

OpenCmsDays 2011

How OpenCms is used in the italian Public Administration

Antonio Nanni

Engineering Ingegneria Informatica S.p.a.

KOMED convention center

Cologne, 9-10th may 2011

How OpenCms is used in the italian Public Administration

- 1. Introducing this speech**
2. Who is Engineering
3. The Public Administration requirements
4. The solutions we provided
5. Coming next
6. Questions & answers

How OpenCms is used in the italian Public Administration

1. Introducing this speech
- 2. Who is Engineering**
3. The Public Administration requirements
4. The solutions we provided
5. Coming next
6. Questions & answers

Who is Engineering

Company profile

An Information and Communication Technology Company

Engineering was born in 1980 in Padova and now is a holding of 15 companies that serves Public & Health Administration, Finance, Industries, Telecommunications & Media, Energy & Utilities, Managed operations and Business Consulting

36 company headquarters in Italy and 4 in the world

About 6500 employees

Internal ICT school for employees and customers formation

CMMI, ISO and PCI-DSS working methodology standards compliant

Who is Engineering

Engineering and Open Source world

A great propension to Open Source

Cooperation in many Open Source projects and communities all around the world, such as:

— OW2 Consortium (<http://www.ow2.org/>)

— Eclipse Solution (<http://www.eclipse.org/>)

— SpagoWorld (<http://www.spagoworld.org/>)

— Italian Competence Center for Open Source (<http://www.ccos.it/>)

— Qualipso – floss (<http://www.qualipso.org/>)

— Networked European Software and Services Initiative (<http://www.nessi-europe.com/>)

Who is Engineering

Engineering and OpenCms

Some project numbers

About 20 web sites realized

Both internet and intranet web sites developed for several administrations, such as:

___ Department of Treasury (<http://www.dt.tesoro.it/it/>)

___ Consob (<http://www.consob.it/>)

___ Corte dei Conti (<http://www.corteconti.it/>)

___ Italian National Observatory for Tourism (<http://www.ontit.it/>)

18 custom modules developed

___ Usually, each project requires a workgroup with at least 7 / 10 members (both for editorial and development activities)

___ About 10000 documents treated for accessibility and profiled on each site

Professional OpenCms solution provider (<http://www.opencms.org/>)

How OpenCms is used in the italian Public Administration

1. Introducing this speech
2. Who is Engineering
- 3. The Public Administration requirements**
4. The solutions we provided
5. Coming next
6. Questions & answers

The Public Administration requirements

Introduction

Requirements classification

___ Infrastructural requirements

___ Laws requirements

___ Functional requirements

___ Utility requirements

The Public Administration requirements

Infrastructural requirements

Distributed architecture

- Fault tolerance
- SOA architecture services

Easy administration

- International localization and multilingual sites management
- Content versioning
- Content import/export
- Backup
- Integrated user management and permissions Identity Management System (LDAP and SSO) adopted by the Italian Public Administration
- Job scheduling system
- Caching system to increase performance (ability to define the static part of site to enhance performance)
- Action tracing and auditing report

The Public Administration requirements

Laws requirements

Accessibility and usability history from WCAG 1.0 to Law Stanca and more...

- ___ 1999 - W3C WCAG 1.0: first approach to web accessibility and usability in 14 points guidelines
- ___ 2004 / 2005 - Law Stanca: more restrictive law based on 22 points guidelines, anticipating WCAG 2.0
- ___ 2008 - W3C WCAG 2.0: more extended approach with about 200 development techniques grouped in 12 point guidelines
- ___ 2010 - Law Stanca update: an experts pool began the study to improve with WCAG 2.0 guidelines

The Public Administration requirements

Laws requirements

Accessibility - Easy content check accordingly with the law Stanca

- ___ Create accessible pages and templates
- ___ Provide support to check content accessibility
- ___ Contents accessibility check during editing and in each stage, also inside workflow process
- ___ Ability to search not accessible contents

The Public Administration requirements

Functional requirements

Easy to customize as government need

- Possibility to easily extend the solution with custom modules by each Administration
- Workflow Authorization to publish contents
- Multi-site managing with a single installation
- XML template for site development

Web 1.0 and Web 2.0 features

- Mailing list
- RSS feed
- FAQ
- Wiki
- Forum
- Blog

The Public Administration requirements

Utility requirements

Easy to use

- ___ Content navigation like Window folders (Virtual File System - VFS)
- ___ Google ®-Like Searching
- ___ Multilingual Word-like document editor (WYSIWYG)
- ___ Sophisticated searches of content, attributes, item types, categories and taxonomies
- ___ Possibility of massive changes on the documents content with automatic matching on the site (eg. modified link or deleted documents)
- ___ On-Line Help
- ___ Work environment can be easily used by web browser (no installation required on client)
- ___ Content versioning (ability to restore a previous content version)

How OpenCms is used in the italian Public Administration

1. Introducing this speech
2. Who is Engineering
3. The Public Administration requirements
- 4. The solutions we provided**
5. Coming next
6. Questions & answers

The solutions we provided

Introduction

Used approach

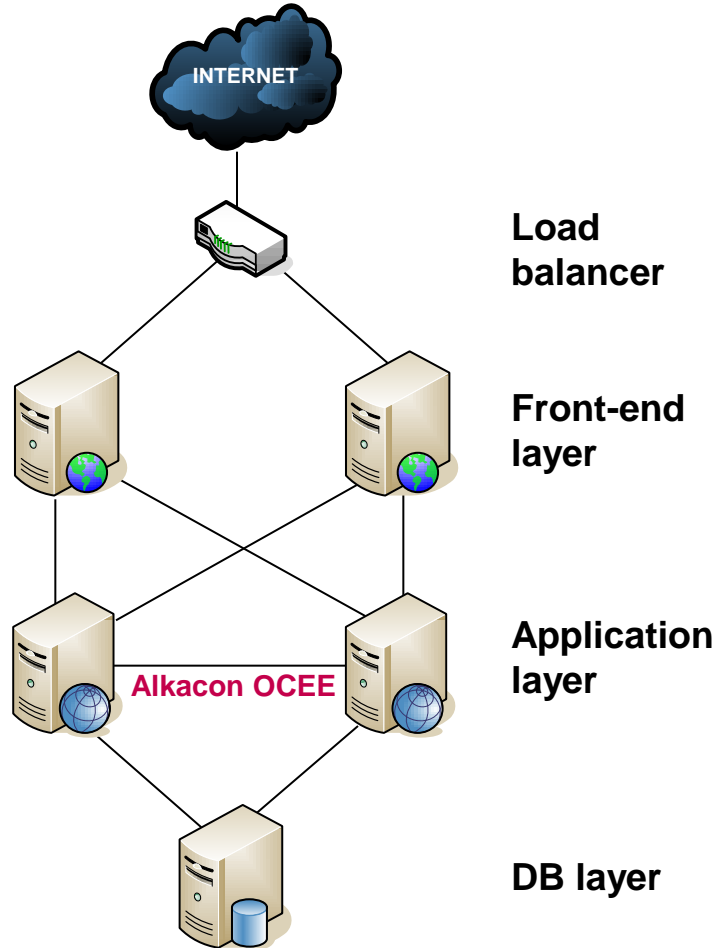
- ___ Software reuse
- ___ Existing software improvement and customization
- ___ New software development

Note:

At the moment, presented solutions are not released as open source software. But the italian Public Administration is evaluating this possibility accordingly with current laws for next future. Actually, no defined times and terms are available about this.

The solutions we provided

Infrastructural requirements



Fully dynamic cluster solution

Load Balancer (Hardware): requests routing to the front-end web server;

Front-end layer : consists of two or more Apache web servers configured for balancing and redirecting to the application servers;

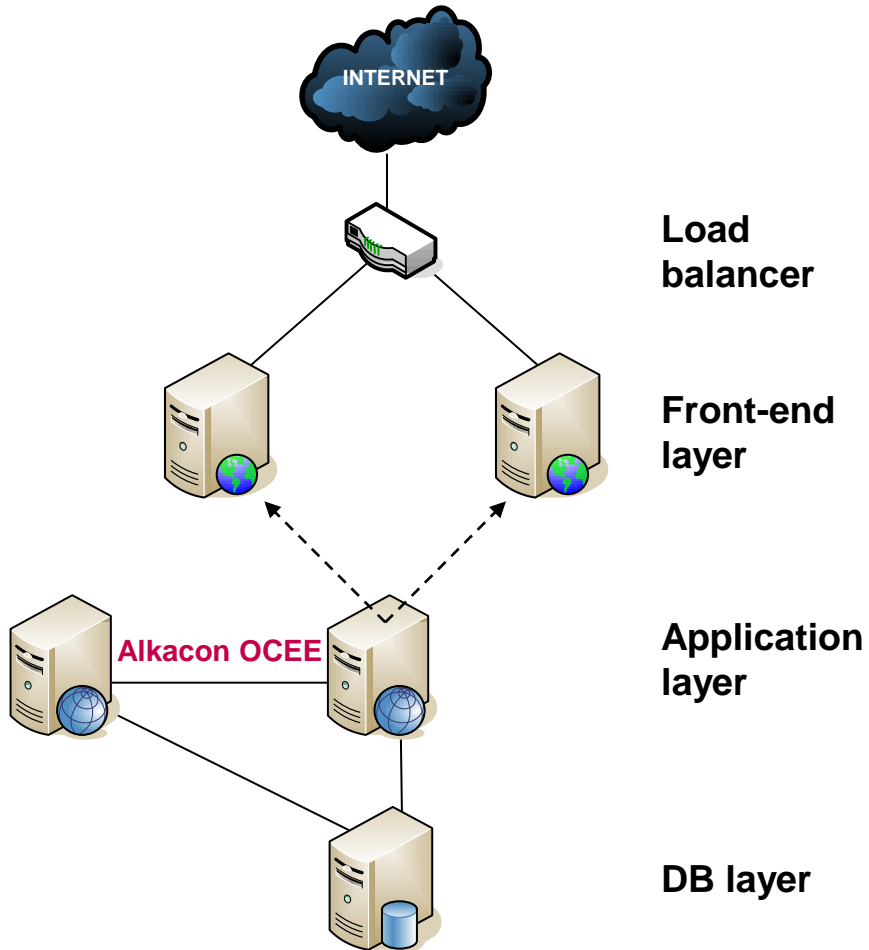
Application layer : made of two Tomcat Application Servers on which instances of OpenCms were installed;

Clustering was made by Alkacon OCEE Cluster Package;

DB layer : made with a clustered DBMS.

The solutions we provided

Infrastructural requirements



Static cluster solution

Load Balancer Hardware: requests routing to the front-end web server;

Front-end layer : consists of two or more Apache web servers;

Application layer : made of one or more Tomcat Application Servers on which instances of OpenCms are installed and where sites are statically exported;

Clustering was made by Alkacon OCEE Cluster Package;

DB layer : made with a clustered DBMS.

The solutions we provided

Infrastructural requirements

Provided modules

LDAP

to allow connection to OpenCms Workplace using an LDAP repository for user authentication

Single Sign-On

with the same goal of LDAP, but integrating the Italian Public Administration SSO system

UserTracing

allows to trace external users activity, all informations were stored into a DB

Auditing

a module for workplace activity tracing and reporting, all informations were stored into a DB, an administration view tool allows to filter these informations and to generate a report into Excel format

The solutions we provided

Laws and utility requirements

Provided modules

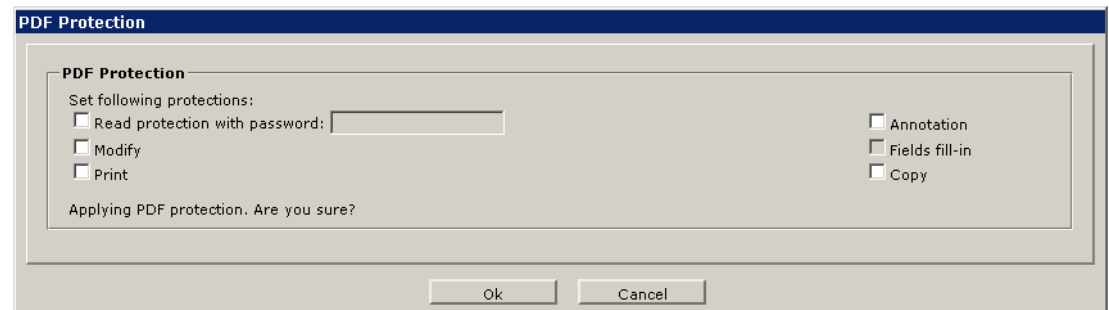
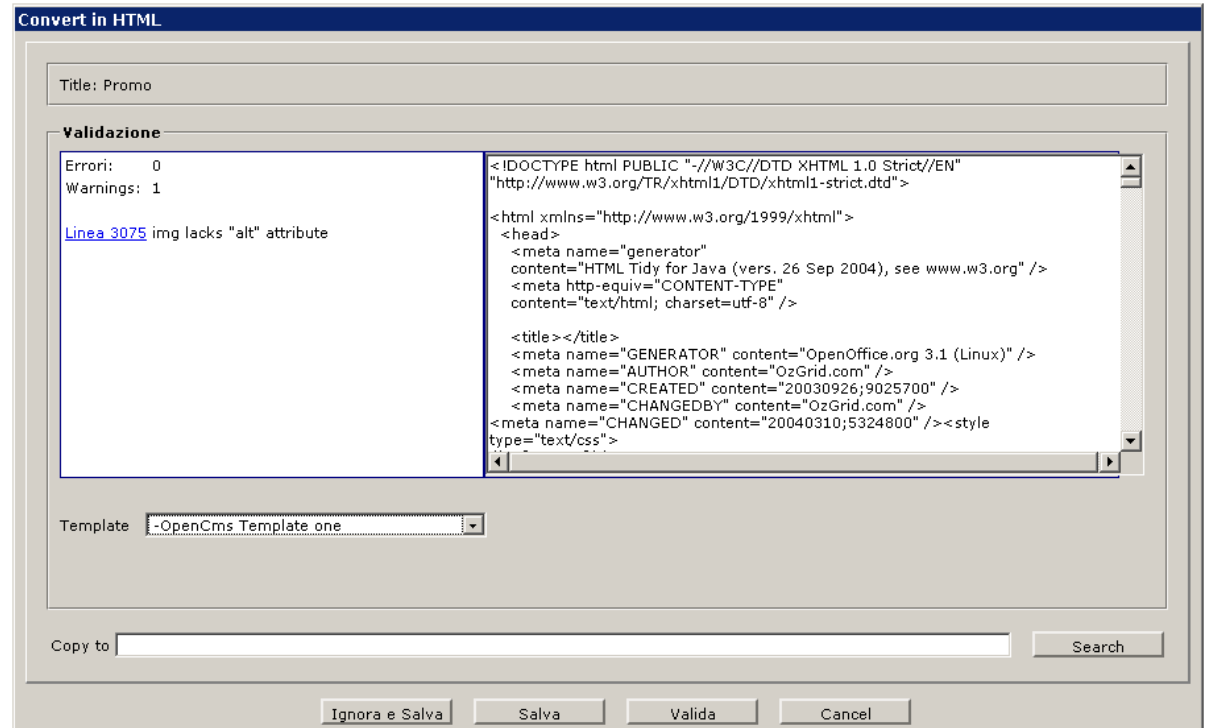
XHTML Converter

*Convert into HTML
or PDF from MS
Office*

W3C validation

Template choose

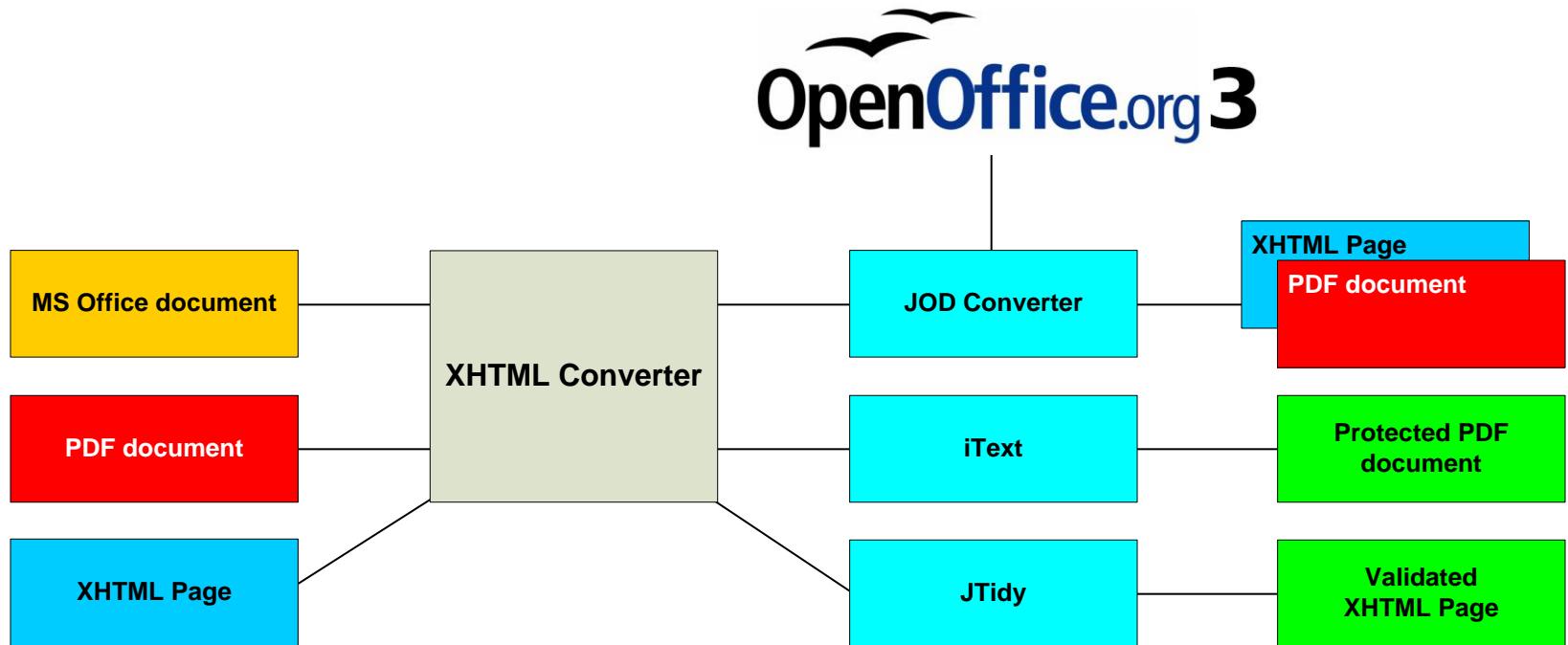
PDF Protection



The solutions we provided

Laws and utility requirements

XHTML Converter: how it works



The solutions we provided

Laws and utility requirements

Provided modules

Custom properties

Advanced resource profiling system

Fully customizable fields with mandatory and validation criteria

Single XML configuration file

Multi-site support

Property	Value
Document type	Sito 1 Circolari
Ispettorato (*)	Documento di programmazione economico-finanziaria Nota di Aggiornamento al Documento di Programmazione Economica e Finanziaria (D Relazione Previsionale e Programmatica (RPP)
Numero della circolare (*)	<input type="text"/> <input type="checkbox"/>
Data di competenza (*)	<input type="text"/> <input type="checkbox"/>
Data di pubblicazione (*)	<input type="text"/> <input type="checkbox"/>
Tipologia di documento	circolari <input type="checkbox"/>
Keyword	Presidente del consiglio Normativa Scolastica
Visualizza in output alle ricerche	<input type="checkbox"/>
Non visualizzare in ultimi documenti pubblicati	Presidente del consiglio Normativa Scolastica
Non considerare il documento per la stampa	Presidente del consiglio Normativa Scolastica

Buttons: Ok, Cancel, Advanced

The solutions we provided

Laws and utility requirements

Provided modules

Advanced Search

Extends the search capabilities natively offered by OpenCms adding the ability to use the W3C validation status, the workflow state and the defined custom properties, as additional criteria to perform searches.

Administration View > Search Management > Index overview > Search

Search Up

Query

Index : ForumSito2Index

Query :

Sort order:

Order:

Search folder : +

Categories: +

Workflow state:

Author:

Document type:

Validation state:

Limit to time ranges

Min. creation date:

Max. creation date:

Min. date of last modification:

Max. date of last modification:

Fields to search in

Fields:

The solutions we provided

Functional requirements

Provided modules

XMLBundle Reader

Based on a single XML file

Default values block

Many site customization blocks

Multilanguage support

```
<sites>
  <site>
    <name>DEFAULT</name>
    <fields>
      <field>
        <fieldId>PDFpassword</fieldId>
        <fieldValue>pippo</fieldValue>
      </field>
      ...
    </fields>
  </site>

  <site>
    <name>/sites/default</name>
    <fields>
      <field>
        <fieldId>PDFpassword</fieldId>
        <fieldValue>pluto</fieldValue>
      </field>
      ...
    </fields>
  </site>
</sites>
```

The solutions we provided

Functional requirements

Users Manager module

Administration View > Users Administration Tools

Users Administration Tools



User Actions



Add User



Add Guest User



Search User



Groups Management



Site Services Management

User Accounts

User Accounts (14)

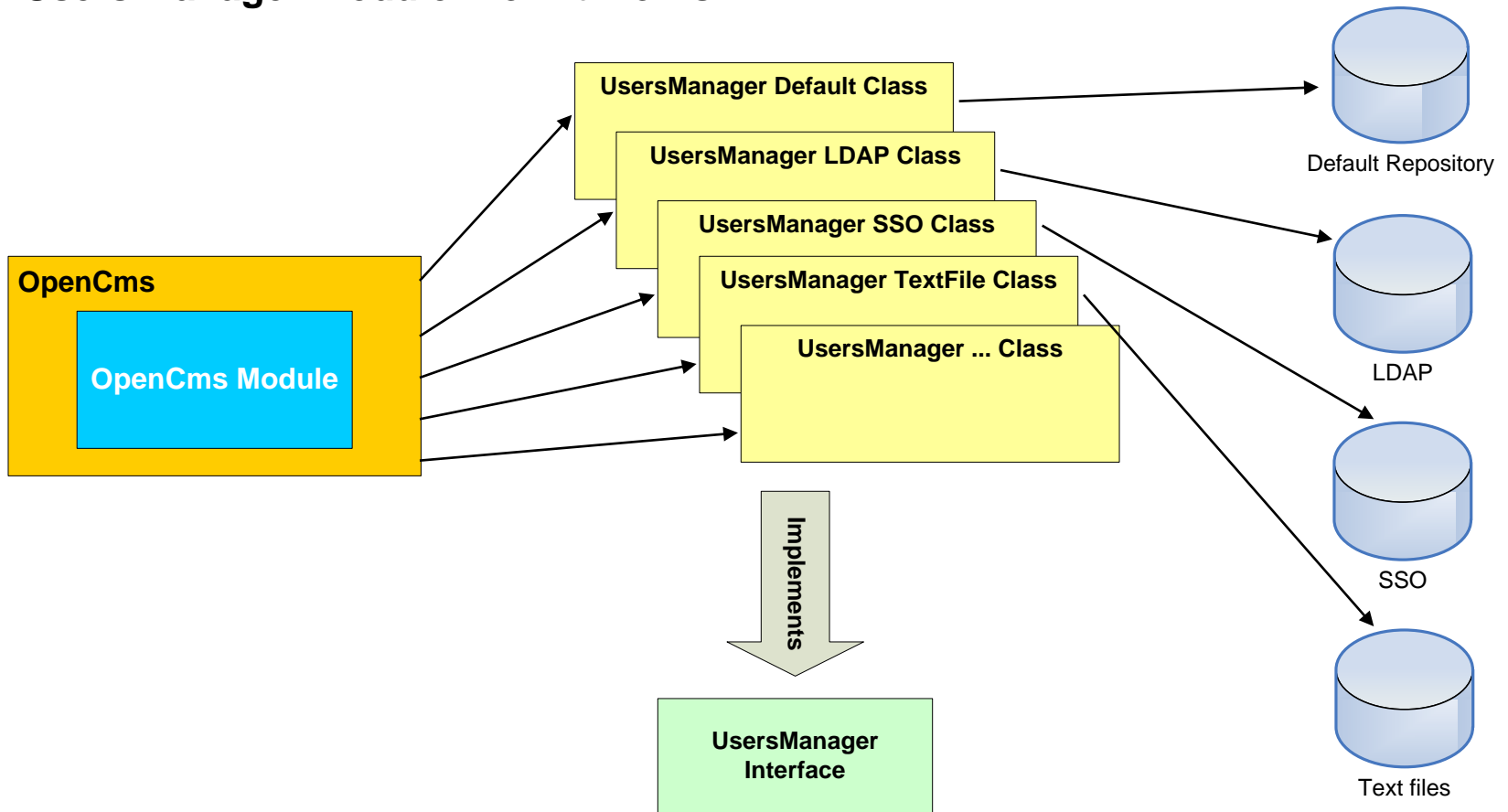


User Name	Full Name	Email	State	Type	E	S	C	I	D
andrea	Cinti Andrea	andrea.cinti@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
Test5	Test 2 Test	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
Test4	Test 2 Test	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
Test3	Test 2 Test	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
Test2	Test 2 Test	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
Test1	Test 1 Test	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
privilegiato	Privilegiato Privilegiato	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
controllore	controllore controllore	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
moderatore	moderatore moderatore	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
autore	autore autore	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
antonio	Nanni Antonio	ananni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
guest	Guest Guest	guest@eng.it	Active	Guest		<input checked="" type="checkbox"/>			
luigi	Chiera Luigi	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			
marco	Grifoni Marco	marco.grifoni@eng.it	Active	Registered		<input checked="" type="checkbox"/>			

The solutions we provided

Functional requirements

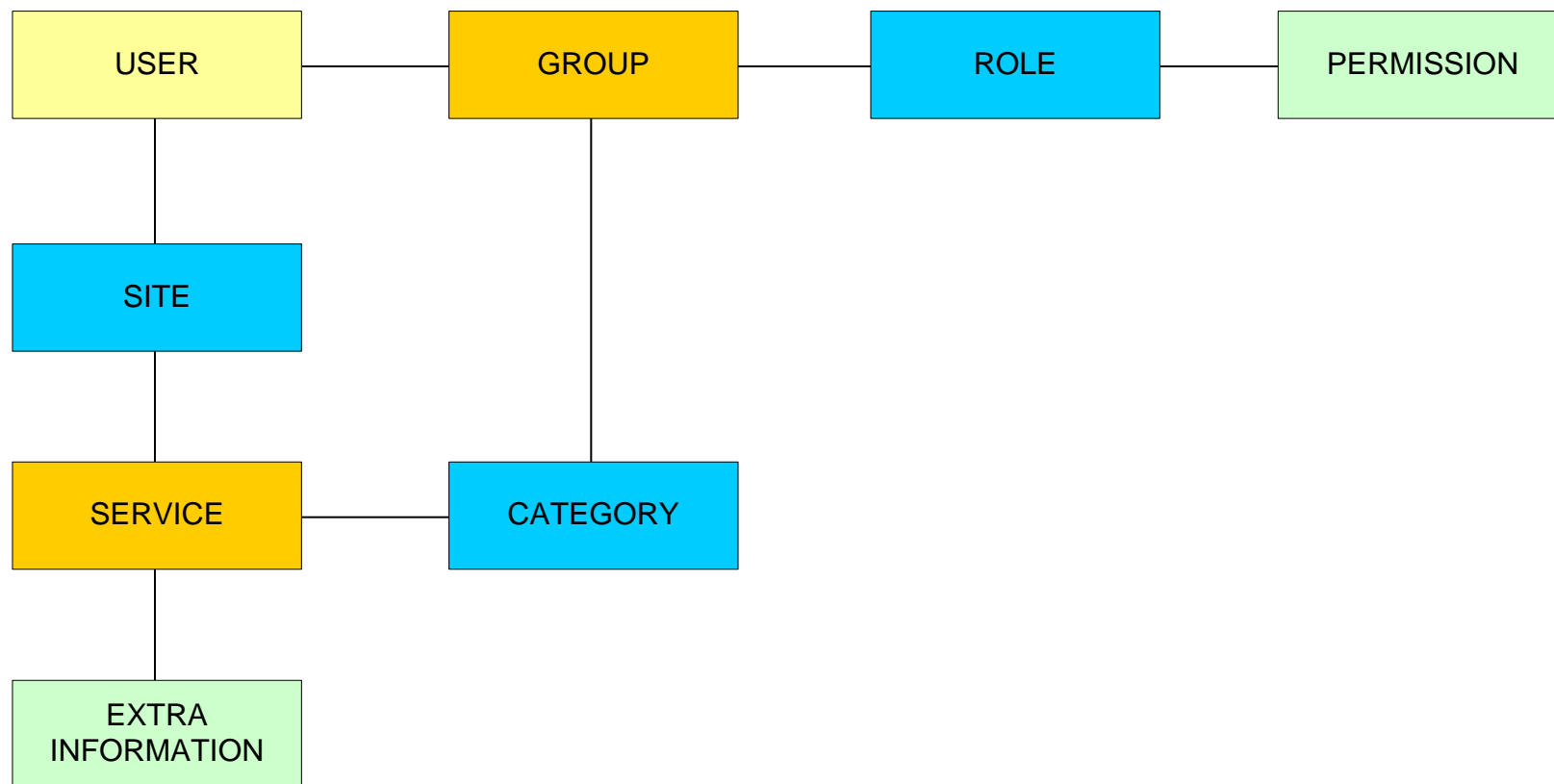
Users Manager module: how it works



The solutions we provided

Functional requirements

Users Manager module: data schema



The solutions we provided

Functional requirements

Provided modules

__ jBPM Workflow

The module integrates Open Source jBPM workflow engine (Business Process Management) developed and distributed by JBOSS. It allows you to create custom editorial processes to manage the approval cycle of content between the different roles of the process. I must say that, in this case, we customized a module already available inside OpenCms community. More effectively, we added some functionalities for folder association to a workflow process, a user active tasks list (called MyTasks) and an online contents revoke utility for unpublishing resources

__ RSS Feed

__ Events Calendar

The solutions we provided

Functional requirements

Provided modules

Mailing List

Allows to set one or more mailing list service instances for sending newsletters to registered users. The newsletter is generated automatically with the latest changes made to the specific content folder related to mailing list instance, it can be also edited by the editorial staff (in the workplace), also email sending is only granted to authorized users

FAQ

Allows, to authorized users, to publish independently some FAQ (Frequently Asked Questions) and provide all function for reading and research. The FAQ can be generated for different areas of the site

The solutions we provided

Functional requirements

Provided modules

Wiki

Allows you to manage site sections as a Wiki. Users registered to this service can enter or modify content in the normal site browsing

Forum

Allows you to easily integrate the Forum service within the sites.

These services are fully customizable in look and feel, labels and use the authentication provided by the UsersManager Module to determine who has rights to use the features of the services

How OpenCms is used in the italian Public Administration

1. Introducing this speech
2. Who is Engineering
3. The Public Administration requirements
4. The solutions we provided
- 5. Coming next**
6. Questions & answers

Coming next

Next developing features

Web 2.0 requirements

Blog module

This module was designed like forum and has the same architecture with UsersManager module dependency

New features

New workflow engine module

this will be a simple engine, with only 3 workflow steps (not customizable); it offers the same extensions we already made for JBPM module, that are MyTasks and Revoke content features

Upgrade to latest OpenCms version 7.5.4

with all existing custom modules migration

How OpenCms is used in the italian Public Administration

1. Introducing this speech
2. Who is Engineering
3. The Public Administration requirements
4. The solutions we provided
5. Coming next
- 6. Questions & answers**