

Content Management Systems How & Why

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WS2 CUC 2002

CMS - bird's eye perspective

CMS = clickable management

- ◆ of all kind of content ⇒ important for content providers
- ◆ rich interactivity ⇒ important for users



TOC

- ◆ CMS definition
- ◆ Content possibilities
- ◆ Organizational issues
- ◆ Technology overview
- ◆ Building a CMS
- ◆ Human aspects
- ◆ Conclusion



Content possibilities

It's all about technology, right?



Deeper meaning: Purpose of CMS

Wrong!

The main purpose of technology is to optimally handle and present the content.

Technology is just the tool.

Content is charming and (can be) addictive



Managing Content

Content Management means:

- ◆ Adding,
- ◆ Editing and
- ◆ Deleting

of native content and integrated (relational) data sources.

“Content” usually stands for:

- ◆ News articles
- ◆ Text & image based half-static content
- ◆ Forum posts
- ◆ Files
- ◆ Banners
- ◆ Workflow
- ◆ Calendars
- ◆ Polls
- ◆ Links
- ◆ FAQs

etc...



Examples



Types of content on:

www.fer.hr



Untypical content



- ◆ Multimedia in news
- ◆ Forums with voice option - throw away your keyboard!
- ◆ File folders, black hole folders, document flow
- ◆ Advanced Polls with radio buttons, checkboxes, option/select and input and text areas
- ◆ Self-checking Links
- ◆ “Find only important” Search
- ◆ etc.



World domination!

- ◆ CMS won't swallow all other business applications!
- ◆ It's about integration not replacement

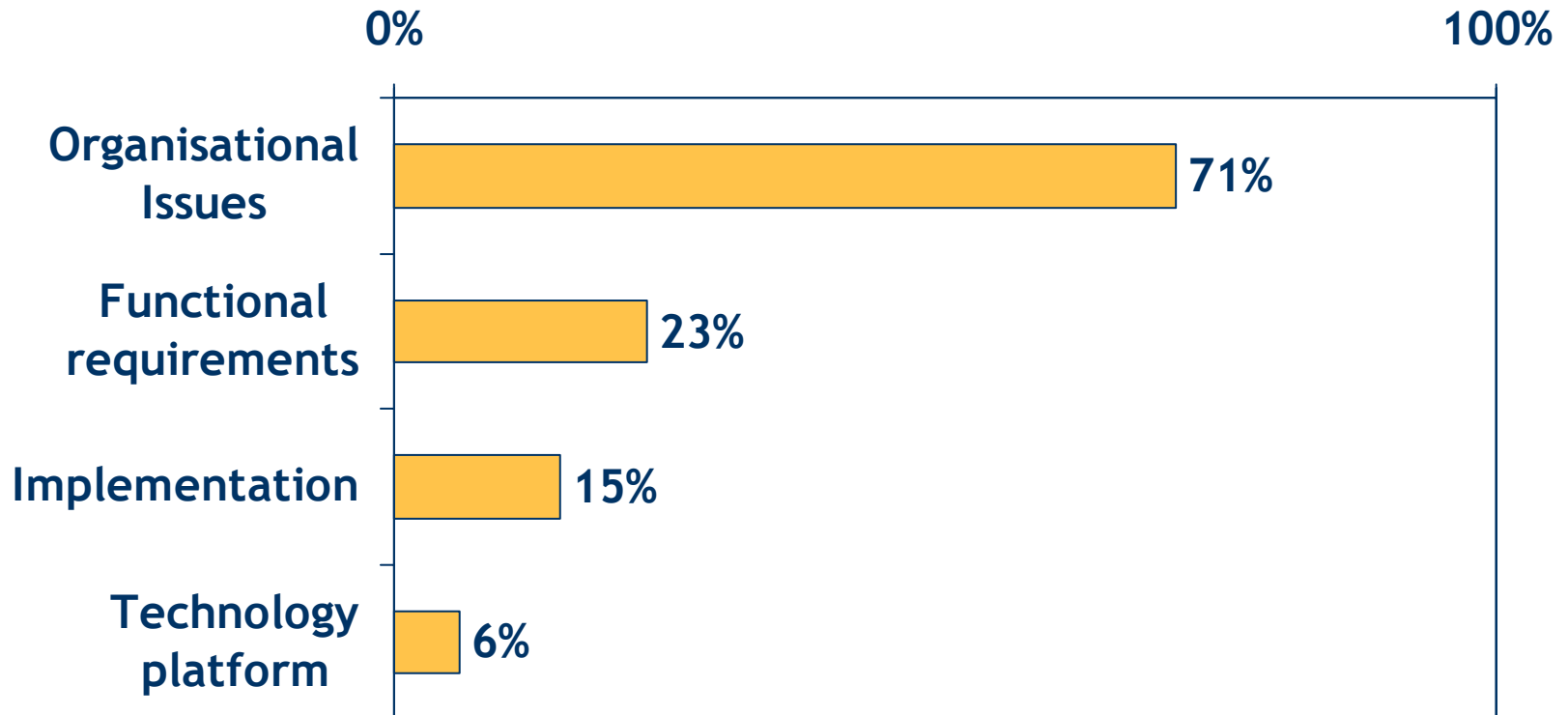
“We are the Borg...”

Is that all technology?

...of course, not!

Technology is just a top of an iceberg.

Issues in CMS projects



Source: Forrester Research VIII 2001



Step 1: Project

- ◆ Define a project
 - Scope of the web site
 - Define your needs
 - Building parts
 - **Required resources**

CMS for what?

- ◆ Presentation site CARNet, Pliva
- ◆ News site CNN
- ◆ Collaboration site /.
- ◆ Learning site Wt.edu
- ◆ Business (B2B, B2C) Amazon
- ◆ Archive Freshmeat.net
- ◆ Combination of all that FER web

Analyses and prediction

◆ *Structure and content*

- How often does site structure change?
 - *This is important when deciding which technology to implement - KISS makes sense!*
- How often does content of site change?
 - *What about content that is linked with changing one?*

When is the right time for CMS?

- ◆ Waste amount of information
- ◆ Frequent updates
- ◆ Lot of different formats and data providers
- ◆ Distributed content owners (and producers)
- ◆ *Organisational decision, not technical!*

Step 2: Obtaining CMS

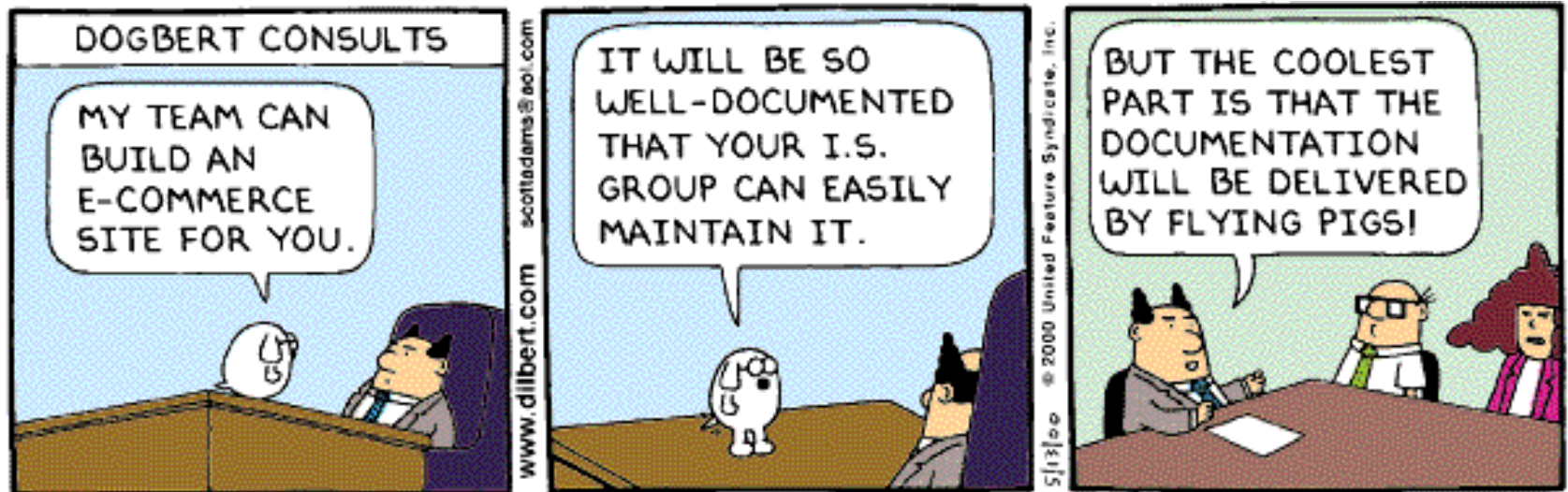
- ◆ Buy off-the-shelf solution
 - Instant implementation, short lifetime, short time frame, fulfil **most** needs, enough money
 - E.g. Web site for event or conference
- ◆ Buy customised solution
- ◆ Develop customised solution by yourself



Step 3: Choose a vendor

- ◆ Make a vendor your partner
- ◆ **Let the vendor develop CMS with you!**
- ◆ Someone with whom you can work out your action items and strive to common goal and responsibilities

Vendor experience





Step 4: Implementation

- ◆ Allocate time and people
- ◆ Testing, testing, ...



Step 5: Maintenance



- ◆ Don't forget!

Content Management Systems

Tour through the unknown...

...we'll stop at technologies
and review some prerequisites
and problems.

What types of CMS exists?

Based on technology (1)

- ◆ Static html pages
 - edited by desktop web editors, e.g. Dreamweaver (*yes, this could be called pre-CMS!*)
- ◆ Static html generated by some kind of batch processing, scripts or cron job
- ◆ Static html pages with CGI scripts

Static web pages

Strengths

- ◆ Easy to setup
- ◆ Exploit full power of web server (khttpd)
- ◆ Easy to setup mirrors and load-balancing

Weaknesses

- ◆ Updates
- ◆ Personalisation
- ◆ Exchange of content with other sites
- ◆ CGI can be resource-hungry
- ◆ Hard to do common navigation

What types of CMS exist?

Based on technology (2a)

- ◆ Dynamic pages with peaces of code inside html
 - Mod_perl, php, asp...

Strengths

- Enables personalisation
- Can access RDBMS and generate html
- Fast and easy to create

Weaknesses

- Hard to edit and maintain because code and html is mixed
- Designers tend to break code

What types of CMS exist?

Based on technology (2b)

- ◆ Dynamic pages with usage of templates
 - Every language has at least one

Strengths

- Easy for designers
- Same data: multiple outputs (especially if data is from RDBMS)

Weaknesses

- More work for server
anticipate number of users to avoid I. effect!

This is the first technology that you might consider nowadays!

What types of CMS exist?

Based on technology (2c)

- ◆ Dynamic pages with layout stored in RDBMS

Strengths

- Changes of layout without changes in code
- Usually very useful editor of layout for webmaster

Weaknesses

- Complex (sometimes very complex code and maintenance)
- Somewhat limiting - often you can't change everything

Remember SlashDot (/.) effect from the previous slide?

What types of CMS exist?

Based on technology (3)

- ◆ Components communicating with XML-RPC or SOAP
- ◆ Mobile agents (CORBA, anyone?)

Strengths

- “Be the first to use it!”
- Easy integration of different information providers (for XML-RPC/SOAP)

Weaknesses

- Mobile agents are still educational topic
- Totally component approach adds new level of complexity

Watch out! CMS is coming!

O.K., so you decided that you want to implement CMS...

- ◆ **Understand the needs, then decide which type of CMS to build!**
 - Don't just take CMS based on marketing presentation! (not even technology presentation)
- ◆ **Possible options:**
 - start from scratch
 - buy components (what about support?) or
 - buy complete solution? (what about customisations?)

(depending on your knowledge, resources and time)

Building a CMS

Something beside technology too, right?



CMS - information architect's perspective

Think in 5D or die!

1. Categories (Web pages in a CMS)
2. Functional Modules (per category)
3. Layout and design (of a category and function module - portlet)
4. Content (of every module of a category)
5. Permissions (of a user/author using a category, which determines module's behaviour)

CARNet's new CMS

Sneak preview

To make magic with CMS...

You need:

- ◆ Authorization of users
- ◆ Permissions

“If you have known users with given permissions using the same Web site asynchronously and synchronously, there is nothing you can’t do!”

Unknown genius, 21st century

Human aspects

Far away from technology, right?



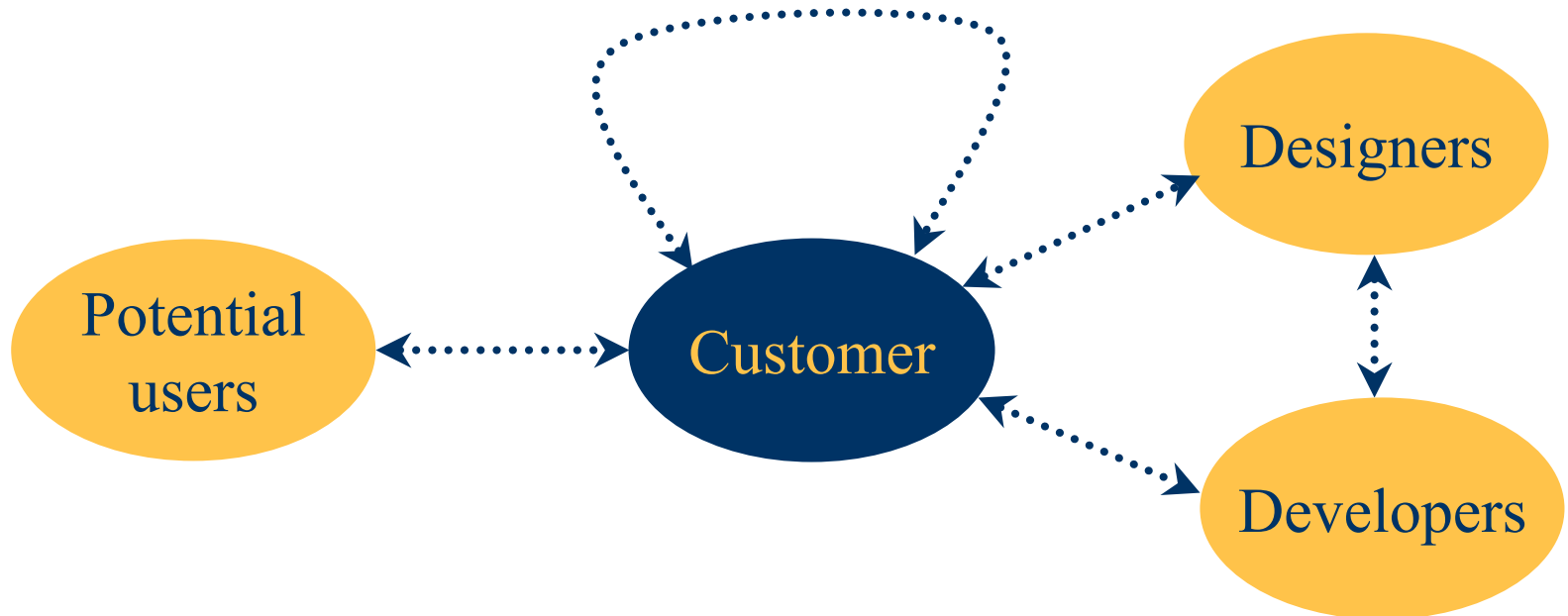
CMS - Benefits



- ◆ generally increases the efficiency of an author and editors
- ◆ specialized for rapid delivery of content
- ◆ sophisticated administration

Authors can be dummies. No need for engineers any more, so fire them all!

During the making of a CMS,
workgroups will have to cooperate



During building it, we will have to cooperate

Developers:

- ◆ Have: their system which needs changes
- ◆ Talk to: customer, designer...

Customers:

- ◆ Have the idea what they want
- ◆ Talk to: designer, developers and their potential users

Designer:

- ◆ Have: skill, ideas
- ◆ Talk to: customer, developer

What else is important for CMS?

◆ People

- How many editors has site (or will have)
- Are editors IT skilled?
 - *Often misconception is that CMS will solve all possible errors in making of pages*
 - *What about knowledge of html? And picture quality, formats and re-sizing?*
- Are there people who know how to program site engine for changing needs?
- Do designers know how to make **html design**?



What else is important for CMS?

- Who will provide content and structure?
 - HR problems - don't underestimate them!
 - Who will provide updates?



Finally...

*Let's review some of the most
important topics...*

Conclusion

- CMS supports all types of your data
- CMS won't replace all your IT systems
- Know your needs!
- Don't start project without needed resources!
- Don't just take CMS based on marketing presentation!

Conclusion

- Don't forget the 5D!
 1. Categories
 2. Functional Modules
 3. Layout and design
 4. Content
 5. Permissions
- It won't work without people!