list:

ID	Business Process ID	Business Process Name	Business Process Description
Manage templates BPC-1			
1	BP - 1	List Template	
2	BP - 2	Add Template	
3	BP - 3	Edit template	
4	BP - 4	Undo change	
5	BP - 5	Save template	
6	BP - 6	Copy template	
7	BP - 7	Delete template	
8	BP - 8	Replace template	
Add/edit/delete content item BPC-2			
9	BP - 9	Find content item	
10	BP - 10	Edit page/Content	Create page based on template
11	BP - 11	Search in media library	Search among media files in media library
12	BP – 12	Insert a media fil	Insert a media fil on the page
13	BP – 13	Upload a media	Upload a media file and set meta data
14	BP – 14	Add/change meta data	such as: responsible person, creation date
15	BP – 15	Delete content	
16	BP – 16	Save content	Save content for later resumption (without being published or sent for approval)
17	BP – 17	Send for approval	Manual be email, phone or by automated workflow functionality
18	BP – 18	Receive feedback	Receive feedback from approval/editor
19	BP - 19	Review before publishing	Review before publishing
20	BP - 20	Undo change	Roll back to earlier versions or undo in editor
21	BP – 21	Publish	see the
Review and approve content BPC-3			
22	BP – 22	Receive notification for review	
23	BP – 23	View right content	
24	BP – 24	Correct content	

ID	Business Process ID	Business Process Name	Business Process Description
25	BP – 25	Reject content	
26	BP – 26	Notify user about the action	Notify user about the action (publish or reject)
Publish content BPC-4			
27	BP – 27	Set publish date and time	
28	BP – 28	Set un-publish/expiry date and time	
29	BP – 29	Save published content item	
30	BP – 30	Publish to staging server	
31	BP – 31	Publish to production server	
Manage media library BPC-5			
32	BP – 32	Locate media file on local Pc	
33	BP – 33	Upload media file to media library	
34	BP – 34	Set meta data	
35	BP – 35	Search among media file in the media library	
36	BP – 36	Show which pages refer to media file	
37	BP – 37	Delete media file	
Manage site structure BPC-6			
38	BP – 38	Create site	
39	BP – 39	Maintain user rights and responsibilities	
40	BP – 40	Edit page	
41	BP – 41	Remove site	Remove site consisting of one or more pages
42	BP – 42	Move page	
Workflow management BPC-7			
43	BP – 43	Send email	
44	BP – 44	Post review	
45	BP – 45	Publish	
46	BP – 46	Facebook publishes	
47	BP – 47	YouTube publishes	
48	BP – 48	Tweeter publishes	
49	BP – 49	Sent notification	
50	BP – 50	Save post in DB	
51	BP – 51	Save draft	
52	BP – 52	Retrieve post data by (user, clients, date)	
53	BP – 53	Retrieve draft data	
54	BP – 54	Approve publish	

10.2.1.Manage templates BPC-1:

10.2.1.1. Overview:

Using templates is a way to control the layout and a tool to create a uniform appearance of all the pages that make up the site, no matter who updates them. A CMS is often set up in a way, that forces the users to use the templates, and therefore it is important, that there are enough templates to provide flexible presentation of content while keeping the number low enough to retain the overview of available templates and when to use which template.

10.2.1.2. Process List

- List Template **BP – 1**:

  - Overview:

Process ID	BP - 1
Overview	
Process Owner	
Problem	**P1:** it can be difficult to distinguish between the layout of templates, if they only are identified by name
Solution example	**S1:** Instead of choosing among the templates from their names only, it might be easier to overview and choose the right template, if they are represented by small rough models of their layout for instance
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

  - Process Diagram:

- Add Template **BP – 2**:

  - Overview:

Process ID	BP - 2
Overview	
Process Owner	
Problem	
Solution example	
Process Status	

Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram:

- Edit template **BP – 3**:

  - o Overview:

Process ID	BP - 3
Overview	
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

  - o Process Diagram

- Undo change **BP – 4**:

  - o Overview

Process ID	BP - 4
Overview	
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram

- Save template **BP – 5**:

  - o Overview

Process ID	BP - 5
Overview	
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

  - o Process Diagram

2. Copy template **BP – 6**:

  - o Overview

Process ID	BP - 6
Overview	
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

  - o Process Diagram

- Delete template **BP – 7**:

o   Overview:

Process ID	BP - 7
Overview	
Process Owner	
Problem	**P1:** Template is in use. If a template is being used by pages, the system should prevent that it is deleted. **P2:** User cannot see which template are in use before trying to delete them. There many exist numerous template in the CMS, and some of them may even be exact copies of other, meant to be changed in some way. It has to be clear which are in use and which are not.
Solution example	**S1:** Block deletion and list pages using this template option to select a replacement template to be applied to all pages using this template **S2:** List template with indication of whether it is in use.
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o   Process Diagram

- Replace template **BP – 8**:

  o   Overview

Process ID	BP - 8
Overview	
Process Owner	
Problem	**P1:** User can only replace the template one page at the time. Sites can have thousands of pages, and changes to the general layout on only parts of the site do occur. It should be possible to replace the template of many pages all at one.
Solution example	**S1**: Replace template of several pages all at once. For instance, by replacing the template from a certain site-node and below or by marking the pages, in a model of the site tree structure, and replace with another template all at once.
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o Process Diagram

10.2.2. Add/edit/delte content item BPC-2:

10.2.2.1. Overview:

Add, edit and delete content are basic functionalities in every CMS, and every CMS will contain the functionality. The interesting things are therefore the problems that users have

experienced when adding, editing or deleting content. These problems are explained below because these are problems that are handled differently, if at all, in different systems.

Most pages will include media files, most often images, to liven up the page and aid the readability.

Problem: Copy-pasting to the CMS editor does not automatically upload picture to media library

The fact that media files have to be uploaded to the server to be visible to the public on a website, is an abstraction that some new or rare users of CMS's forget. A user writes some

content in a Word document, inserts some pictures and tries to copy and paste text as well as pictures into the CMS editor. This is an intuitive thing to do, but usually CMS's cannot handle the pictures this way. The ideal solution would be a CMS that could handle this, and automatically upload the picture to the media library and change the reference in the text from the local pc to the media library on the server. Another way of handling the problem could be a message telling the user to upload the picture to the media library, if a picture is pasted into the editor

10.2.2.2. Processes List:

- Find content item **BP – 9**:
  - OverView:

Process ID	BP - 9
Overview	
Process Owner	
Problem	**P1:** Content item can be difficult to find
Solution example	**S1**: Option to mark unpublished page with appropriate icon or color
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o Process diagram:
- Edit page/Content **BP – 10:**
    - o Overview

Process ID	BP - 10
Overview	
Process Owner	
Problem	**P1**: CMS Editor show only little part of the page **P2:** Someone edits a page he should not edit
Solution example	**S1:** CMS editor should be able to show the entire page and not only the box that begin edited and have preview function **S2:** Permissions should be set up so that only relevant pages are visible to and editable by a user
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o Process Diagram
- Search in media library **BP – 11:**
    - o Overview

Process ID	BP - 11
Overview	
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o Process Diagram
- Insert a media file **BP – 12:**
    - o Overview

Process ID	BP - 12

Overview	
Process Owner	
Problem	**P1:** Copy-pasting from word to CMS editor dos not automatically upload picture to media library
Solution example	**S1:** CMS editor, that automatically upload media file, when copied into the editor and prompts the user for meta data. Or Message, that tells the user to remember to upload a picture.
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram
- Upload a media file **BP – 13:**
  - o Overview

Process ID	BP - 13
Overview	
Process Owner	
Problem	**P1:** User overwrite file used on pages with an unsuitable image
Solution example	**S1:** Giving a warning that the file is in used and block the overwrite
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram
- Add/change meta data **BP – 14:**
  - o Overview

Process ID	BP - 14
Overview	
Process Owner	
Problem	

Solution example	**S1:** Some of the values could have default values set automatically e.g. creation data and responsible person
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram
- Delete content **BP – 15:**
  - o Overview

Process ID	BP - 15
Overview	
Process Owner	
Problem	**P1:** Delete page has sub-pages in tree **P2:** Delete page is linked from other pages.
Solution example	**S1:** Warning about consequences when trying to delete the page or block the deletion **S2:** Block deletion and show list of referencing pages.
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram
- Save content **BP – 16:**
  - o Overview

Process ID	BP - 16
Overview	Save content for later resumption (without being published or sent for approval)
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	

Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram
- Send for approval **BP – 17:**
  - o Overview

Process ID	BP - 17
Overview	
Process Owner	
Problem	
Solution example	**S:1** Manual be email, phone or by automated workflow functionality
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process Diagram
- Receive feedback **BP – 18:**
  - o Overview

Process ID	BP - 18
Overview	
Process Owner	
Problem	
Solution example	**S1:** Manual be email, phone or by automated workflow functionality
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o Process Diagram
- Review before publishing **BP – 19:**
    - o Overview

Process ID	BP - 19
Overview	
Process Owner	
Problem	P1: preview doesn't look exactly as the page dose, when saved
Solution example	Publish to staging server with browsing as if it was published. Preview only selected page in frontend design as if it was published
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o Process Diagram
- Undo change **BP – 20:**
    - o Overview

Process ID	BP - 20
Overview	
Process Owner	
Problem	
Solution example	Roll back to earlier versions Or undo in editor
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

o Process Diagram
- Publish **BP – 21:**
    - o Overview

Process ID	BP - 21

Overview	
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

   o Process Diagram

10.2.3. Review and approve content:

10.2.3.1. Overview :

Publish content has been separated as a long subtask to C.2 to give a better overview of the process. The subtasks can be called a workflow, which supports and enforces publishing restrictions.

10.2.3.2. Process list

- Receive notification for review **BP – 22**
- View right content **BP – 23**
    - o Overview:

Process ID	BP - 23
Overview	
Process Owner	
Problem	**P1:** content can be difficult to fined
Solution example	- Link in notification email. - Search functionality. - List of unpublished content item.
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process diagram
- Correct content **BP – 24**
- Publish **BP – 25**
- Reject content **BP – 26**
- Notify user about the action **BP – 27**

10.2.4. Publish:

10.2.4.1. Overview :

10.2.4.2. Process list

- Set publish date and time **BP – 28**
- Set un-publish/expiry date and time **BP – 29**
- Save published content item **BP – 30**
- Publish to staging server **BP – 31**
- Publish to production server **BP – 32**

10.2.5. Manage media library:

10.2.5.1. Overview :

All websites need at least a few hand-typed pages with text, images and links to other pages or websites. Most CMS's have a repository for media files – images, video files, Word and PDF documents etc. - that can be inserted on a page. This is a basic requirement that must be present, although the specific functionality can vary.

10.2.5.2. Process list

- Locate media file on local Pc **BP – 32**
  - o overview

Process ID	BP - 32
Overview	Browse functionality
Process Owner	
Problem	
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

  - o Process diagram
- Upload media file **BP – 33**:
  - o overview

Process ID	BP - 33
Overview	
Process Owner	
Problem	**P1:** Uploading many files to media library, since they have to set meta data for each file
Solution example	
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process diagram
- Set meta data **BP – 34**
- Search among media file **BP – 35**
- Sow related pages **BP – 36**
- Delete media file **BP – 37**
  - o overview

Process ID	BP - 37
Overview	
Process Owner	
Problem	**P1:** There are references to the media file from pages that will either link to a non-existing file
Solution example	Block deletion and list pages using file allow user to replace the file with another one
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process diagram

10.2.6. Manage site structure

10.2.6.1. OverView

10.2.6.2. Process list :

- Create site **BP – 38**
  - o overview

- o Process diagram
- Maintain user rights and responsibilities **BP – 39**
  - o overview
  - o Process diagram
- Edit page **BP – 40**
  - o overview
  - o Process diagram
- Remove site **BP – 41**
  - o overview

Process ID	BP - 41
Overview	
Process Owner	
Problem	**P1:** Pages are referenced of one or more pages
Solution example	Block deletion and list referencing pages
Process Status	
Process Concept	
Initiation Criteria	
Average Processing Time	
Frequency	
Special Requirements	

- o Process diagram
- Move page **BP – 42**
  - o overview
  - o Process diagram

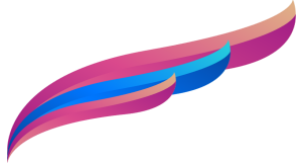### 10.2.7. Workflow management

10.2.7.1. Overview :

10.2.7.2. Process List

11. System integration with external systems:

12. Class Diagram:

13. Interface Interaction Design:

14. Technical IT architecture:

Like many computer programs, Dee.CMS requires certain hardware and software specifications in order to install and run. These are basic requirements, though, so you may want to use our recommended suggestions to improve performance. The following list of requirements and recommendations apply to Dee.CMS.

- **Operating System:** Windows and OS X

- **Hardware:** Multi-Core processor, 4GB Ram or more and 100 GB HD

- **Application Server:** Apache Tomcat 8+

- **Client Browser:** chrome, safari and Firefox

15. Usability and design