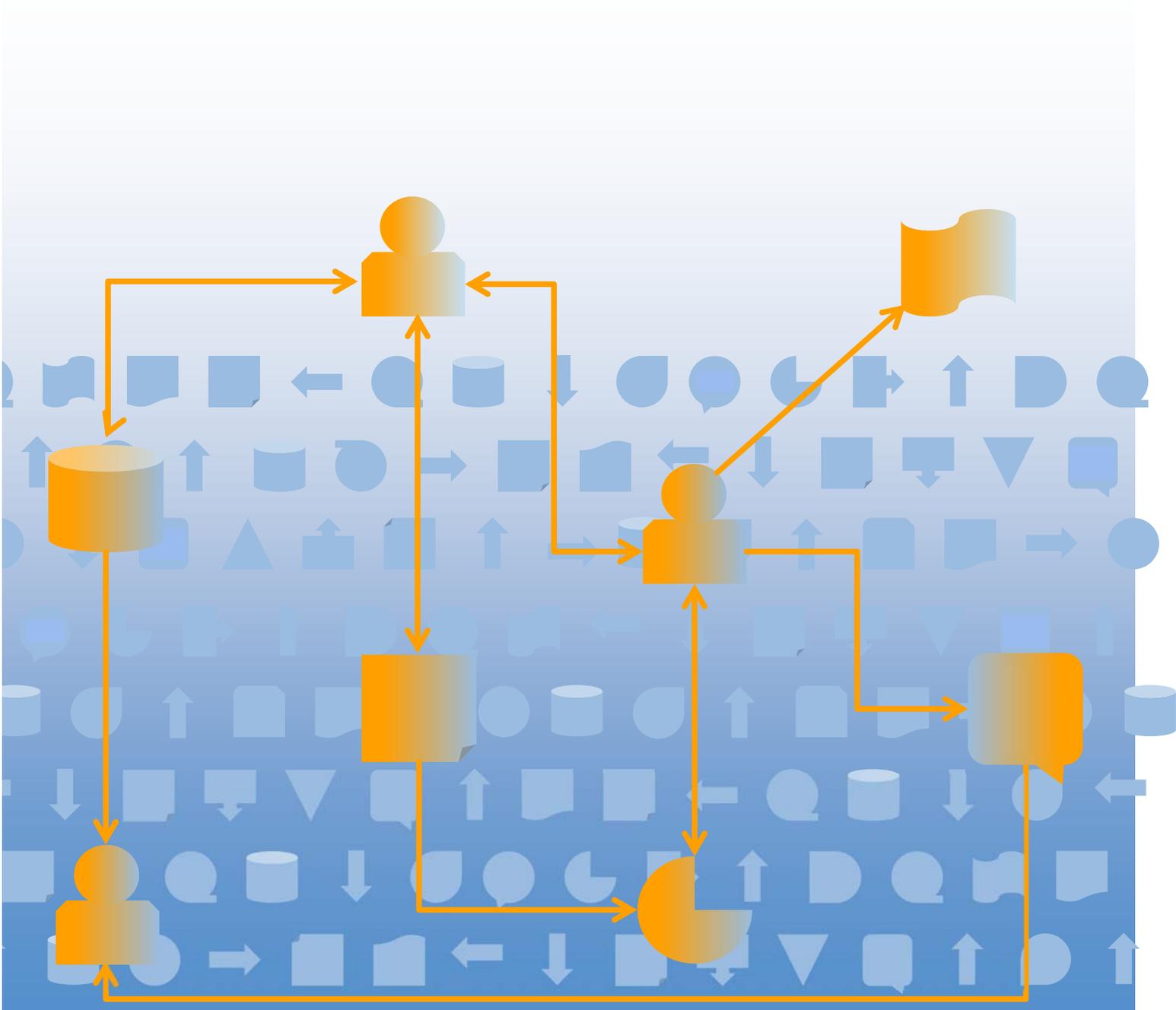


## Sharing and managing information



## Índex

1	What is OpenKM?.....	3
1.1	Document Management	4
1.2	Record Management	<b>Error! Bookmark not defined.</b>
1.3	OpenKM KCenter Platform	7
2	Modules.....	9
2.1	Applications	9
2.2	CMIS	10
2.3	Multitenant document management	<b>Error! Bookmark not defined.</b>
2.4	Barcode reader	12
2.5	Electronic invoice	<b>Error! Bookmark not defined.</b>
2.6	Mail archiver	15
2.7	Autocad Viewer	<b>Error! Bookmark not defined.</b>
2.8	DICOM viewer	16
2.9	OCR Engine	17
3	Features.....	19
4	Technology .....	23
5	Hardware requirements .....	26
6	Some of our references .....	<b>Error! Bookmark not defined.</b>

# 1 What is OpenKM?

**OpenKM** is an **Electronic Records and Document Management System (EDRMS)**

Organizations produce large amounts of documents, images and other information in digital format. The search and localization of this information involves an arduous task that can be time consuming. In addition, users often save documents to folders on their own computers. No one knows what information is in the whole organization or what information is needed.

### *The searching information/document “drama”*



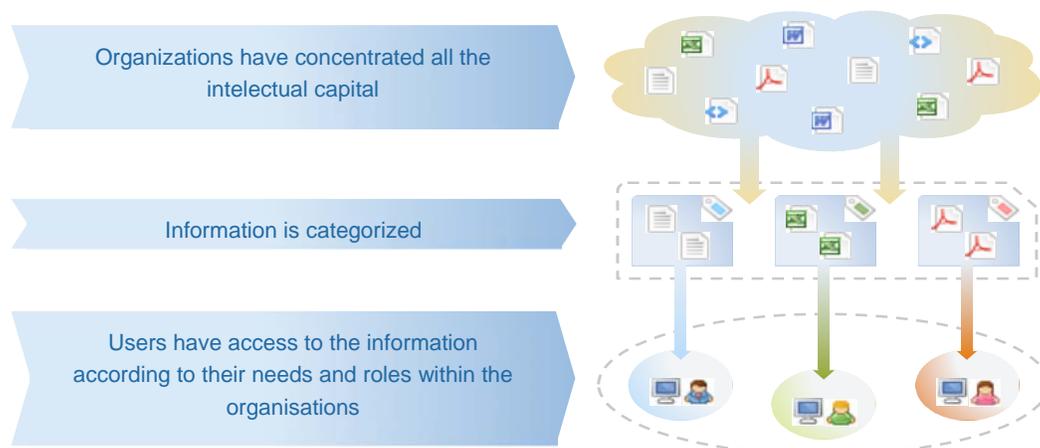
**OpenKM** integrates in a single documentary platform, all the functionalities to create and manage documents, (for its storage as for its search and recovery).

In addition, documents are created, received and used during the performance of the activities of each organization. To support the continuity of these activities, comply with the regulatory framework and facilitate the necessary accountability; Organizations should create and maintain authentic, reliable and usable documents and protect the integrity of such documents for as long as necessary.

**OpenKM's** Records Management helps organizations to effectively and systematically manage the creation, receipt, maintenance, use and disposal of documents. It includes the processes to incorporate and maintain, in the form of documents, the information and evidence of the activities and operations of the organization.

**OpenKM** also incorporates the **KCenter** platform that provides a powerful environment, which enables organizations to create their own application, to fit the requirements of their business and create a customized environment. With this platform, you can easily manage, simplify your work and increase efficiency.

### *With OpenKM*



## 1.1 Document management

**OpenKM** provides an intelligent system with complete document management capabilities, including version control, metadata, scanning, comments, forums about the document, workflow, etc.

Unlike other solutions, **OpenKM's** bottom-up approach allows activities around content, to be **used to connect people to other people, information to information, and people to information**, getting management more efficient; the collective intelligence of the organization.

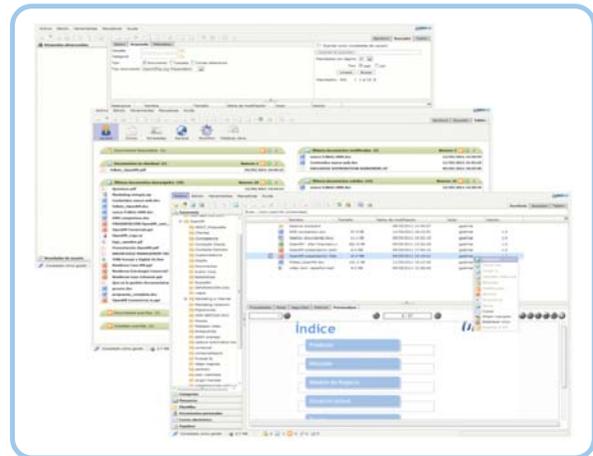
**OpenKM** is a valuable repository of corporate information assets that **facilitates the creation of knowledge for better decision making**.

Managing with **OpenKM** results in:

- an **improvement in productivity**, thanks to the interaction of shared activities
- **greater cost efficiency**
- a better **relationship with customers**
- a faster **sales cycle**
- a **reduction in the time** of placing the product on the market.

With **OpenKM** you can:

- **Collect** information from any digital source.
- **Collaborate** among colleagues, for document development and project management.
- **Capitalize** the accumulated knowledge, for a better strategic vision, of the own organization.



Using **OpenKM** is very simple thanks to an intuitive and easy-to-use user interface that allows you to create intellectual capital - both explicit and tacit - as a natural byproduct of personal activity and teamwork.

### Gather information

**OpenKM** captures information from any digital source, including: e-mail, Microsoft Office, OpenOffice, PDF, AutoCAD, etc. In addition, through the application interface, **any application can be integrated** with **OpenKM**, acting as producer or consumer of information.

All information is collected and stored, so that it can be viewed and used quickly, **on a single platform accessible from anywhere**.

Work teams can **enrich and modify** shared documents; **edit** the information of any type of file and the **linking** of a final **document**, to all supporting materials.



*Collaborate: share and work together on projects and working groups*

**OpenKM** allows users to **receive and efficiently distribute** the necessary information according to their profile in the system.

**OpenKM** improves staff productivity by assigning **daily workflows** to each user.

In addition, **OpenKM search agents** (personalized channels for each user) provide each user with high quality content, which is necessary for the development of their work.

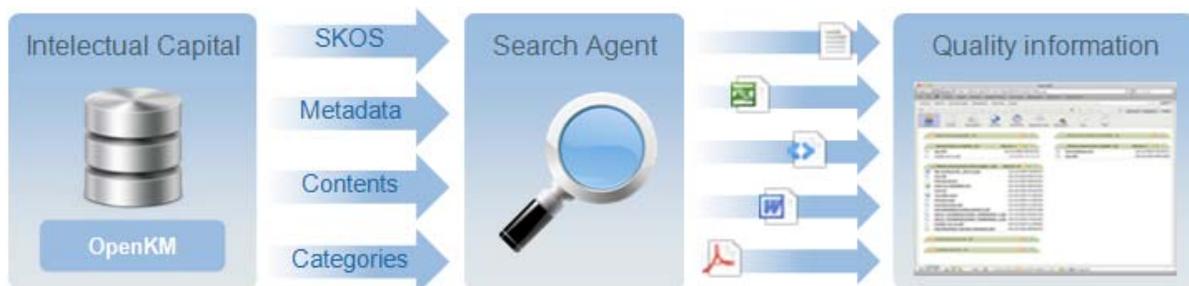


*Capitalize: turn the knowledge into action*

**OpenKM** allows the user to **turn information into valuable intellectual capital** assets for the enterprise. This helps organizations fully realize the potential of corporate knowledge with a single click.

**OpenKM** includes **administration tools** for defining roles and user profiles; access controls, user quotas, document security level, detail of activity logs and workflow management among others.

**OpenKM** improves **staff productivity** by assigning daily work processes to each user, thus offering high adoption rates. These automatic processes allow to enrich and control the intellectual capital, of the organization.



## Benefits

- **SAVINGS**

**OpenKM** is a web application that uses standards and Open Source technologies. Its flexible licensing system and its robustness and stability, allow very tight and competitive costs.

- **INTEGRATION**

**OpenKM** integrates with third-party applications, allowing a single point of access to the entire informational core of the organization.

- **EASY TO USE**

Installation without any client software. Access from the **cloud** to information through an internet browser. Support for **iPhone** and **Android**. Quick learning curve. Translated into more than 35 languages.

- **INNOVATION**

In a highly competitive business environment, it is important to foster the development of the **company's intellectual capital**, collaboration and reuse of resources

- **PRODUCTIVITY**

It facilitates the **rapid localization of documents** and encourages the practice of information exchange among users. **Simple configuration** of notifications, processes, work routines and revision.

- **SECURITY**

Each user or group can simply manage the information they want to make public and create "**smart folders**" with configurable properties. The embedded **antivirus** and the extreme robustness of the system, guarantee the **integrity** of the **stored data**.

- **OPTIMIZATION**

For better process optimization, OpenKM has tools to **evaluate** and **audit** the **behaviour** of users and groups, as well as the use of documents.

## 1.2 *Records management*

The documents are created, received and used during the execution of the activities of each organization. To support the continuity of these activities, comply with the regulatory framework and facilitate the necessary accountability; Organizations should create and maintain authentic, reliable and usable documents and protect the integrity of such documents for as long as necessary.

To achieve this, organizations should establish and implement a comprehensive document management program in which:

- Determine the documents that should be created in each process and the information that is necessary to include in those documents.
- Decide the form and structure in which documents should be created and incorporated into the system, and the technologies that need to be used.
- Determine the metadata that should be created next to the document and throughout the processes related to it, and how these metadata will be linked and managed over time.
- Determine the requirements for retrieving, using and transmitting documents during business processes or by other potential users, and the storage times required to meet them.
- Decide how to organize documents so that they meet the necessary requirements for their use.
- Evaluate the risks that would derive from the absence of documents that testify the activities carried out.
- Keep the documents and allow access to them over time, in order to meet the needs of the organization and the expectations of society.
- Make sure that documents are only kept for the period of time required or required.
- Ensure that documents are kept in a secure environment.
- Identify and evaluate opportunities to improve the effectiveness, efficiency or quality of processes,

### 1.3 **OpenKM KCenter Platform**

The **KCenter** platform is the solution to build your own **OpenKM** -based application

decisions and actions that may result from better creation or management of documents.

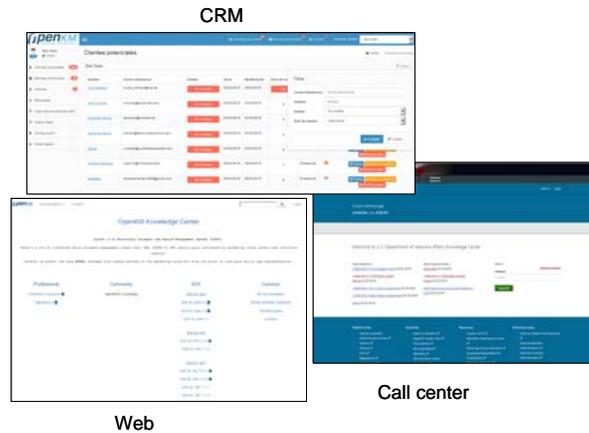
**OpenKM** Records Management helps your organization in the effective and systematic management of the creation, reception, maintenance, use and disposal of documents, includes the processes to incorporate and maintain, in the form of documents, the information and Proof of the activities and operations of the organization.

**Records Management** regulates the practices carried out by both those responsible for their management and by any other person who creates or uses documents in the exercise of their activities.

**OpenKM's Record Management** system incorporates, manages and facilitates access to documents over time.

- The process of **traceability** of the actions allows controlling and establishing stages and deadlines in the actions to those who carry them out.
- The **provision** in **OpenKM** is a series of processes associated with the application of transfer, destruction or preservation decisions of documents, which are documented in conservation calendars or other instruments. The destruction, is the process of elimination or deletion of documents without its reconstruction possible.
- The **OpenKM file plan** is a set of rules that controls, for each type of company record; **Where** records have to be kept, the **policies** that apply to them, **how long** they should be kept, **how** they should be eliminated, and **who** is responsible for their management.

The **OpenKM KCenter** platform provides a powerful environment that allows you to create your own application, based on your business requirements and a customizable environment. With this application, you can easily manage, simplify your work and increase efficiency.



The **OpenKM KCenter** platform is based on the Virgo Web Server, which is a Java application server, designed to run Java EE and Spring applications; With a high degree of flexibility and reliability. It provides a simple and easy-to-understand platform for developing, deploying and serving Java EE applications.

Technological characteristics:

- The Spring Web MVC framework
- Template Engine
- Freemarker (allows to change "design" in real time based on the templates stored in the **OpenKM** repository).
- Project with OSGI (Open Services Gateway initiative) architecture.

By default, the **OpenKM KCenter** platform is integrated with the Freemarker and JSP template engines. It can easily be integrated with other template engines, such as Thymeleaf. With Freemarker templates, you can change the design of the application "in real time", without having to re-compile the application; With the templates that are stored in the OpenKM repository.

Some OSGI benefits:

- Reduce complexity.
- Reuse.
- Easy deployment.
- Dynamic Updates.
- Adaptive.
- Insurance.
- Transparent.
- Versionable.
- Simple.
- Fast
- Not intrusive.
- Highly tested.

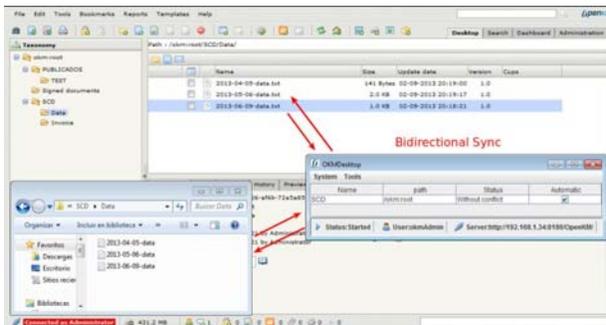
## 2 Modules

### 2.1 Applications

**OpenKM** has a series of applications, which allow us to electronically sign documents up to the scan of these in PDF format.

#### DESKTOP SYNC

This client allows users to synchronize folders and files between the **OpenKM** server and their local computer.



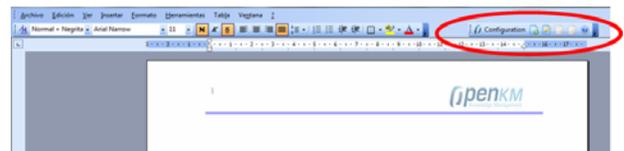
Their characteristics are:

- Automatically synchronize or manually open the folders of **OpenKM**, with the desktop of a personal computer.
- Import folders from a personal computer to **OpenKM**.
- Available for Linux and Microsoft.

#### MICROSOFT OFFICE ADD-IN

Microsoft Office add-ins allow you to extend the functionality of the office suite and interact with OpenKM quickly and efficiently.

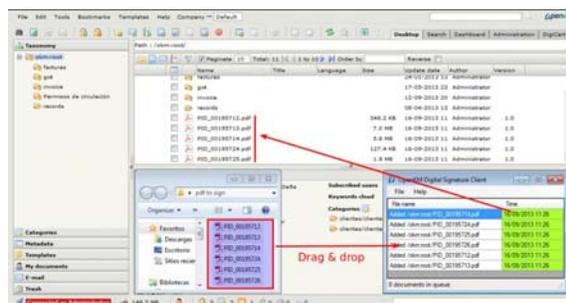
- **Microsoft Outlook Add-in:** bulk import of emails including attachments.
- **Microsoft Word Add-in:** Allows users to upload new files and edit existing files in **OpenKM**.
- **Microsoft Excel Add-in:** Users can edit the files contained in the document manager and upload them again.
- **Microsoft Power Point Add-in:** Allows editing files and uploading them to **OpenKM**



#### ELECTRONIC SIGNATURE CLIENT

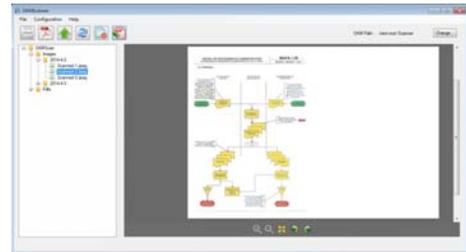
The electronic signature is a set of electronic data that accompany or are associated with an electronic document and whose basic functions are:

- Identify the signatory user.
- Ensure the integrity of the signed document.
- The electronic signature client allows to sign (in an electronic form) documents created and managed in **OpenKM**.



## SCANNER CLIENT

The scanner client offers the ability to capture images from scanners, convert them to PDF (optionally) and upload them to OpenKM by setting values in the metadata.



## 2.2 CMIS

CMIS is a specification that allows the Interoperability of Business Content Management Systems. OASIS approved CMIS as an OASIS specification in May 2010. The specification proposes a generic data and service model as well as different services based on HTTP, SOAP and REST / Atom protocols.

### OpenKM supports CMIS through the following modules:

- Apache Chemistry OpenCMIS library, is a library in Java that allows developers to create CMIS clients and servers.
- An OpenCMIS based connector, which allows **OpenKM** to be used as a CMIS server.

### CMIS IS IDEAL FOR THE FOLLOWING CASES OF USE

#### Repository-to -Repository

When several content repositories operate together:

- Centralized records management, which is stored in secondary repositories.
- Publishing content from one repository to another. Aplicación-a-Repositoryo

#### Application-to -Repository

When an application that uses content is connected to a content repository. Enterprise software applications. (BPM, ERP, CRM, among others).

- Collaborative applications
- Desktop applications (such as Openoffice, which can be directly connected to a CMIS repository).

Use SharePoint as the front-end and **OpenKM** as the back-end. This is intended to solve the scalability problems of SharePoint instances to improve the user experience.

#### Federated repositories

It means that an application interacts simultaneously with several content repositories, integrating the results into a single user interface.

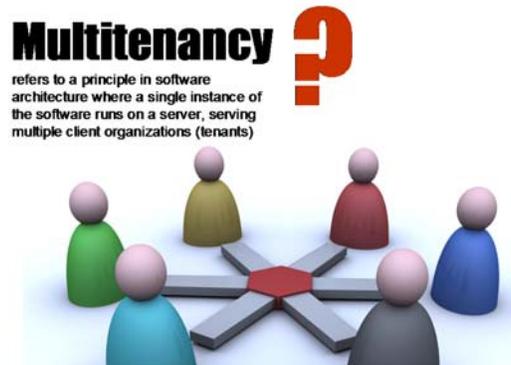
- Federated searches.
- Integration instead of migration.

## 2.3 Multitenant Record Management

Normally **OpenKM** is configured like a single-instance single-tenant (ST) environment where each tenant (Instance owner) will run a single instance that is installed on one server or across a cluster of them.

Although it may also be possible to run multiple **OpenKM** instances on the same server, separating content stores and creating a personalized clients environments. Some advantages are:

- Share costs with all tenants.
- Share support and personnel costs.



The **Multi-tenancy** enables multiple independent tenants to be hosted on a single instance, which can be installed either on a single server or across a cluster of them. The main instance is logically partitioned such that it will appear to each tenant that they are accessing a completely separate instance of OpenKM.

### THE MULTITENANT SUPPORT PROVIDES

- Enabling MT.
- Managing tenants.
- Delegated administration.
- Tenant customisation.
- Tenant-aware interfaces.
- Tenant content routing.

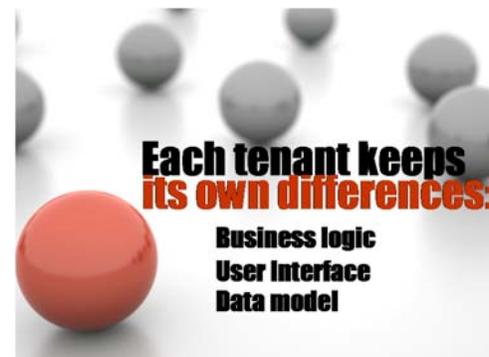


The super 'adminOkm' has access to complete environment. Tenants will be administered by the super 'adminOkm' using the Tenant Admin Console.

Once a tenant is created and enabled, then the tenant admin can log in to the **OpenKM** instance and access the Administration area within the context of their tenant domain. If for example, a tenant/organisation called 'OKM' is created, the tenant admin can log in as 'admin@OKM' and create users such as 'john@OKM', mikel@OKM'.

### THE ADMIN FEATURES CURRENTLY AVAILABLE

- Manage system users (including user Usages and Quotas).
- Manage user groups.
- Category management.
- Import.
- Export (\*)
- System information.
- Node browser.
- Tenant Customisation



It provides tenants the ability to customize their **OpenKM** environment, including models, workflows and web client UI.

The physical content for each tenant is stored on a separate root directory (possibly a separate mounted drive). This also allows accurate physical disk usage to be derived by measuring the disk used at the root location.

## BACKUP AND RESTORE

Since all tenants share the same database schema, the steps for a cold backup and restore are similar to the simple backup process. The steps also must take the use of tenant-based Content Routing (if applicable) into account.

### 2.4 Barcode reader

**OpenKM** incorporates a barcode reading and identification module. The barcode module supports the following formats and thanks to **OpenKM's** plug-in architecture, it is possible to make it easily extensible to other formats.

## 1D / LINEAR BARCODES

### Codabar

It's a high density numerical barcode. In addition, it includes four special characters (A, B, C, D), which do not appear in the code interpretation. This barcode is of variable length and doesn't have checksum.



### Code 39

The barcode Code39 was the first alphanumeric code to be released to market, it's characterized for being of average density, besides being the most used (not commercial use). This code is an error detector, which makes the use of checksum not obligatory. It must begin and finish with an asterisk (\*). It is mainly used for military and governmental specifications



### Code 93

Code 93 was developed with the purpose of complementing the Standard Code 39. It's a high density alphanumeric code that supports the complete ASCII character set without the ambiguity of its predecessor. The barcode can be of variable length and needs two checksum characters. It's used in logistics and parcel and postal services.



### Code 128

The barcode Code 128 is an alphanumeric code that can codify 106 different characters, variable length and includes checksum. It has a great acceptance in logistics, parcel service, labelling of products, tickets and postal applications.



### EAN-8 y EAN-13

There are two versions of EAN (European Article Numbering), EAN 8 and EAN 13, which allow to codify 8 and 13 digits respectively. It is a numerical code and includes checksum. The EAN 13 barcode is used in most European commercial products.



### ITF-14

ITF-14 (Interleaved Two of Five) is the GS1 implementation to codify commercial articles. ITF-14 symbols are generally used in product packaging processes. The ITF-14 will always encode 14 digits.



## UPC-A y UPC-E

Virtually all the products sold in the U.S.A. use the UPC-A barcode . It contains 12 digits. The first six are assigned by the "Uniform Code Council". The five remaining are used to identify the product. The last digit is the checksum. The UPC-E barcode is trimmed version of the UPC-A, it's used when there isn't sufficient space for the standard UPC-A code.



## RSS-14

RSS 14 barcode (Reduce Space Symbology) encodes the full 14-digit EAN.UCC item identification in a symbol that can be omnidirectionally scanned by suitably configured point-of-sale laser scanners. It is the latest barcode type for space-constrained identification from

## 2D / MATRIX BARCODES

### Data Matrix

The Data Matrix is a two-dimensional codification system that allows the generation of a great volume of information in a very limited format, with high reading reliability thanks to systems of redundant information and error correction. The use of this type of codes is recommended for electronic components.



### PDF417

The PDF417 is a multilinear code, continuous, of variable length, with high information storage capacity. It is a portable file, has a capacity of up to 1800 numerical, alphanumeric and special characters. It has error detection and correction mechanisms: nine safety levels, which allows a successful reading and decoding, even when the code damage is 40 %. It's used in different sectors like industry, banking, parcel service or logistics.



"EAN International" and the "Uniform Code Council". RSS barcodes are usually used in the food industry and healthcare, where items are too small to allow the use of other barcode symbologies.



## RSS Expanded

RSS Expanded is capable of encoding 74 numeric or 41 alphabetic characters and is normally used in retail points of sale. The reading is unidirectional, like the RSS-14.



## QR Code

A QR Code (Code of Rapid Response) is a module to store information in a data matrix or a two-dimensional barcode. It is characterized by three squares found in the corners allowing the reader to detect fastly the position of the code



## Aztec

Named after the resemblance of the central finder pattern to an Aztec pyramid, Aztec code has the potential to use less space than other matrix barcodes because it doesn't need to be surrounded by a blank space.



## 2.5 Electronic Invoicing

**OpenKM** incorporates an e-invoicing module which extracts invoices "xml" format for then store them in the system, also allows other functions like validate the invoice via digital signature, download in PDF format or send notifications.

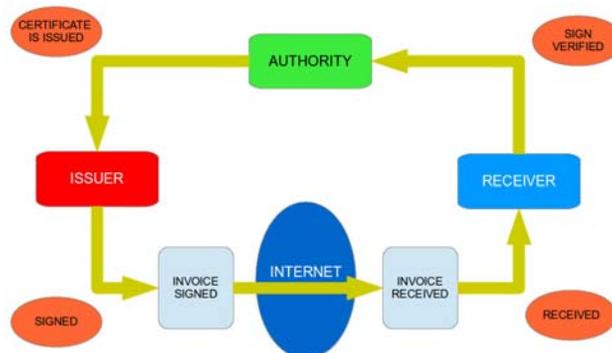
The e-invoicing is the digital version of the traditional paper invoices, and must be legally equivalent to the latter. By its very nature, electronic invoices can be stored, managing and exchanged by electronic or digital means.

For that e-invoicing to be valid, must be completed with e-signature, allowing eliminate paper invoice.

In countries where the law supports it, the validity of an e-invoicing is exactly the same as the traditional paper invoice, and thanks to the digital signature that includes integrity and a high level of traceability, is judicially considered a binding document and does not need further proof or confirmation of their own existence.

An electronic invoice will be done in 2 phases:

1. Invoice is created and stored in a data file.
2. Then it proceed to signing a digital certificate of the sender, encrypts the contents of the invoice and adds digital stamp to it.



Depending on the company size and the volume of its sales, the savings in respect of issue and invoice management (issue, sending, receiving, storage, search, signature, return, payment) can fluctuate between 40% and 80%.

## 2.6 Mail archiver

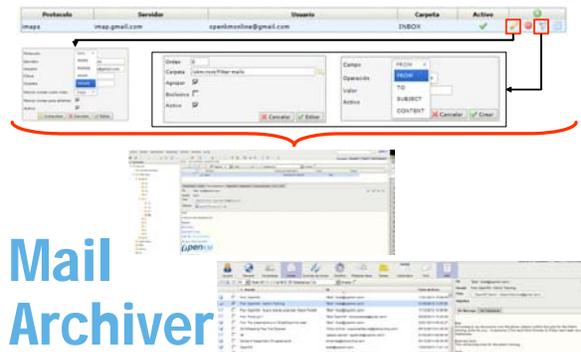
The module archive emails **OpenKM** allows us to use the repository as a document management system to store messages massively. The mail file is an automated process for the preservation and protection of all emails.

There a lot of benefits of email archiving the most important are :

- The recovery of lost or accidentally deleted emails.
- Accelerated audit response.
- Preservation of the intellectual property.
- "eDiscovery" in the case of litigation or internal investigations.

Main goals for users:

- Data Preservation.
- Protection of Intellectual Property.
- Regulatory compliance.
- Litigation and Legal Discovery.
- Email Backup and Disaster Recovery.
- Messaging System & Storage Optimization.
- Monitoring of Internal & External Email Content.
- Records Management (Email Retention Policies).
- Business & Email Continuity.



## Mail Archiver

### FEATURES

- Internet mailboxes such as Gmail or Yahoo! Mail.
- Any POP3 and IMAP mailboxes.
- Import queue.
- Microsoft Outlook Addin for 2000 to 2010.
- EML, MSG mail message formats.
- Rules for automatic mail catalog ( customizable archive settings ).
- Configurable archive, retain and purge email according to your regulation.
- Digital Signing and verification ( secure archive compliance ).
- Fast mail search engine.
- Fast mail browser UI.
- Indexes any mail data ( content, attachment and metadata )
- Export to EML format ( available configure to export to other formats like PDF ).
- Retention rules (automatic purge aged mails based on rules).
- Antivirus checkin.
- Auto tagging.
- Quota management.
- Reporting.
- Full audit logs.
- Alerts based on archived search queries.

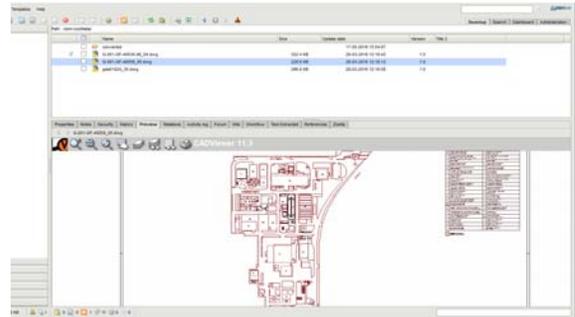
## 2.7 AutoCAD viewer

OpenKM extracts all the information contained in the map, including:

- The texts
- References to other plans and
- The metadata it may contain.

The preview lets you:

- Enlarge or decrease the image.
- View the different layers that make up the plane, and filter the information it offers by selecting those layers that interest us.
- Scale the image or move it within the preview area.
- Search for alphanumeric data contained in the map.



The references between planes are captured by OpenKM. Allows the user to manage them from the application itself. When a user uploads an AutoCAD drawing, the document manager checks the external references of the DWG file. If any is missing, the application itself requests the user to include the referenced plans; So that in OpenKM creates an internal structure, similar to that found in the origin server of the plans

## 2.8 DICOM viewer

DICOM (Digital Imaging and Communication in Medicine) is the worldwide recognized standard for the exchange of medical tests, intended for handling, visualization, storage, printing and transmission. It includes the definition of a file format and a network communication protocol. The communication protocol is an application protocol that uses TCP / IP for communication between systems. DICOM files can be exchanged between two entities that can receive images and patient data, in DICOM format.

Regardless of usage, the same format is always used; Including the use of files and network. DICOM differs from other data files, in that it groups the information into a set of data. That is, a chest x-ray, contains the patient ID along with it, so that the image can not be mistakenly separated from its information.

The DICOM files consist of a header with standardized and freeform fields, and a body with image data.

The OpenKM DICOM viewer allows you to:

- Toggle DICOM display overlay on and off.
- Popup DICOM tag.
- Measure the distance of two points, the area of an ellipse or an angle.
- Remove all measures.
- Rotation left / right, horizontal / vertical.
- Invest in grayscale or color.
- Image zoom

- Adjust the center of the window and the width of brightness and contrast.



## 2.9 OCR Engine

Optical character recognition (OCR) allows you to automatically recognize the characters of an image document through an optical mechanism. OCR has many applications - it can be embedded anywhere it is needed, to scan different types of paper documents or to transform scanned images of text into searchable and editable information.

OCR technology can be applied for the processing of various types of documents allowing their automatic classification into digital files.

**OpenKM** allows you to create zonal OCR templates, to recognize and extract structured text from scanned images, saving the extracted data as a metadata group, thus avoiding any humane errors in entering data



The top part of the image shows two screenshots of the OpenKM OCR interface. The left screenshot shows a scanned document with a highlighted area and a corresponding OCR template configuration window. The right screenshot shows the same document with the OCR results displayed, including a highlighted area and a corresponding OCR template configuration window.

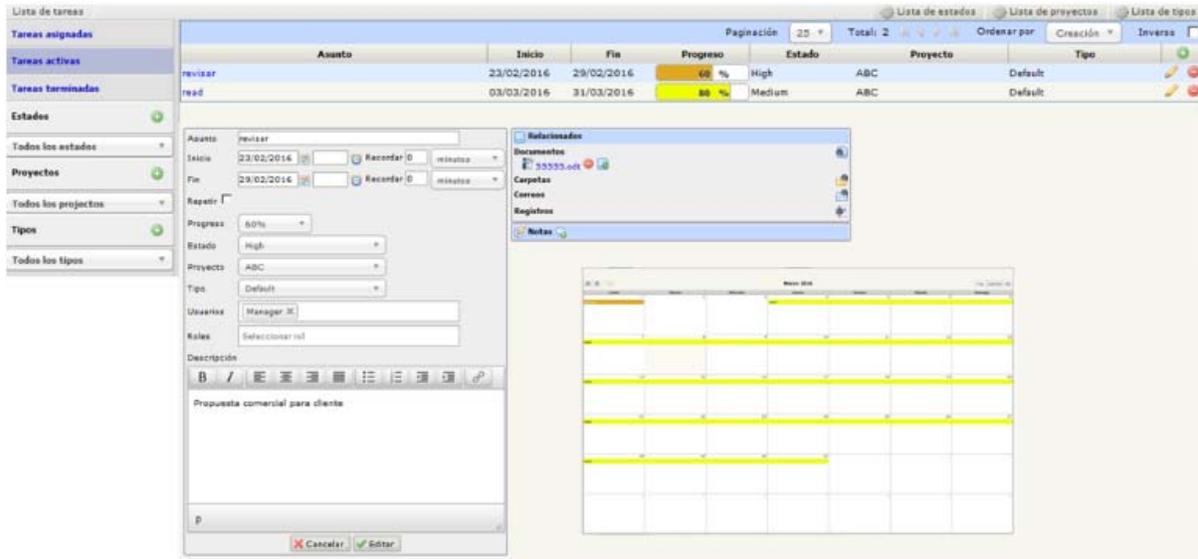
Field	Class	Type	Zone	Data
Value	String	Capture field	39,9988	Coordinates : x1:634 y1:507 x2:799 y2:552 Bounded Group : 39,9988 String input2 <b>Result : 39,9988</b>
Bank name	String contains	Control field	Domiciliación bancaria B. BILBAO VIZCAYA ARGENTARIA Para ser pagado a partir de 25 Mar. 15 (El pago de esta factura se acredita por su aboi	Coordinates : x1:37 y1:393 x2:458 y2:508 Order : 0 Value : VIZCAYA ARGENTARIA <b>Result : true</b>

With **OpenKM** you obtain:

- Accurate OCR (optical character recognition).
- Batch processing.
- Code bar reader.
- Preprocessing of image.
- Direct connection of the scanner.
- Recognizes and classifies several designs of templates.
- Support various scanned image formats (png, jpg, gif, bmp, PDF).
- Various data export formats for connection with third-party applications: output: XML, Pdf, CSV ...

## 2.10 Task Manager

The **OpenKM** Task Manager allows the creation and management of events, tasks and projects within the organization.



Asunto	Inicio	Fin	Progreso	Estado	Proyecto	Tipo
revisar	23/02/2016	29/02/2016	60 %	High	ABC	Default
read	03/03/2016	31/03/2016	80 %	Medium	ABC	Default

In the Task Manager you can:

- Differentiate between assigned, active or finished tasks
- Decide the start and end date and time.
- Establish notices before the start and end of the event.
- Determine that the task is repeated every certain period of time; Up to a certain date or a number of times.
- Set% of progress achieved.
- Assign states to tasks, link to projects, or sort by type.
- Invite unit users or groups of users.
- Provide participants with access to documents and related information.

Tasks are visible from the **OpenKM** Calendar in month, week or day format; From which you can see a summary of the event. The participants can add comments and the creator of the task can edit the parameters of the task.

## 3 Features

For more information, please visit: <https://openkm.com/en/features.html>

### Collect

- Sync with Google Contacts.
- Import of EML and MSG files.

### Client

- Web Client: You can access your documents from anywhere, no client software installation required.
- Fast and friendly user interface using AJAX.
- Works with most popular browsers: Firefox, Internet Explorer, Opera, Safari, Chrome.
- Translated into 35 languages.
- Preview multimedia files.
- Web Administration.
- WebDAV.
- Drag & drop (files or documents) from the desktop.
- Support for iPhone & Android and Blackberry

### 1D / Linear Barcodes

- Codebar
- Code 39
- Code 93
- Code 128
- EAN-8 and EAN-13
- ITF
- UPC-A and UPC-E
- RSS-14
- RSS Expanded
- Extensible to other formats

### Microsoft Office Add-in

- MS Outlook Add-in
- MS Word Add-in
- MS Excel Add-in
- MS PowerPoint Add-in.

### 2D / Matrix Barcodes

- Data Matrix
- PDF 417
- QR Code
- Aztec
- Extensible to other formats

### Openoffice Office Add-on

- OpenOffice Add-on is compatible from version 3.2

### Antivirus

- Scanning all uploaded documents for viruses. (Prevents the insertion of documents with viruses in the repository)

### OCR

- Scans and secure storage of all paper documents
- Unlimited OCR
- Reads binary, gray scale or color images.
- Extraction of text, dictionaries support in English, French, Italian, German, Spanish and Dutch.
- Searching for data in TIFF.

### Desktop Sync

- Automatically or manually synchronize folders and files between **OpenKM** and the desktop of a personal computer.
- Import folders from desktop to **OpenKM**.

### Email

- Capture of email from an IMAP server, Pop3.
- User account settings.
- Import text, html and attachments
- Metadata capture.
- Automatic import and sorting by filters.

### Electronic Invoicing

- Invoice extracting in "XML" format
- Invoice validation by digital signature
- Downloading the E-invoice in PDF format
- Sending notifications

### Collaborate

## Document management

- Bulk upload documents using ZIP files.
- Download folders as ZIP files.
- Lock / Unlock documents.
- Manage Favorites.
- Select the default startup folder.
- Support for document templates.
- Personal documents for each user.
- Recycle Bin for each user.
- Event notification by email (when changes occur).
- Send document URL via e-mail.
- Send document as email attachment
- Notes on documents.
- Messaging (share queries / subscriptions / send messages to users).
- Chat Service.
- Extraction of metadata from documents.
- Unique document identifier.
- User Tags.
- Tags in the thesaurus.
- Tag Cloud.
- Categorization.
- Staple (documents / folders / emails).
- Forums.
- Generation of documents with the wizard (forms and documents together with a final document is generated with values).
- Watermark on documents (text or image).
- Programmable automatic cataloging
- Intelligent extraction of keywords
- Operation with multiple files
- Text to speech converter
- Expiration of documents
- Live Edit

## Documents preview

- AutoCAD.
- MS Office family.
- Open Office family.
- PDF.
- Sound and video files.
- Images
- DICOM.

## Version Control

- Based on the model check-in / check-out.
- Add comments to versions.
- Access to previous versions of the document.
- Restore previous versions of the document.
- Allows history compaction to free up space.

## Dashboard

- User view (document edited, locked, unloaded, signed, last modified, last uploaded).
- Overview (documents most viewed / modified, the last week / month last uploaded, last modified).
- New user (agent search).
- View workflow.
- View email (new mail and attachments).
- Cloud document search and navigation.
- RSS Feed.
- Videoconference: OpenMeeting integration

## Workflow

- Create complex workflows.
- Workflow for review, approval, validation.
- Support for serial and parallel workflows.
- Assign tasks to groups or users.
- From the dashboard can monitor workflow tasks, status and process.
- Configurable mail messages notification.
- Workflow enables you to shoot automatically from a folder or document type.
- Automatic workflow execution based on folder or document type.

## Task Manager

- Create tasks.
- Assign, control or complete tasks.
- Manage status and projects related with tasks.
- Configurable mail message notifications

## Calendar

- Create tasks.
- Move or change task duration.
- Month, week and daily view.

## Search Engine

- Searches for documents by content, keyword, date modified, author and document type.
- Automatically indexes uploaded document formats: Text, HTML, RTF, XML, PDF, OpenOffice.org, MS Office, MS Office 2007, EXIF JPEG, MP3 ID3
- Search by synonyms.
- Searches ordered by relevance.
- Searches using group properties (metadata)
- Allows storing queries.
- Advanced searches using XPath and SQL
- News User
- Search based on a hierarchical directory structure.
- Select the search objects, folders, emails or documents.
- Allows user to use tags to find documents.
- Allows use metadata to locate documents.
- Choice of simple and advanced search.
- Allows sorting of the results according to various criteria.
- Download Options or go to the location of a document from the results view
- Support for Stemming, stop-words and synonyms.
- Push news service (based on user queries).

## Group properties (metadata)

- You can add your own group properties to the system (metadata).
- Supports different formats: inputs, simple lists, multiple selection lists, text areas.
- Internationalization of metadata values.
- Allows you to sort the position of how the metadata appears in the user interface.

## Thesaurus

- View documents in the structure of the thesaurus.
- Automatic extraction of keywords.
- Skos Module-based training and training documents.

## Security

- Plug-in for JAAS based authentication.
- Support for LDAP, Active Directory, DBMS, etc ... (via a configuration file). By default OpenKM comes with an embedded database.
- List of granular access control.
- Flexibility in choice of inheritance of access control lists.
- Security and user roles.
- Permissions on folders and documents.
- Record of every user operation.
- Support for SSL communications.
- Cryptography (encrypts and decrypts documents).
- Electronic signature.

## Administration

- Full user audit (trace log). All user operations are recorded and stored in a database.
- Show logged users.
- Unlock and remove documents published.
- View the repository.

- Advanced searches using XPath and SQL.
- Detailed activity log.
- Import documents / folders from the file system.
- Export the repository file system.
- Managing the workflow.
- Reports (jasper).
- Importing the thesaurus (or .rdf owl formats).
- View configuration settings..
- User quota.
- User Profiles (functions for which a user can access).
- Task Scheduler (scheduler).
- Smart tasks
- Macros

### Integration

- Kofax
- Cadviewer
- BonitaSoft
- Abby Flexicapture
- Flexibar
- 2D barcode reader
- Active Directory
- LDAP
- CAS (authentication)
- Canon IW DS.
- With third application using webservices
- With third application using CMIS
- With third application using Rest
- Automatic synchronization with Windows and Linux desktop
- SDK for .NET

## 4 Technology

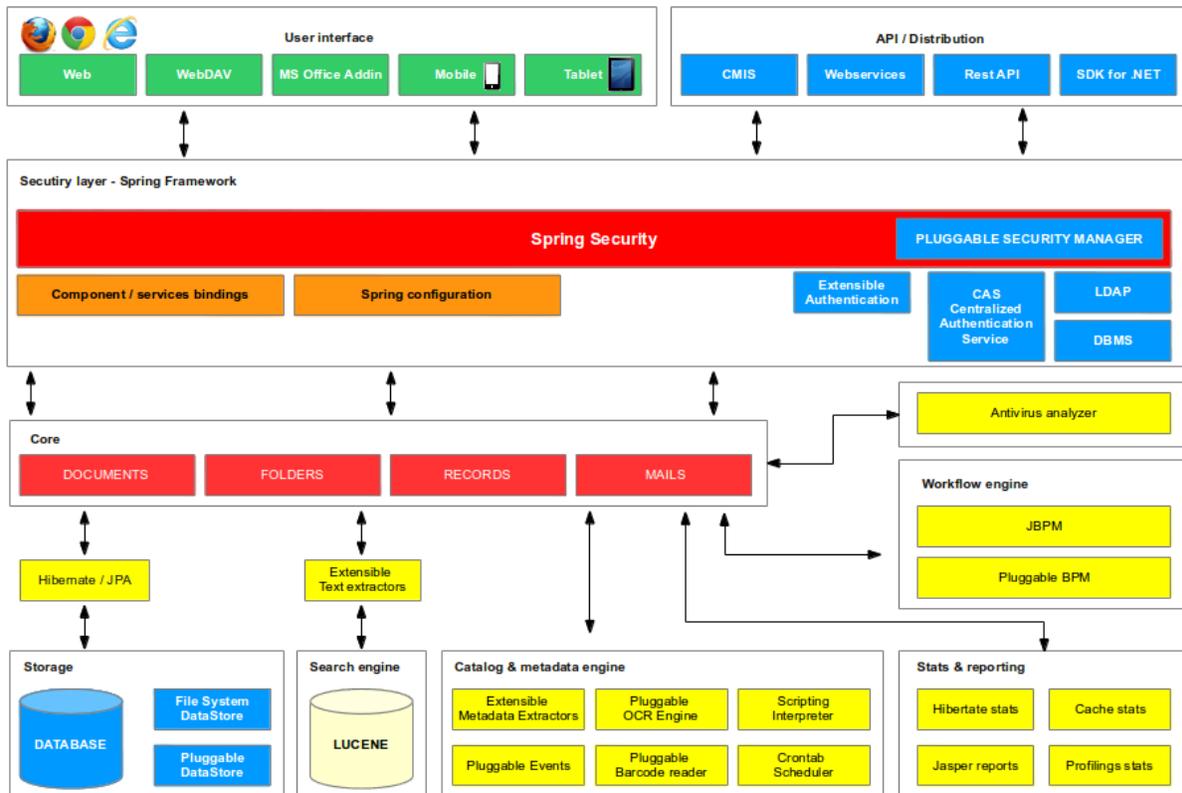
OpenKM is a Java J2EE application running on a Apache Tomcat. OpenKM can be installed and run on different platforms.

OpenKM architecture is based on the following technologies:

- JBoss Application Server
- Java J2EE (JDK 1.5)
- GWT (Google Web Toolkit - Ajax)
- Hibernate
- Lucene Text Search Engine
- POI File Format Conversion
- OpenOffice
- jBPM
- KEA
- Weka
- Aperture
- Rdf2go
- Openrdf
- WebDAV y and Webservices.

The **OpenKM** architecture allows it to run on any operating system: Unix., GNU / Linux., Windows and MacOS

The information can be stored in a directory or in any DBMS (Oracle, PostgreSQL, MySQL, MS SQL Server, etc. The diagram below shows the diagram of the OpenKM



## USER INTERFACE

Users can access the application through a browser. **OpenKM** implements a Web 2.0 user interface framework based on GWT (Google Web Toolkit) that supports Firefox, Internet Explorer, Safari, Chromium and Google Chrome and the latest versions of Opera.

Also available, a user interface adapted for mobile devices based on JQuery Mobile, Addins for Microsoft Office, and the WevDAV protocol for connecting OpenKM repository as a network drive.

## API

**OpenKM** implements the CMIS (Content Management Interoperability Services) protocol, an OASIS open standard that defines an intermediate layer, which allows the interconnection and control of various document management systems and repositories using Web protocols.

Additionally, **OpenKM** exposes a complete API via Webservices (SOAP) and REST that can be used as a point of integration with third party applications.

For .NET application development, an SDK (Software Development Kit) is available. This one encapsulates all OpenKM API and a set of graphics solutions.

## SECURITY LAYER

**OpenKM** is a Java EE application using Spring Framework. The most important module is the security layer - Spring Security - that centralizes management of access allowed to users based on their credentials. The security control rests with a AccessManager module that implements the logic of safety assessment in the application. The Java EE OpenKM architecture allows you to implement custom security logic.

The **OpenKM** authentication process can be carried out by a CAS service (Autentication Centralized Service), LDAP, or via a database where users are registered..

## CORE

The **OpenKM** Core centralizes and implements the management and processing logic for different types of objects that are stored in the repository. These objects are nodes of type document, folder, emails and records as well as the combination of metadata structures.

## WORKFLOW ENGINE

OpenKM incorporates by default JBPM workflow engine. The Java EE architecture implemented in **OpenKM**

allows to work - connect - with other Workflows engines transparently.

## STORAGE

**OpenKM** uses Hibernate for OMR (Object Relation Mapping) data mapping and supports different relational databases (DBMS) such as PostgreSQL, MySQL, Oracle, MS SQL Server, DB2 and others. The whole metadata layer is stored in a DBMS database, while the binary objects (documents), based on the selected type are DBMS, are stored either on the file system, in a database or in a specific implementation of DataStore. Thanks to Java EE architecture implemented in OpenKM, you can create specific DataStore

## SEARCH ENGINE

**OpenKM** uses Lucene as search engine. All objects that **OpenKM** works, whether or not binary, are indexed by the search engine. In the case of binary objects such as Microsoft Office documents, PDFs or images, etc., are added to a queue of indexing.

Prior to being processed by Lucene, documents are analyzed by text extractors (Text Extractors). For example, in the case of images, they are processed by an OCR engine for identifying text strings, which will be used during Lucene's indexing process . The search engine results are filtered by the SecurityManager. Users can only access information that they have privileges on.

## CATALOG AND METADATA

Barcodes Engine allows to identify and read barcodes on the documents. The Java EE architecture implemented in OpenKM allows you to extend the capacity of reading and processing of barcode formats.

**OpenKM** is integrated with several open source OCR engines (such as Tesseract or Cuneiform) and commercial (as Abby, Kofax or Cognitive among others).

Scripting - Shell Bean - combined with events system, smart tasks, task scheduler (Crontab) and reports (Jasper Reports) allow plan, implement and control the process of automatic metadata capture and complex automate processes in a completely transparent way for the user.

## ANTIVIRUS

**OpenKM** can be integrated with most antivirus. All binary objects are processed by the antivirus engine, ensuring the integrity of the repository and the safety of users in daily use documentation

## STATISTICS AND REPORTS

The **OpenKM** statistics and reports system put into the hands of administrators a powerful source of information through which to control the state of the aplicación. Thus, they can analyze values: regarding the use of Hibernate layer, the second-level cache metrics and methods concerning API and core.

This information helps in decisions taking to establish the optimum values for the objects in the second-level cache, the parameterization of the resources used by the DBMS and how they are used and anticipate problems that may arise in the future, as those that involve the hardware, among others.

## 5 Hardware requirements

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Hardware requirements may vary based on the number of simultaneous users, repository size and system configuration.

Note that all configurations on this page are based on **OpenKM** Team's expertise and are only approximations of what is necessary for small and medium-sized **OpenKM** environment configurations

### *Minimum OpenKM hardware requirements.*

- Intel Pentium 4
- 256MB RAM

### *OpenKM small installation*

With less than 25 user, repository size 10-60GB.

Minimum configuration:

- 1GB RAM
- Dual core 2 (1.86 GHz)
- 150-250 GB SATA (hard disk)

For better performance

- 2GB -4GB RAM

### *OpenKM medium installations*

With more than 50 users, repository size bigger than 150GB.

Minimum configuration:

- 2GB RAM
- Quad core (2.2 GHz)
- 250-500 GB SATA (hard disk)

For better performance:

- 4GB -8GB RAM
- SCSI hard disk

### *OpenKM on a virtualized server*

Con menos With Less than 50 users, repository size 20-50GB.

- 1GB RAM
- Due Core 2 (1.86 GHz)
- 80-100 SATA hard disk

## 6 Some of our references

<b>AAPP</b>	
<b>Sanitario</b>	
<b>Educativo</b>	
<b>Energía</b>	
<b>Finanzas</b>	
<b>Servicios</b>	
<b>Tecnología</b>	



Contact details

C/ Gilabert de Centelles 17,  
Palma of Mallorca,  
Balearic Islands, Spain. CP: 07005

+34 605 074 544

[www.openkm.com](http://www.openkm.com)

