

[Business Function Analysis]

[CMC Features]

[Amer]

[Alaan TV]

# 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.

# 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:

1. storing
2. indexing
3. search and retrieval
4. format management
5. revision control
6. access control
7. publishing
8. reporting

# 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:

1. SEO-friendly URLs
2. customizable templates to manage content presentation
3. permission-based access control
4. user and group functionality
5. content organization structures
6. content virtualization
7. versioning and workflow management
8. collaboration platform
9. delegation between user groups
10. language or user support
11. integrated file managers
12. integrated audit logs
13. install and upgrade wizards
14. 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:

1. support your online marketing campaigns
2. integrate with your customer relationship management system

# 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.

# Features :

# A fast, attractive interface for editors

# Configure content types front-end through layout engine

# Simple, configurable permissions

# Workflow support

# Multi-site and multi-language support

# Full template support and customizable templates

# 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).

# Business Function Analysis Documents and Modules:

|  |  |  |
| --- | --- | --- |
| **Document** | **Level** | **Modules** |
| User Requirements |  | CMS features, Business Process |
| Detail Analysis Documentation |  | Class Diagram, Interface interaction design |
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# Scope/Exclusions:

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

# 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.

# 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 |  |  |  |

# 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:

# 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 |
| 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 |

# 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 |  |
| 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 |  |
|  |  |  |  |

# Manage templates BPC-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.

# 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** |  |
|  |  |

# Process Diagram:

### Edit template BP – 3:

# Overview:

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

# Process Diagram

### Undo change BP – 4:

# Overview

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

# Process Diagram

### Save template BP – 5:

# Overview

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

# Process Diagram

# Copy template BP – 6:

# Overview

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

# Process Diagram

### Delete template BP – 7:

# 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** |  |
|  |  |

# Process Diagram

### Replace template BP – 8:

# 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** |  |
|  |  |

# Process Diagram

# Add/edit/delte content item BPC-2:

# 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

# 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** |  |
|  |  |

### Process diagram:

### Edit page/Content BP – 10:

### 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** |  |
|  |  |

### Process Diagram

### Search in media library BP – 11:

### Overview

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

### Process Diagram

### Insert a media file BP – 12:

### 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** |  |
|  |  |

### Process Diagram

### Upload a media file BP – 13:

### 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** |  |
|  |  |

### Process Diagram

### Add/change meta data BP – 14:

### 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** |  |
|  |  |

### Process Diagram

### Delete content BP – 15:

### 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** |  |
|  |  |

### Process Diagram

### Save content BP – 16:

### 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** |  |
|  |  |

### Process Diagram

### Send for approval BP – 17:

### 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** |  |
|  |  |

### Process Diagram

### Receive feedback BP – 18:

### 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** |  |
|  |  |

### Process Diagram

### Review before publishing BP – 19:

### 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** |  |
|  |  |

### Process Diagram

### Undo change BP – 20:

### 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** |  |
|  |  |

### Process Diagram

### Publish BP – 21:

### Overview

|  |  |
| --- | --- |
| **Process ID** | BP - 21 |
| **Overview** |  |
| **Process Owner** |  |
| **Problem** |  |
| **Solution example** |  |
| **Process Status** |  |
| **Process Concept** |  |
| **Initiation Criteria** |  |
| **Average Processing Time** |  |
| **Frequency** |  |
| **Special Requirements** |  |
|  |  |

### Process Diagram

# Review and approve content:

# Overviow :

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.

# Process list

### Receive notification for review BP – 22

### View right content BP – 23

### 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** |  |
|  |  |

### Process diagram

### Correct content BP – 24

### Publish BP – 25

### Reject content BP – 26

### Notify user about the action BP – 27

# Publish:

# Overviow :

# 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

# Manage media library:

# Overviow :

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.

# Process list

### Locate media file on local Pc BP – 32

### 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** |  |

### Process diagram

### Upload media file BP – 33:

### 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** |  |

### Process diagram

### Set meta data BP – 34

### Search among media file BP – 35

### Sow related pages BP – 36

### Delete media file BP – 37

### 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** |  |
|  |  |

### Process diagram

# Manage site structure

# OverView

# Process list :

### Create site BP – 38

### overview

### Process diagram

### Maintain user rights and responsibilities BP – 39

### overview

### Process diagram

### Edit page BP – 40

### overview

### Process diagram

### Remove site BP – 41

### 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** |  |
|  |  |

### Process diagram

### Move page BP – 42

### overview

### Process diagram

# Workflow management

# Overviow :

# Process List

# System integration with external systems:

# Class Diagram:

# Interface Interaction Design:

# 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

# Usability and design