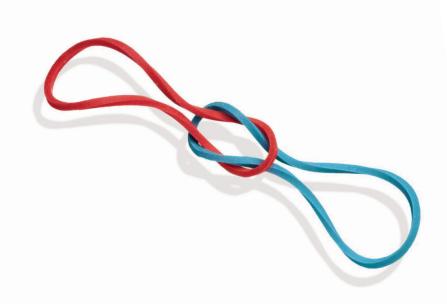


Document Management Server

Whitepaper



1 TABLE OF CONTENTS

1	TABLE OF CONTENTS	1
2	INTRODUCTION	1
3	WHY A DOCUMENT MANAGEMENT SYSTEEM (DMS)	2
4	DOCUMENT LIFE CYCLE	3
	4.1 Capture / Register Documents	3
	4.2 Creating Documents	
	4.3 Editing Documents	
	4.4 Archiving & Destruction of Documents	
5	THE USER INTERFACE	9
	5.1 Record (Case) Categories	9
	5.2 Viewing Records	
	5.3 Document Creation	12
	5.4 Search	
	5.5 Personalization and Profile Picture	17
6	FUNCTIONALITY	19
	6.1 Independent of Document Type	19
	6.2 OpenIMS® Transfer agent	19
	6.3 Roles and rights	19
	6.4 Metadata	20
	6.5 Document history / audit trail	
	6.6 Document Workflow	
	6.7 Commenting on Documents (also Drawings)	
	6.8 Document and Image Preview Facilities	
	6.9 PDF(/A) Conversion from Office, Visio and others	
	6.10 Template Management / Corporate Identity Monitoring	
	6.11 Microsoft Outlook plug-in	
	6.12 Microsoft Word and Excel Plug-in	
	6.13 Auto Upload Facility (Local Folder)	
	6.14 Hyperlink per Document	
	6.15 Shortcuts to Other Documents	33
	6.16 Relationships (Link / Relationships) Between Documents	
	6.17 Personal List of Favorites	
	6.19 Multi-Language Support	
	6.21 Subscribe (Subscription)	
	6.23 Digital Signature	
	6.24 Mobile Devices (iPad, Surface, Tab and Smartphones)	40
	6.25 Reporting Functionality (Data Warehouse Support)	
	6.26 OpenIMS® Overview	
	6.27 Connections to External Systems	
	6.28 OpenIMS® - Dropbox Integration	
	6.29 OpenIMS® - Seafile Integration	
	6.30 OpenIMS® - Network folder Synchronisation	
	6.31 OpenIMS® - Cluster, Fallback-environment and DMZ	44
	6.32 Sharing Documents (Document Extranet/Portal)	45
	6.33 OpenIMS® as a Document Store for Applications (such as ERP)	
7	ARCHIVING DOCUMENTS AND RECORDS	46
	7.1 Configuring Retention Periods	

9	MANAGEMENT OF MANUALS	51
	8.5 Other Systems - Solutions	49
	8.4 Mail merge (and labels) Microsoft Office and OpenOffice	
	8.3 Navigating between Sugar and OpenIMS® Records	48
	8.2 Adjustable User Interface - Portal	
	8.1 Unified User Interface	48
8	INTEGRATION WITH SUGARCRM	48
	7.5 Destruction of Documents	47
	7.2 Archiving a Record	47
	7.3 Archiving Log	47
	7.2 Archiving a Record	

2 INTRODUCTION

OpenIMS® is a platform to manage all your document workflows. Both in- and outside your organization. It's not just about the digitization of mail, invoices or contracts, but it also includes creating new documents from templates and archiving e-mail. The platform can be flexibly adapted so that it can match all your business processes and document workflows.

OpenIMS® Document Management Server is developed completely by using web technology. This means that as a user, only a web browser is required to use the system. In consequence this product does not need product upgrades to be installed on the PC of the user. During development, special attention was paid to user-friendliness and performance of the system.

OpenIMS® Document Management Server includes the following features / services:

- User friendly and fully web-based.
- · Document type independent.
- Unlimited number of document and records types (projects, cases, customers, debtors, etc.).
- Extensive search facilities (including full-text search) with authorization.
- · Reporting options.
- Full document lifecycle management including archiving and destruction of archives.
- Customizable metadata / categorization per document type
- Document generation / corporate identity management (based on templates).
- · Add-ins for Microsoft Outlook, Word and Excel.
- Generation of PDF/A documents for over 200 document formats.
- Extensive version management (audit log per document).
- Assistants (wizards).
- · Document relationships and shortcuts.
- Process oriented document handling screens (for example mail processing, invoice approval).
- Generate standardized process documents per process status.
- Extensive authorization facilities concerning user groups and roles (case type, document type).
- Standard document workflow (with support for serial/parallel approval) including reminder periods and e-mail notifications.
- Drag and drop facilities to drag and process files directly in the DMS.
- Distribution lists and personal watch lists.
- Full multilingual user interface including customer specific workflow, features and even multiple-choice lists.
- Default DMS archive where record structures and documents can no longer be changed, with their own search index, offering additional options for converting documents to PDF/A, linking terms and archive destruction using reports.
- Extensive features for user authorization (including support for LDAP in combination with Active directory and / or other directory services) with Single Sign On support. Based on NTLM or Kerberos.
- HTTPS or SSL support for working secure from home or any other location.
- Connects with scanners and multifunctionals for processing mail, invoices, packing slips, weighing slips, etc.
- Various facilities for customization and integration with other business-related systems.
- Extensive synchronization facilities to share information between different OpenIMS® environments.
- Sharing documents (including approval workflow) with external parties.
- DMS API.

ISO Certification

The OpenIMS® platform is ISO 9001 and ISO 27001 certified. This means that the platform meets the requirements of these ISO standards, which is certified by TUV.



3 WHY A DOCUMENT MANAGEMENT SYSTEEM (DMS)

Most organizations use a file server to centrally store and share documents. In addition, documents are often stored on the local hard disk of the (user) PC and are often sent as an attachment in an e-mail. This means that documents are available in many different places with corresponding versions. Resulting in multiple disorganized silo's containing information where it is no longer clear which version of a particular document is the most recent. An undesirable situation. However, there are many more reasons to start working with a Document Management System. The main reasons for working with a Document Management System (DMS) are the following:

Work more efficiently and with better quality.

One of the main reasons for using a DMS is to increase the organizational efficiency. This involves looking at information processing, disclosing information and making the information available.

Traceability / certification (ISO 9000, EN 50158, HKZ, etc.).

On a file server it is not always clear who and when was worked on a document. At best, you can find out the last author. A DMS offers you extensive controls and functionality to gain insight in these matters while also keeping it verifiable / demonstrable; a requirement for, among other things, certification of your processes.

• Working in a structured manner (using the corporate identity).

You want to save time and improve quality by working in a standardized way based on your corporate identity.

· Version control.

A DMS ensures that you always work with the most recent version of a document and knows what has changed when and by whom in previous versions.

· Security.

A DMS can shield documents based on meta-information (for example: status, author, responsible, etc.) and / or groups / roles that can be defined in the DMS.

• Workflow.

The entire lifecycle of a document is managed in the DMS: writing, reading, approval, publishing and archiving.

Search and find.

In a DMS you are able to navigate and to search on basis of full-text and / or meta-information in compliance with the authorization of a user.

Archiving & destruction of archives

OpenIMS® has an archive environment that can be set up based on legal regulations (archive law).

In the coming chapters, various OpenIMS® DMS functionalities will be explained in more detail.

4 DOCUMENT LIFE CYCLE

A Document Management System must have functionality to support the entire life cycle of a document. We can recognize the following phases within the life cycle:

- 1. Creation / capture / registration,
- 2. Storage and profiling / metadata,
- 3. Manage / distribute (workflow),
- 4. Archiving.
- Destruction.

Controlled and directed by a workflow.

4.1 Capture / Register Documents

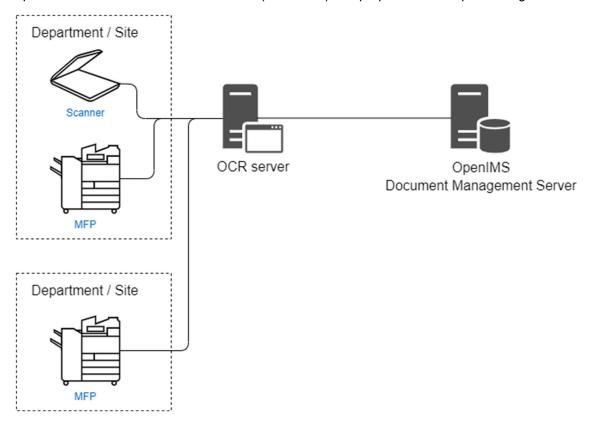
4.1.1 Document Store (Connecting ERP or other business-related systems)

Documents can be produced not only by users or scanners, but also by business-related systems (such as Exact, Navision, SAP, AFAS, etc.). Think about invoices, packing slips or order slips. The relevant documents can be imported by the DMS and placed directly in the right location in the DMS (the right record) and are then ready for further distribution.

Based on document naming (for example the customer number in the name of the document), an XML manifest or a text message, information on the placement of a document can be included. It is of course no problem if multiple systems deliver documents in accordance with the same agreements.

4.1.2 Scanning Incoming Documents (Mail and invoices)

OpenIMS® DMS can record scanned files (after OCR) and prepare them for processing.



OCR (Optical Character Recognition) with PDF/A output

OpenIMS® can be extended with OCR software so that the content of the scanned documents (the text) can be searched. The included OCR software can also convert documents to PDF/A, the specialized format for long-term preservation. The OCR software can also read barcodes so that you can assign scanned documents



directly (automatically) to, for example, the correct department. OpenIMS® uses the ABBYY OCR engine for this purpose.

Intelligent recognition (ICR)

Some documents lend themselves for intelligent recognition. You can think of packing slips, weighing slips, delivery slips, invoices and the like. Using ICR software, important information can be recognized from the document (for example a VAT or customer number), whereby the recognized value can be used as metadata and to read the correct data from your financial / ERP software, allowing the user to handle and archive these documents more efficiently. OpenIMS® uses the ABBYY ICR engine for this purpose.

Smart barcode processing (processing signed documents)

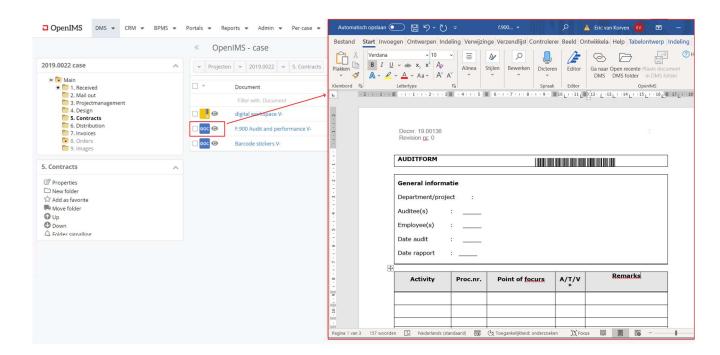
By working with barcodes on your outgoing documents such as (signed) contracts, letters and the like, OpenIMS® DMS can place these in the correct DMS record, without the intervention of a user.

4.2 Creating Documents

A document can end up in the DMS in various ways. Either via a scanner, via so-called assistants (document generation) based on templates (corporate identity), by uploading existing documents, from an e-mail (attachment) or by copying an existing document within the DMS.

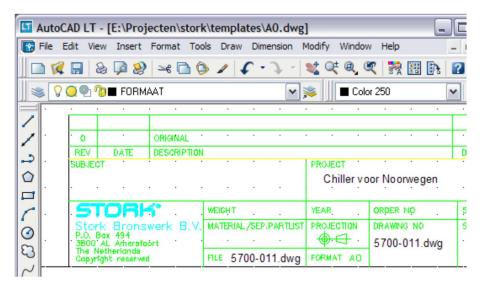
4.2.1 Document Templates (Corporate identity)

The administrator of the DMS can record a number of standard documents (stencils or templates) for the users of the system. This ensures that everyone uses the same corporate identity in a user-friendly fashion, for example for sending a letter, project report or for drawing up a quotation or project plan. The name and address details can be placed directly in a letter, for example by means of a linked CRM system. Metadata residing in the DMS can also be placed in the document, such as a document number, project number or version number.



For OpenOffice.org. odt- and Microsoft. docx-filetypes XML based integrations have been made so that OpenIMS® metadata information can be used in the document without using macros.

This functionality is also available for AutoCAD drawings. For example, within AutoCAD the title block of the drawing can be dynamically filled with the metadata that is stored within OpenIMS®.



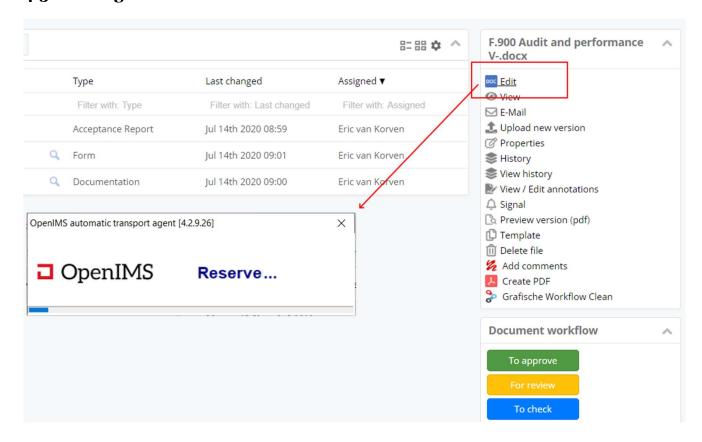
Documents (Upload)

It is of course possible to entrust existing documents to the system (= upload). These can be, for example, drawings, notes, invoices, quotations or order confirmations. Of course, a user is able to place newer versions of an external document in OpenIMS[®].

Microsoft Office Plug-ins

It is also possible to place information directly from Microsoft Outlook or Word into the DMS.

4.3 Editing Documents



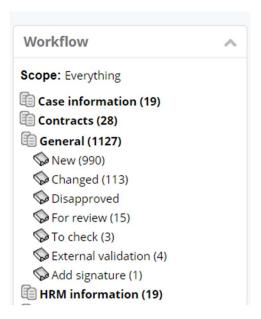
Special attention has been spent to retrieving and writing documents from and to the DMS. Using the **OpenIMS® Transfer Agent**, the user can open a document directly from a web browser. The user selects the relevant document and selects the "Edit" button, after which the document is locked (checked out), then automatically retrieved (downloaded) and the corresponding (local) application is automatically started, after which the document is opened. When the user is ready, he or she closes the relevant application, after which the modified version is written back (uploaded and checked in) to the DMS.

The user therefore does not have to perform any special actions, other than those with which the user is already familiar.

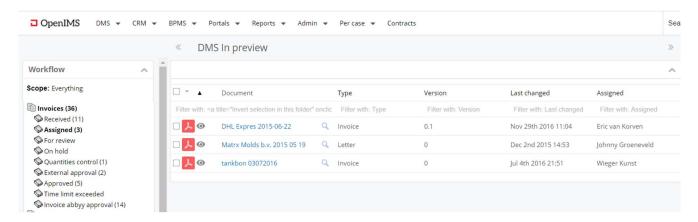
Of course, other users can still view the relevant document even if the document is edited by another user. A similar feature is available for Mac PC's and laptops.

4.3.1 Pending Overview

Another point of view in the DMS is the "Pending" overview. This screen provides an overview of which documents are available per workflow and in which state. A user can select a document from the pending documents (per workflow stage) and edit / process it.

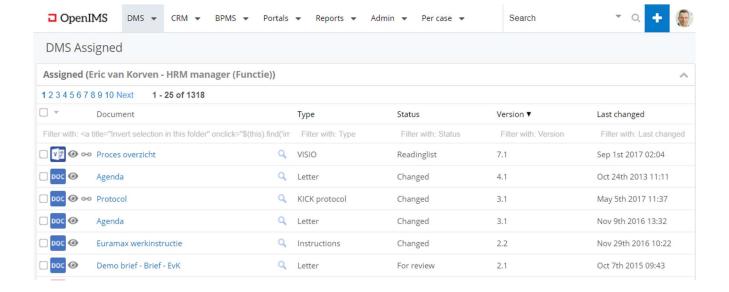


A department such as the Financial Administration can also immediately see which invoice is with whom and what the status of the invoice is.



4.3.2 Assigned Overview - To-do List

Another cross section of the DMS is the "Assigned" overview list. This is the personalized overview of documents to be handled by the respective user (to-do).



The moment a document is assigned to another user, for example because the current user has given instructions to do so, the document will appear in the personal overview "Assigned" of the other user.

When a user is for example ill, the relevant documents can also be assigned to other users from this overview.

4.4 Archiving & Destruction of Documents

In the final stage of the process, a document is archived and possibly destructed later. Special profiles can be defined for this within OpenIMS[®]. Retention periods and the like can of course also be granted.

Archiving strategies

OpenIMS® allows multiple solutions for archiving. Together with the customer, the most ideal way of filing documents or archiving is examined for the organization in relation to the laws and regulations that apply to the organization concerned.

- Archiving when closing a case or record (at document or set of documents level).
- Archiving during document handling.

See also Chapter 7 Archiving Documents and Records, where it is specifically described how this works.

Archiving at record or case level

After a project or case has been completed, it can be moved to the archive. This can be done on the basis of a workflow step in which a user indicates that the record can be closed and then archived. After this, all documents within the record are moved to the OpenIMS® archive. A destruction period can then be linked to the entire record, including all documents, or it can be set up at document level. The archiving period can then also be broken down by record category and / or document type if necessary.

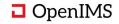
Conversion to PDF/A

The relevant documents can also be converted to PDF/A (=PDF variant for long-term preservation) when they are moved to the archive.

Archive search index

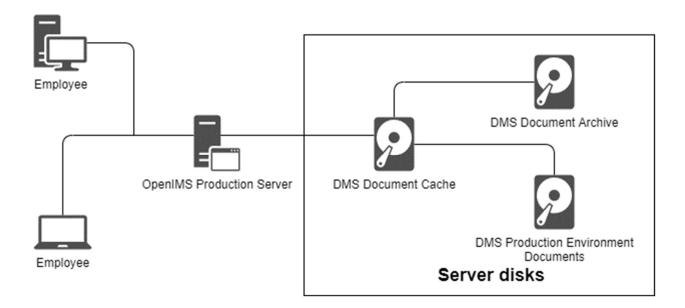
All documents that are in the archive are placed in the search index of the archive.

You can choose to allow only a specific user group to search archived documents or all users according to their authorization. This can be configured freely.



Archiving on cheaper (slower) storage

It may be a consideration for documents residing in the archive (large volume over the years) to store them on a cheaper storage environment, because they will not often be requested.



5 THE USER INTERFACE

The appearance of OpenIMS® DMS is simple and user-friendly by design. All complex actions and operations are performed in the background.

Some important features of OpenIMS® DMS are:

- Distinct points of view.
- Simple and user-friendly.
- · Task-based user interface.
- 100% web based.
- Fully multilingual.
- Tree structure (explorer).
- Support for BYOD devices so that users are always able to consult, search and perform workflow tasks.
- Standard support for secured connections by HTTPS and of course VPN.

All documents within the system can be accessed from a web browser. This has the advantage that the system is geographically independent, so that everyone can work on documents with a (secure) Internet connection. At the office, at home, with your customer and mobile.

The DMS interface has been optimized to be as user-friendly as possible, so that your employees can get started as quickly as possible within the OpenIMS® DMS platform.

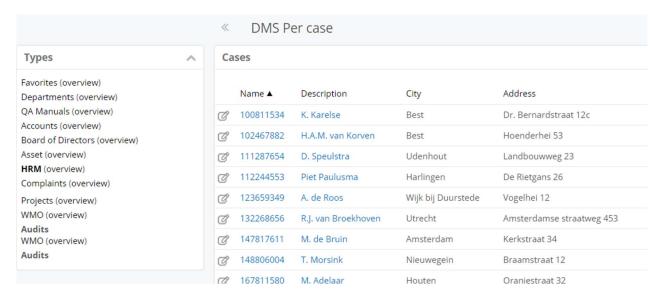
5.1 Record (Case) Categories

Many organizations work on the basis of record structures. These are standard structures so that all employees work in the same way and can more easily support other colleagues in this way.

You can also create project-related records in the DMS, but also HR records or, for example, customer records. The system is generic in design and provides a recognizable record for every employee within their own records.

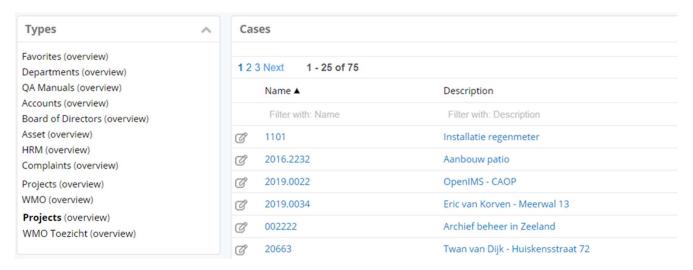
You only see the record categories for which you are authorized, and per category you see the available records. Any additional columns can be activated to make sure that you can search quickly and efficiently to the correct record. This ensures that everyone within the organization can work with the same DMS solution without accessing sensitive information. Of course, the built-in search engine also takes this into account.

Example HR records





Example Project case records

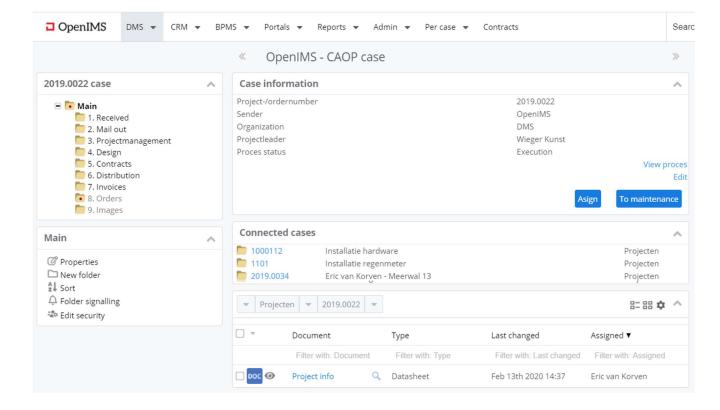


5.2 Viewing Records

After opening a category, you can select a record. Members of a record can quickly and efficiently select a folder in a record in which all important (project) documentation can be found. This can be compared to a paper file only now in a digital form. Since not only Microsoft Office documents but also your e-mail and scanned e-mail items can be placed in the record, there is a complete overview of all documents that are present within the record concerned.

A record contains a self-contained folder structure. In practice, such a structure is generated at the touch of a button via an assistant (possibly including standard documents), so that all your projects are set up in exactly the same structure.

The folders can be protected at folder and document level against unauthorized users.



5.2.1 Authorization at Record or Folder Level (Regarding roles)

It is possible to configure per record (or even per folder) who fulfils which role within the record. This can therefore mean that user A has the role of a project manager within project X and within project Y the role of a project user.

5.2.2 Status of a Record and Record Information

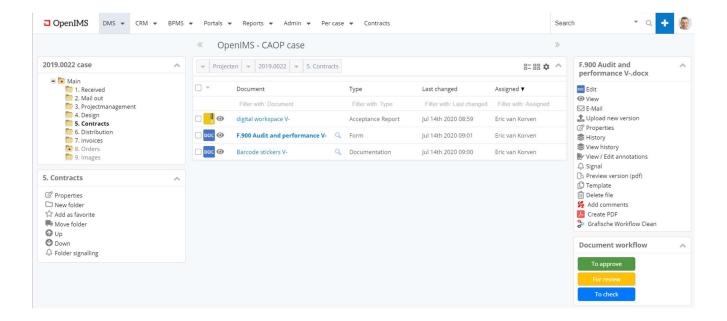
Based on a project / record datasheet, insight can be obtained into the status (for example, quotation, research, design, construction, test, delivered) of a record or case. All record properties can also be linked to a data sheet, which is then assigned to all documents within the record, for example a project number, name of the customer etc.

A user can not only configure general information such as the name of the record or the description, but also basic properties such as a project number, customer number or who the project manager is.

Linked records are also shown within the main record. For example, a user can have a customer record as main record and linked records as the different projects that are executed, or as in the example below a location with associated machine installations.

Navigating to a document

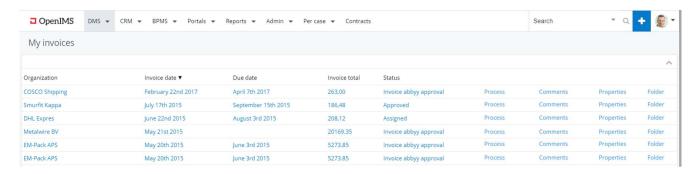
You can navigate through the folder structure to the correct document. In the example, you can see that the name of empty folders has a different color (greyed) than a folder containing documents (bold). In the example, you have a record where the folder "5. Contracts "has been opened and three documents are available. All other actions that are possible are shown related to the workflow choices that belong to the document "Audit and performance".



Working with document lists or process specific lists

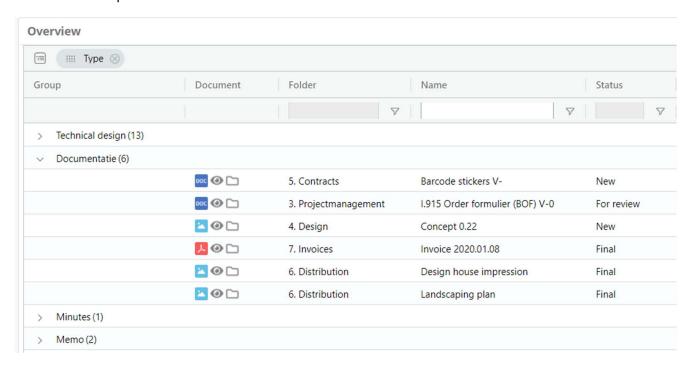
In addition to the tree structured navigation, OpenIMS® can also work with specific cross sections of the document collection. These cross sections can be set up as special overviews (tabs) with metadata information. Think about an overview for invoices, postal items, contracts and the like to be processed.

Below is an example of a "My invoices" view, in which invoices that have yet to be processed are included.



Overview

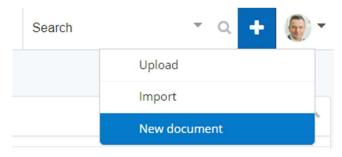
There is also a highly advanced filter function available that allows the end user to filter, sort and view up to 100,000 documents in a web-based spreadsheet. You can group the information in a column using drag & drop or zoom in on a specific workflow.



You can configure this filter at different levels, across the entire DMS, a specific category or a specific record. This allows a record owner or manager to quickly navigate and view all available information. It is also possible to save specific views or forward them to another colleague.

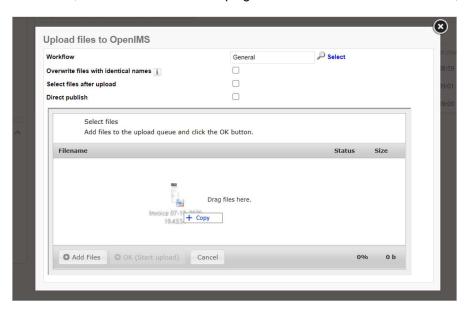
5.3 Document Creation

You can easily add documents to the DMS. You can upload them or create them using an assistant based on document templates using the "New Document" assistant.



You can also move documents to the DMS via Drag & Drop. You navigate to the DMS folder to which the documents should be placed and drag them to it from the browser, desktop or even Outlook. The DMS detects this action and the default "Upload" dialogue is started to process the documents.

In addition, there are of course also plug-ins available for Microsoft Outlook, Word and Excel.



After selecting the required documents, the user, when activated, must fill in the document metadata for all documents. If a datasheet is used, part of the metadata will already be filled in with the data from the datasheet.

In addition to dragging external documents to the upload dialogue, a document can also be dragged within the DMS to another folder.

Record type dependent documents per phase

It is also possible to automatically set up documents to a phase transition within, for example, a project. To help you handle cases, processes and projects in a structured manner.

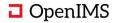
5.4 Search

A great search function within a DMS is very important. Such a facility should be simple and fast. Almost everyone knows the success of the Google search engine, it has a simple but effective interface.

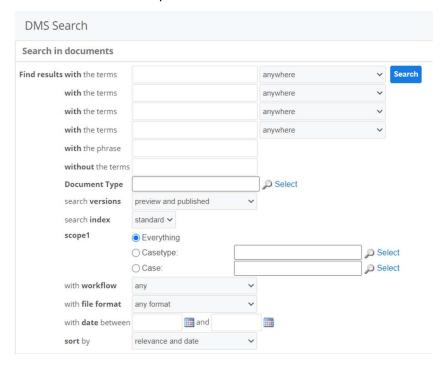
The search function in OpenIMS® can be deployed to retrieve all the information from within the document management system. The search engine can take into account authorizations/rights that users have on certain documents. It is also possible to provide weighing factors. Metadata assigned to a document is also searched and taken into account in the results.

Features: ·

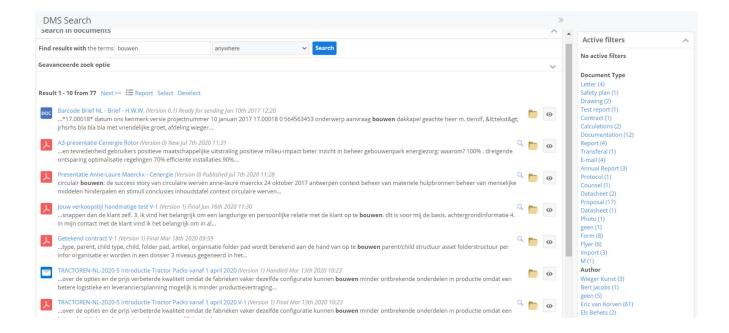
- A document is added to the search index within minutes.
- Displays the search term in the dynamic summary.
- Searches in metadata (classified documents) or within a record.
- Full text search.
- Authorization.
- Sorting based on relevance.
- Sorting based on date.
- Search within the search results.
- Display the search term in the summary.
- Thesaurus (list of synonyms).
- Find phrase.
- Find wildcard.



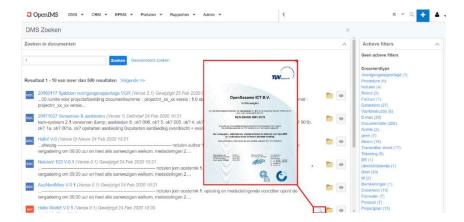
- Search in ranges (date from to)
- Document preview (default for PDF and images, optional for Microsoft Office).
- Possibilities for multiple search indexes for secure information or access to the web.



The advanced search offers the possibility to search by: Metadata, date, workflow profile, filetype, etc. All metadata fields used within the system are available within this advanced search screen.



For PDF documents, there is an integrated feature to view the first page without opening the document. This can also be extended by using a PDF conversion facility for other document formats such as Microsoft Office.



A user can move the mouse over the search result and at that moment the relevant document is displayed in preview. See the image above.

5.4.1 Instantly Searchable

All documents available in the Document Management System can be consulted via the built-in search engine. This works instantaneously. This means that immediately after modification (usually within a few minutes) the full content of the document is known to the search engine without loss of performance (indexing). A huge advantage over most traditional search engines.

5.4.2 Display Search Term in the Summary

After a user has entered a search term, the term found will also be shown in the results in which it appears. The user can then determine whether the document has the correct context.

5.4.3 Additional Support Through Thesaurus

OpenIMS® has a thesaurus module (synonyms) that supports the user of the search engine in searching for certain information (see image to the right). The thesaurus can contain industry-specific terminology such as medical terms and can be configured differently per organization.

5.4.4 Spell Check

Optionally, an interface (link) to Google can check whether a search term is written correctly. If this is not the

case, the module will offer an alternative. This module is language specific and still evaluated in product development.

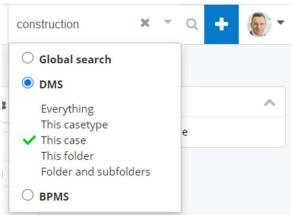
5.4.5 Searching Within Records

This allows a user to indicate that he does not want to search the entire DMS, but only a specific part of the DMS. Options are:

- Everything.
- This case type / record category.
- This case / record.
- This folder.
- Or this folder and underlying folders.

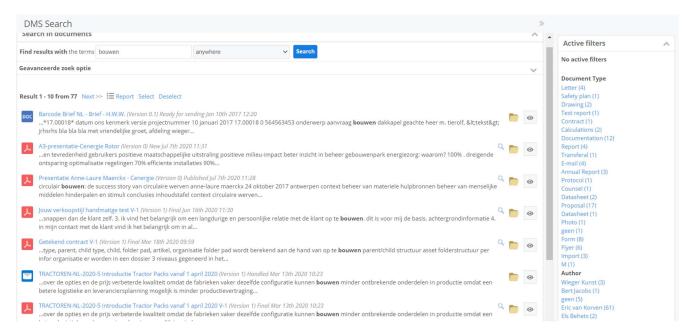
5.4.6 Additional search fields

Additional search fields can also be added to the search overview, including list boxes.



5.4.7 Results with search filters

In addition, it is possible to introduce search filters based on the search results. This allows a user to refine a set of results with suggested search filters such as document type, contract type, document workflow, author.



5.4.8 Search by Folder Names

In addition, it is also possible to search by name of a folder. This means that a search term does not have to appear in a document, but the name of the folder is also sufficient to find documents.

5.4.9 Search Term Logging

Everything that is searched for is logged in a logfile. Functional administrators can analyse and consult this logfile.

5.4.10 Indexing Existing File Servers

In addition to the functionality to search documents within the DMS, your existing file servers can also be indexed and documents searched.

5.4.11 Document Filter / List

In addition to searching for documents, a user can also use advanced document lists on which he can filter. For example, all documents from a DMS record or all contracts that your organization has concluded. This makes it easy to make function-specific consultation overviews available.

Image: Example of all incoming mail items.

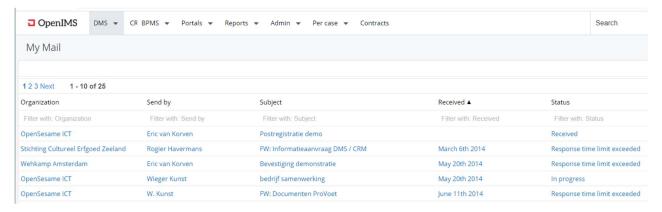
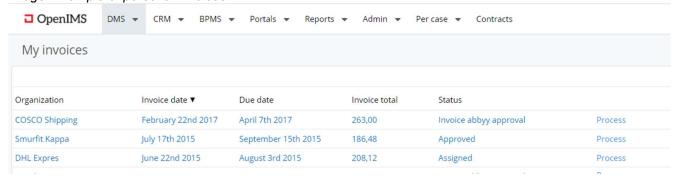
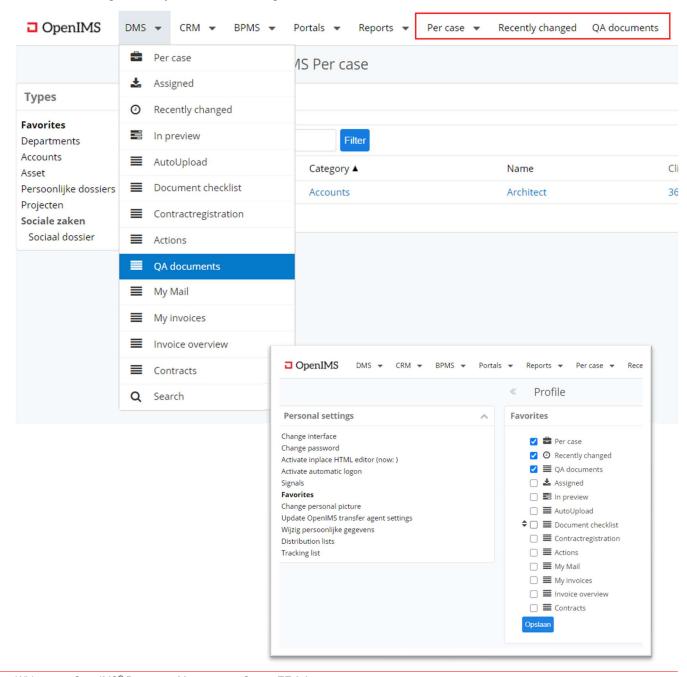


Image: Example of personal invoices.

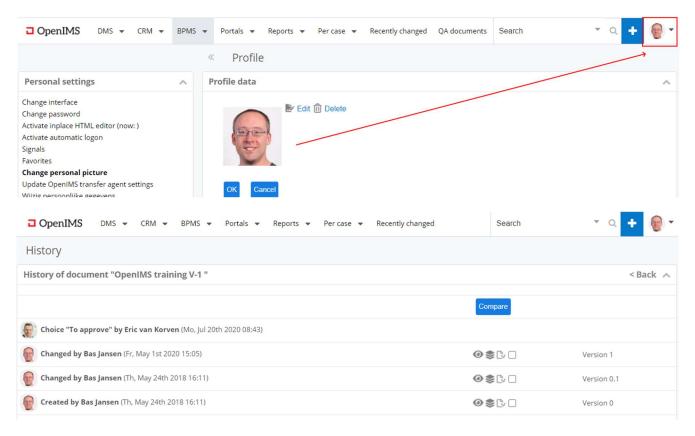


5.5 Personalization and Profile Picture

An user can adjust the navigation menu of the DMS and enable / disable options. Under the DMS menu additional overviews and applications for which the user is authorized are available. These options can also be included in the main navigation. In the example below, "Per case" has been added. You can adjust this via your "Personal settings", here you can also change the order of the available items.

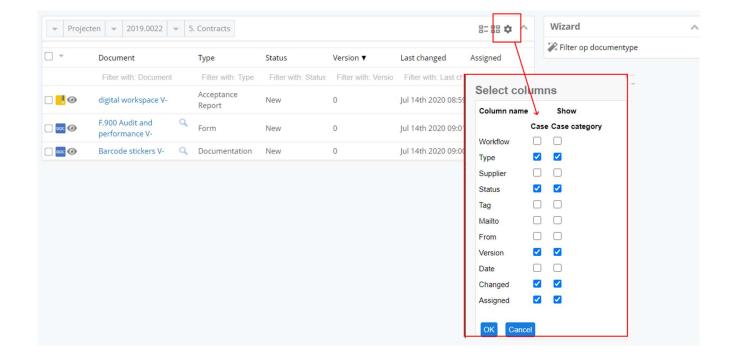


In addition to showing your profile photo in the menu bar, it is also used in the historical overview of a document.



Personalized document lists

A user can adjust the columns to be displayed per record and per folder. This allows a user to determine which information is presented.



6 FUNCTIONALITY

6.1 Independent of Document Type

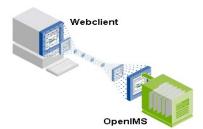
OpenIMS[®] Document Management Server can work in principle with all types of filetypes and make them accessible via a web browser. This could include:

- All types of Microsoft Office documents.
- OpenOffice (OpenDocument) format.
- AutoCAD drawings (also IFC format).
- Various image formats, jpg, jpeg, tiff, gif, bmp, psp, mic, etc.
- And many others.

An important feature of the system is that a user does not need to take any specialized steps to open, edit and save a document. Just click on a specific file and your favorite application will start automatically (using the Transfer Agent). OpenIMS® will take care of the rest, so you can get started right away.

6.2 OpenIMS® Transfer agent

The OpenIMS® transfer agent ensures that when a user opens a document in the DMS to modify, it will download and starts the related software, like Microsoft Word. During the download, the document is automatically checked out (locked) so that another user cannot work on the same document simultaneously. If someone else is working on the document then users will be notified which user checked out the concerning document.



If the user closes the document, the document is sent to the DMS using the transfer agent (upload), the document is updated to a new version in the DMS. The history will be updated (history log) and the document is released again (check-in) so other users can work on it again.

The transfer agent intelligently handles documents that are regularly consulted by a user. These documents are held locally through caching, making them immediately available. OpenIMS® naturally checks in advance whether there have been any interim changes to the relevant document (hash technology).

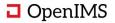
Functionality transfer agent:

- Automated check-in and check-out of documents.
- Document version control.
- · Advanced document caching.
- Automated updates of OpenIMS® Transfer Agent software.
- Support SSL (HTTPS).
- There is also a Java variant available for Linux and MAC clients.

6.3 Roles and rights

A functional administrator can manage the OpenIMS® configuration after following the correct training, for example:

- Manage users.
- Define and manage groups and roles.
- Create metadata fields, expand selection lists.
- Customize and expand document workflows, link additional metadata fields to a workflow, or adjust authorization.
- Retrieve accidentally deleted documents.
- Adjusting record template structures and document templates.

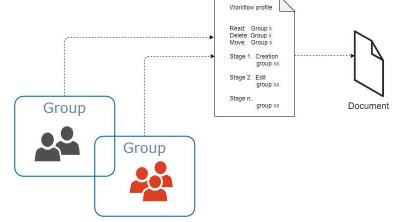


Within OpenIMS® you can define user groups at your own discretion. In practice, these are often function (role) groups, such as engineer, manager, purchaser. You can then assign users to the created groups. A user can be in multiple groups.

You can record the actual rights of a group in a workflow profile. In practice, this concerns the following basic rights:

- Remove.
- Move.
- Read.
- View for publication.

Within the workflow profile it is determined which user groups in which stage of a workflow may change or assess a document. This means that the system can use other groups per workflow status.



A document can be in a number of

freely definable stages per workflow. An organization can determine per stage and user/group who can do what. See the above image.

6.3.1 LDAP Support

OpenIMS® supports LDAP, allowing the use of directory services such as Microsoft Active Directory, Novell E-Directory or OpenLDAP. So that usernames and passwords can be centrally managed.

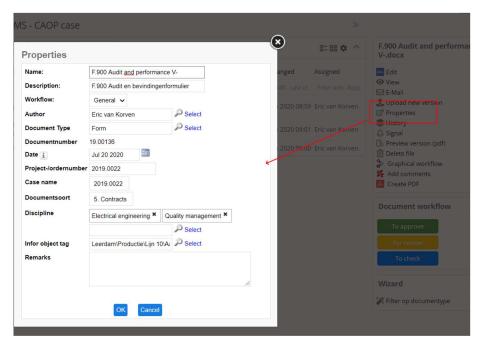
6.3.2 Single Sign On

OpenIMS® supports the current standards regarding Single Sign On. Next to NTLM, which is still used regularly, SAML, Google authentication and Kerberos are also supported or even another authentication standard could be used.

6.4 Metadata

Using a workflow, rights and certain attributes (metadata) are added to a document. With which the document can be categorized. In the workflow profile, data such as author, date of creation or other metadata (classification) can be recorded. OpenIMS® DMS has a metadata management environment with which you can manage the above.

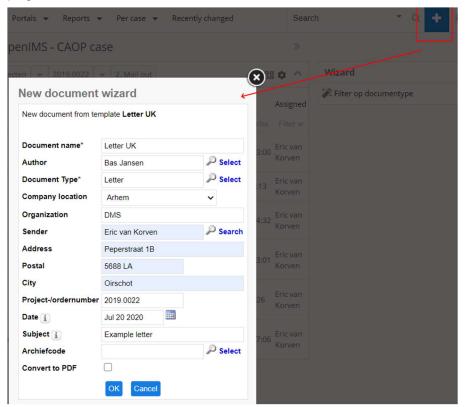
Different types of metadata fields are available, such as text and memo fields, but also selection lists and multi-select lists. If the lists are longer than 20 entries, the list box automatically becomes an auto complete field. In addition, custom fields can also be defined that, for example, retrieve information from external data sources.



Adding metadata automatically (context sensitive) of a project or case

Because metadata can also be recorded at record/case level, this metadata can be inherited by the documents in the record/case, so that a user only has to enter the missing metadata for a specific document.

This metadata is also available if you upload a document in the DMS or place it in the DMS via the Outlook plug-in.



6.5 Document history / audit trail

A history log is made of every document within the DMS. This log records the entire life cycle of a document. From the log, see image on the next page, various information about the document can be consulted and various functions are available.

- Version management / rollback.
- Insight to the modification of properties (metadata).
- Insight into move actions of the document.
- View the owner of the document.
- Access to all statuses (who approved a document) that have been completed.
- Show differences between two versions for Microsoft Word, OpenOffice.Org Writer, PDF, TXT or XML documents. A feature for AutoCAD is available based on a viewer such as Oracle AutoVue (separate product).
- View of employee picture.

The image on the next page gives an impression of the history of a particular document.

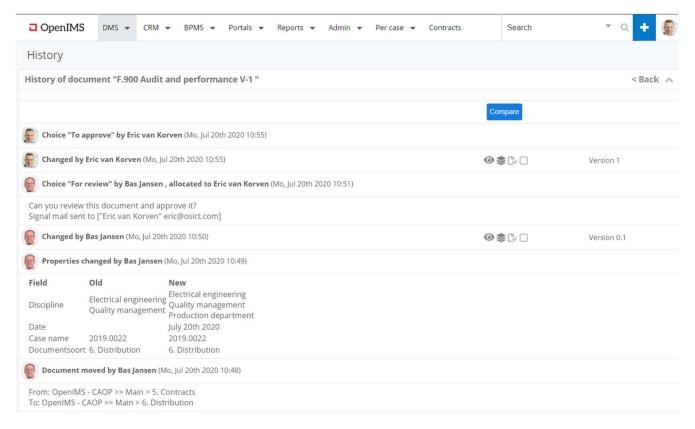


Image: Textual comparison of the contents of two documents.



By using the history, a user can see exactly who changed what and when. Opening and viewing a previous version in draft (read-only) and, if desired, reverting a certain change (=reverting a version) is also possible.

6.6 Document Workflow

A workflow means the automation of (work) business processes in which the information or documentation, required for the execution of the work, must proceed according to predetermined rules. A document workflow is implemented in such a way that the user is normally not confronted by it. The user can only change or approve those parts to which the user has rights. When certain rights are not issued, the corresponding options (icons) will not be available.

A document is passed from one sub-task to another. By introducing a workflow profile, work processes can be run more efficiently because the processes are automated and optimized.

The workflow profile designer enables an organization to manage work processes. The business (i.e. IT demand management) can indicate which steps there are before a document can be published. The different workflow profiles are created without programming a single line of code. The Workflow profile designer works similarly to Outlook 's Inbox assistant, but from a web browser.



A workflow profile contains a number of important features, such as:

- Granting read-only rights (modified version, latest approved version).
- Assign and manage user rights (tasks and roles).
- Assigning a workflow profile to a document.
- Changing a workflow profile.

The workflow is based on the state of a document. Per status an indication can be:

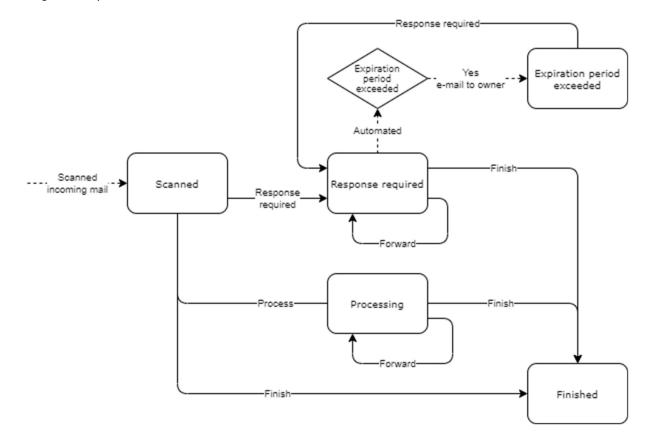
- Who may change the status of a document (user groups).
- Who can publish (approve) or reject (free to fill in) a document. In addition, it is possible to indicate for each choice to which status the document will be promoted once a certain decision has been taken.
- Support for parallel approval.
- Whether a reminder (to whom, period, possible status change) applies.
- Who (fixed distribution list) should receive a notification for each status change.
- Whether certain functionality (application code) should be executed during a status change.
- A process description per status is also available.

Serial, parallel and conditional workflow profiles can be set up via the Workflow profile designer.

6.6.1 E-mail Notification

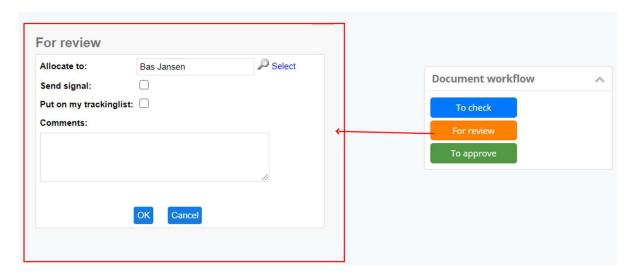
Between each status transition, a user has the option to send an e-mail notification to the user to whom the document is assigned. A user can only assign a document to users whose user group is allowed to do something in the following state.

Image: Example of a document workflow.

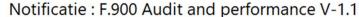


If the document is assigned to a user, it is possible to send a notification message (e-mail) to this user with an accompanying text.

Image: workflow next step.



Below a notification from the DMS.





OpenIMS signal

F.900 Audit and performance V-1.1

door Bas Jansen (Mo, Jul 20th 2020 11:52).

Notificatie

Hyperlink to: F.900 Audit and performance V-1.1

Workflow option: For review

Remarks: Can you review this document

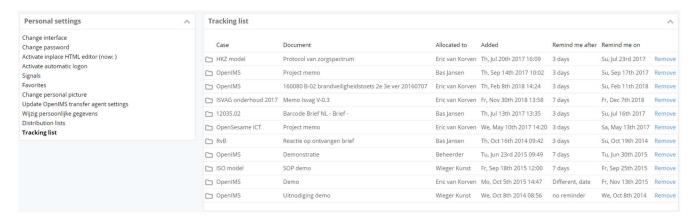
You are receiving this message because you registered within OpenIMS.

6.6.2 Assigning the Correct Workflow

When placing existing or creating new documents, a workflow is assigned to the document. From that moment on, the document will be led through the organization using the workflow profile. The workflow profiles are managed by the business i.e. someone responsible within IT demand and/or supply management.

6.6.3 Personal Watchlist

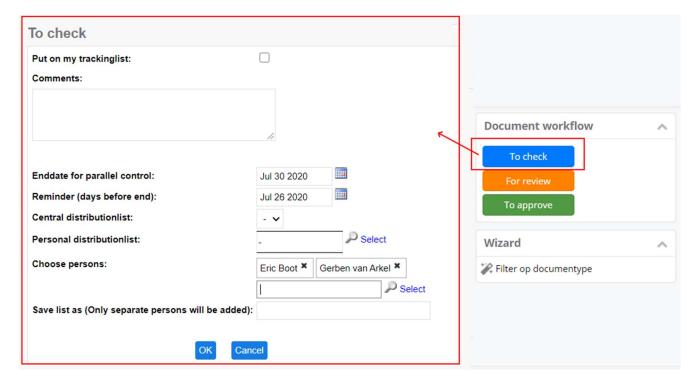
A user could follow documents, which are assigned to colleagues, on a personal watchlist to monitor handling of the document. The user can also set an expiry period to receive an e-mail notification when it's due.



6.6.4 Distribution Lists, Serial/Parallel Handling and Notifications

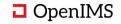
If within a document workflow it is defined that multiple users must handle a document, a group of users, a previously defined distribution group (see below) or OpenIMS® user group can be chosen, where all members will receive an e-mail notification.

The user can link an expiry period and reminder date to the relevant document. A user who has been added to the distribution list but has not yet responded will receive an e-mail notification to respond also.



A user can create personal distribution lists to use when documents are assigned.

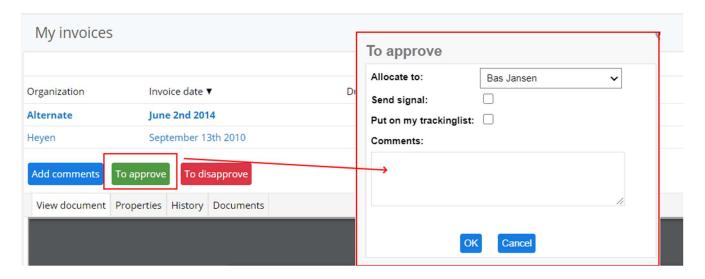
A user can define notifications per state of a document. A notification is a signal (alarm) and sent when a document remains longer than a set period in a certain state. This signal can be sent to various user. At the time



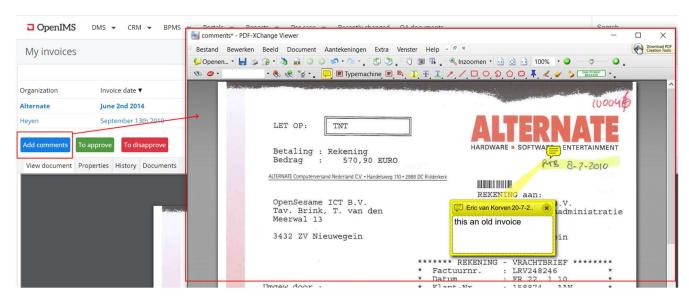
the expiry period of a certain metric is exceeded (for example 'Response time') a document could be promoted to a state for escalation. The expire period can be configured manually, recorded generically per document type (workflow) and could also be derived from metadata.

6.7 Commenting on Documents (also Drawings)

During a workflow transition, comments can be included that will also be recorded in the document history.



A PDF viewer can also be used, so comments can be made on PDF documents that are added to the history of the relevant document. For example, a user can use the PDF-Xchange viewer or the Foxit PDF viewer for this purpose.

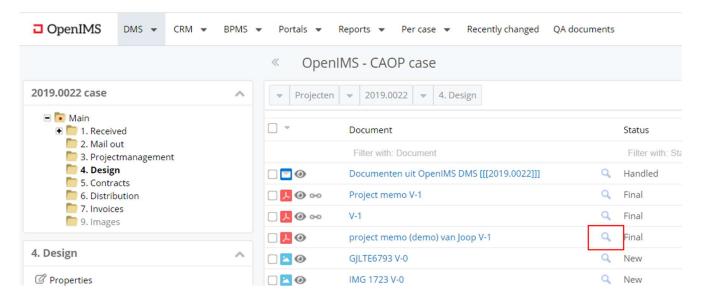


In addition, OpenIMS[®] also has a built-in PDF (web-based) viewer with options to insert comments. This PDF-viewer is browser independent and can therefore be used from a user's PC as well as from a laptop, tablet or other mobile device to comment on documents.

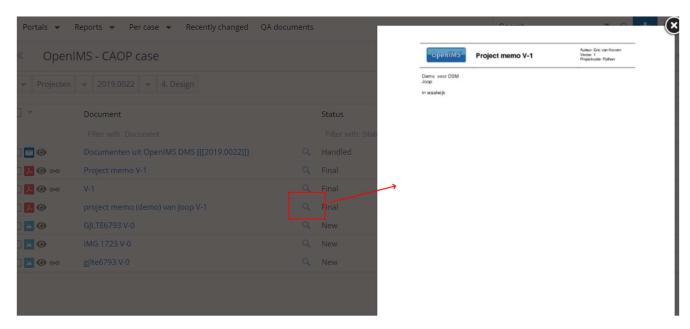
With this functionality, employees can insert comments on an invoice or report an adjustment to a changed situation on a technical drawing etc.

6.8 Document and Image Preview Facilities

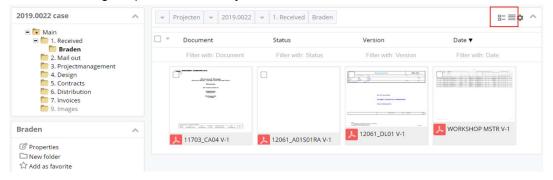
By default, you can use the preview facility for PDF documents and images. This gives you the opportunity to view a PDF directly from the search results without downloading it first.



When the magnifying glass is selected, the document preview is shown in the top right corner.



In addition, there is a preview function with a built-in viewer to present all PDF documents and images as a thumbnail. Using the preview function you can browse the documents based on content instead of the filename.



6.9 PDF(/A) Conversion from Office, Visio and others

OpenIMS® DMS offers users the possibility to convert Microsoft Word, as well as other document formats, to a PDF format without manual intervention.

An important advantage of this technology is that a hyperlink to a PDF version (see also image) can be placed on a web page, for example the intranet. A visitor can then download the document and automatically have the latest published version available in PDF format.

Based on this conversion, hyperlinks in Microsoft Word documents are also supported.

6.9.1 Archiving Records or Documents Permanently to PDF/A-Format

Using an additional assistant (Create PDF), a document or set of documents can be permanently converted to PDF and then sent digitally to, for example, a customer or citizen.

A user can also provide PDF security:

- PDF document encryption (40 bits / 128 bits).
- Password protection.
- Print and copy protection.

Properties of the conversion facility:

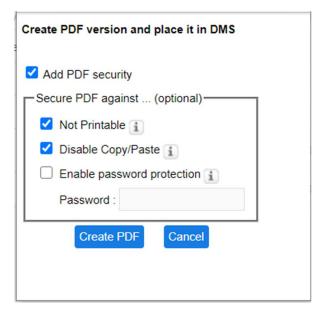
- Support of hyperlinks within converted Microsoft Word documents.
- Conversion to PDF/A format.
- Resolution (300 dpi).
- Conversion to a format other than PDF, such as: JPG, PNG, HTML, TIFF, Postscripts and EPS.
- Assigning Watermarks or Stamps.
- Digital signature (also in bulk for multiple documents such as outgoing invoices).
- Adding extra document metadata (such as a registration document number).

Outlook MSG to PDF/A or EML

The OpenIMS® platform supports converting Outlook MSG messages to PDF/A documents. This allows a user to handle an e-mail in the same way as a traditional e-mail which has been digitized using a scanner. OpenIMS® can also connect to mailboxes and place the e-mail as an incoming e-mail in the postal registration screen. This creates a uniform way of document handling.

6.10 Template Management / Corporate Identity Monitoring

OpenIMS® utilizes extensive options for template management. This allows development of many standard documents (templates) that ensure that users always work with the same formatting/layout of certain documents. You can use your corporate identity in all your documents. Think of a quote, a press release, a memo, notes, order forms and the like. Existing templates that are used in your organization can also be easily deployed within OpenIMS®.



The templates can be linked to user groups so users only see the templates that apply to them. You can also manage all templates centrally and even configure them to add additional security and be used in a workflow.

The system is not limited on the number of templates to be used.

Metadata within Documents

Specific to Word, Visio and AutoCAD templates, metadata can be included automatically in the document. This allows a user, for example, to create a letter in which the name and address details and a letter identification number are complemented in the document by OpenIMS®.

The templates will include metadata placeholders/tags that ensure that metadata from the system (such as name and address details, date, attribute, etc.) are included in the documents. This link to the metadata is dynamic.

Example: The heading location tag will cause a heading to be placed in the document depending on where the document is created. The location data can be recorded in your personal profile and/or chosen each time the user creates a new document.

Edit personal data Salutation Dhr Initials Bas Jansen Administration 030 77633821 Telephone Select Signer Eric van Korven Select Manager Wieger Kunst e-mail bjansen.openims@gmail.com Function Hoofd administratie Greating Company location Arhem Prive Street Postalcode City Niew Edit 🗓 Delete Image

Linked Documents (Mail merge)

Merging a Microsoft Word document with information from Excel using standard Microsoft facilities is possible. Both documents are placed and processed in the DMS.

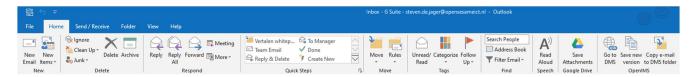
Document Creation during Process Transitions

It is possible to generate documents for each process step. When creating a case or project the required documents can be generated. Resulting in the creation of important documents so they cannot be forgotten. The documents can also be copied from a quality manual which is also maintained in the DMS. As a result, the entire organization uses the same approved (template) documents.

6.11 Microsoft Outlook plug-in

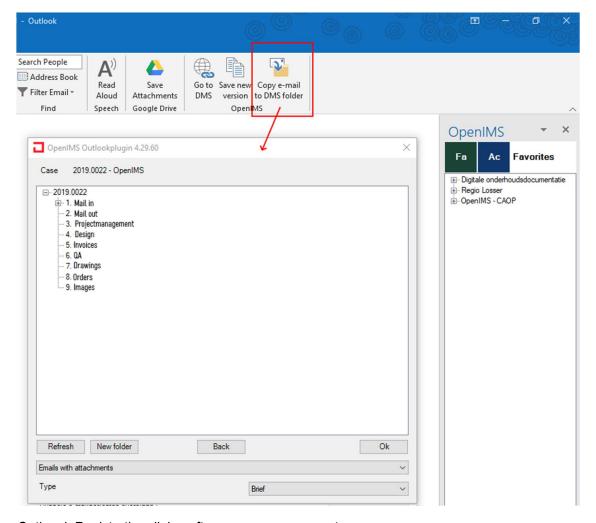
6.11.1 Registration of Outlook Messages and Attachments

A user selects one or more e-mails in Outlook and chooses the "e-mail to DMS" button. The OpenIMS® registration dialog is started where the user can choose from all previously selected records and various storage methods (message and attachments, attachments only, message only).



If the intended record is not in the list of recently selected folders, the user can search for the desired record using the search dialog and then select the registration folder from the displayed folder tree.

After clicking "OK", the relevant message is stored in OpenIMS® DMS. In Outlook, the message in question is flagged, so that the user knows which messages have or have not been registered in the DMS. OpenIMS® also registers the date of the message, the sender, recipient and CC addresses.

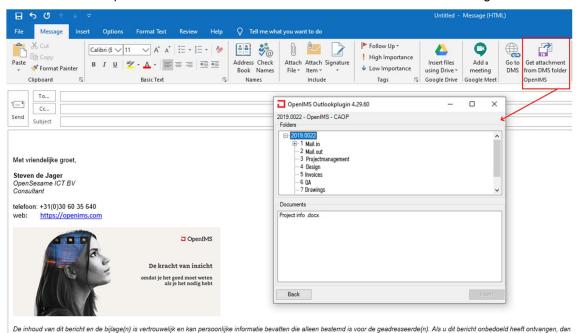


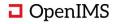
Optional: Registration dialog after every message sent.

This feature is activated optionally and applies to all users. With this feature a user will be asked after each e-mail sent in Outlook whether the e-mail should be registered the DMS.

6.11.2 Insert Documents directly from Outlook

You can add an OpenIMS® DMS document as an attachment in an e-mail message.





It is also possible to select a set of documents in the DMS by checking them. Then you can use the DMS "Send documents" assistant to place the documents in an e-mail message as an attachment or as a hyperlink.

Drag to an Outlook folder (linked with a DMS folder)

With this feature, a user can select a folder in the DMS and create and link a folder in Outlook. If the user now drags an e-mail to the created Outlook folder it will directly be placed in the linked DMS folder.

Detection of duplicate e-mails

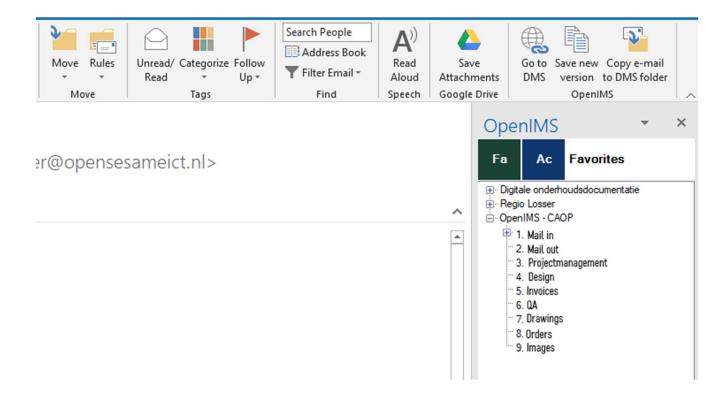
OpenIMS® is able to detect duplicate e-mails when a user places an already existing e-mail in the DMS. While posting the e-mail, a notification will appear with the location where the existing message was found.

6.11.3 Outlook Panel

It is possible to add an OpenIMS[®] panel to Outlook. This panel consists of a number of parts:

Favorite records, Fa

This displays a list of records you defined as a favorite. You can drag an e-mail to the panel into the DMS folder. You can also save an attachment in this way.



Active record, Ac

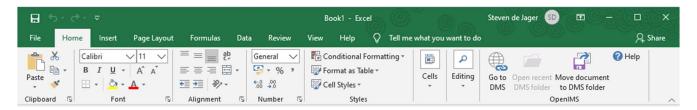
When archiving an e-mail in a specific record the information concerning the user who performs the action, the sender of the message will be registered. When the next time the user opens an e-mail from the same sender the record will be shown in the AC panel (Active) where it has already stored e-mail in the past. This allows you to store and archive e-mail quickly and efficiently.



In addition, the functionality "Active Records" can be configured to intelligently recognize records. A special project code is included when sending documents from the DMS. When replying to the e-mail, "Active Records" shows the corresponding record based on the project code. The user only needs to drag the e-mail to the record (or folder) to send to corresponding location in the DMS.

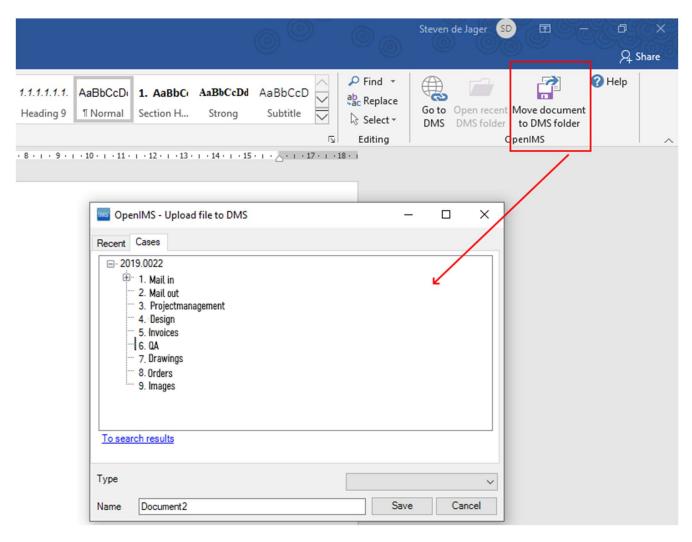
6.12 Microsoft Word and Excel Plug-in

The "To DMS" button directs the user to the DMS homepage. The Recent locations option gives the user the option to go to the DMS immediately after placing a document for further processing of the relevant document.



Placing documents in the DMS

When a user wants to place a document in the DMS, it chooses the button "Place in DMS". A registration dialog is now started. In the registration dialog, a user can choose a recent location or search for a record and choose the correct location from the DMS tree structure. Additional metadata can be provided during registration. After choosing OK, the document is sent to the DMS and processed.



6.13 Auto Upload Facility (Local Folder)

There are still applications that require the use of a file server. You can associate these fileserver folder(s) to associate with DMS records/folders which are monitored by the OpenIMS® auto upload agent. As soon as you place a file in this folder, the document is uploaded to the DMS and you can then process it in the DMS.



6.14 Hyperlink per Document

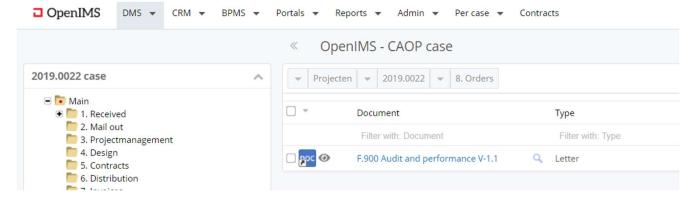
Because OpenIMS® DMS is fully web-based, documents from the DMS can easily be added, for example, to an intranet(page) or a hyperlink to a document or record can be included in an e-mail, the ERP or financial system.

Each document has an unique secure hyperlink to the current (published) or draft version of the document. For example, by referring to a document from the intranet using this method, it always refers to the last approved version of the document. This means that a certain document can be changed and that these changes will only become available to the intranet visitor when the document is approved again.

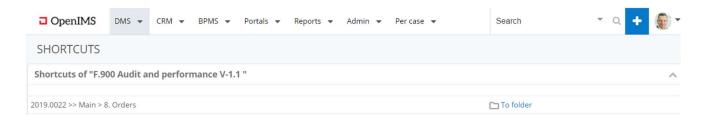
Nothing has to be adjusted on the intranet and it is also guaranteed that in all places where a reference is made to the relevant document, such as from different pages of the intranet but also from e-mails sent and the ERP system, it will always refer to the correct version of the document.

6.15 Shortcuts to Other Documents

Using a document shortcut, a document can be presented in multiple places in the DMS while only one version of the document is present. The shortcuts within OpenIMS® are linked to the original documents (the published or draft version). You can make changes to a document via the shortcut as if it were the original document. The changes to the document or metadata are reflected and all other shortcuts to this document are also updated. The rights to the shortcut are determined in the workflow of the original document.



From the original document you can see exactly where the different shortcuts are placed within the DMS.

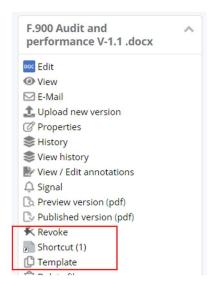


6.15.1 Dynamic Shortcut

A dynamic shortcut always follows the original document. So, if this changes then the shortcut will also change.

6.15.2 Static Shortcut

This is a link to a specific version of the document. This will therefore no longer change if the document changes or changes its status.



6.16 Relationships (Link / Relationships) Between Documents

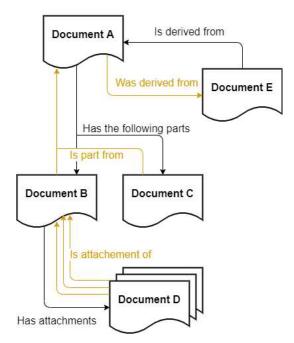
With the facility to link documents together, relationships between documents can be defined. The relationship is established on the basis of natural language. It is also possible to define multiple types where a document can have multiple relations. You can think of: 'Is attachment of', 'Is part of', 'Is translation of' and such logical relationships.

A relationship is by definition two-way traffic; this means that you can jump from the relation screen to another document where the references to the source document can be found again.

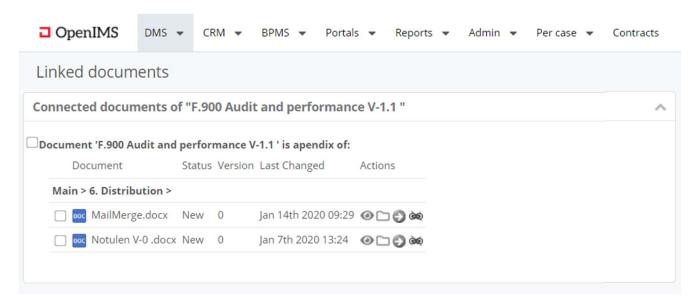
Start actions / events

In some cases it is important that if a certain document is changed, all related documents change state or that all authors receive an e-mail notification. This can also be realized with the above functionality.

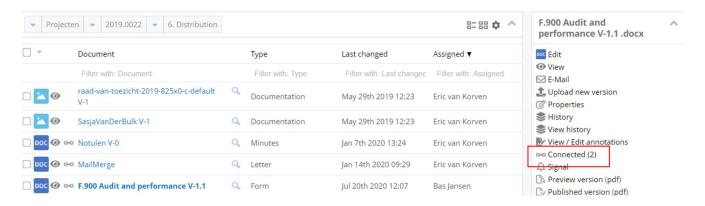
Document relations



View connected files

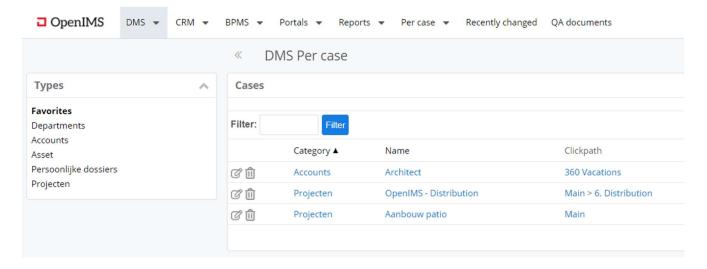


List of connected documents

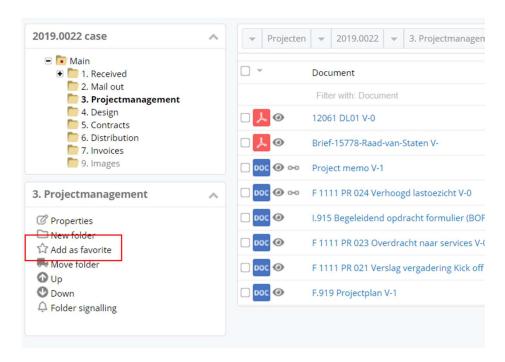


6.17 Personal List of Favorites

A user can also create a list of favorites. The list can consist of hyperlinks to a record or a folder within a record. OpenIMS® can be configured so that the favorites list by default opens when a user navigates to "Per record".



From this favorities overview, a user can navigate to the record category or to a higher level in the click path of the relevant favorities folder.



A user can create hyperlinks to a record or to a specific folder within a DMS record.

6.18 Standard DMS API

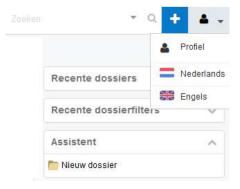
The OpenIMS® DMS platform can be fully accessed via an API interface. This makes it possible to provide ERP applications or SaaS solutions with a Document Management solution as a back solution.

The API interface provides you with features to:

- Generating, deleting and archiving records.
- Add, edit or delete folders.
- Add and remove documents and also generate document hyperlinks so that a document can be edited
 directly from the application utilizing the OpenIMS[®] transfer agent.
- Search through a record or the entire platform.
- Create and manage users.

6.19 Multi-Language Support

Not only the standard functionality of OpenIMS® is available in multiple languages (such as English and Dutch), but also the workflow labels, status transitions and field names are multilingual.

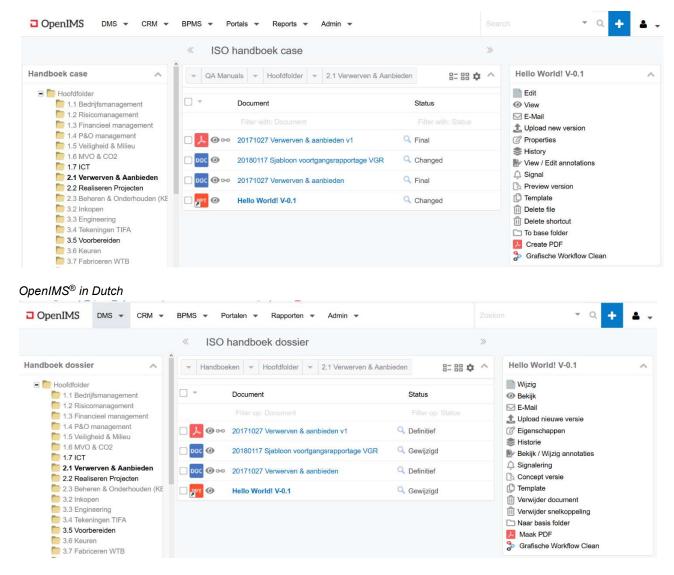


Manage contents of a multilingual list box field 'Document type'



An administrator can manage the relevant translation per language. When there is no translation available of a particular field the default language will be displayed.

OpenIMS® in English



It is possible to provide support for multiple languages in OpenIMS® records.

6.20 CAD & Document Viewers

As part of a project CAD drawings also has to be managed in a structured manner. This is possible with OpenIMS® DMS. The DMS also provides additional facilities for document numbering, version management, block title generation and history.

OpenIMS® supports, amongst others, AutoCAD and MicroStation. In addition, various viewers are supported such as AutoVue (Oracle), Volo View, AutoDesk Express Viewer (AutoCAD) and AM-View (Cyco). Some viewers support not only CAD drawings but support over 200 document formats.

OpenIMS® supports the so-called compare function using viewers; this is selecting and comparing of two drawings. Above you see two versions of a CAD drawing, the bottom one shows the differences between the two drawings.

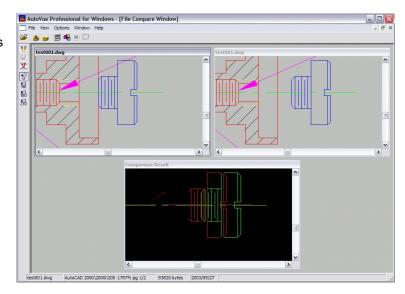
Rating (Redlining)

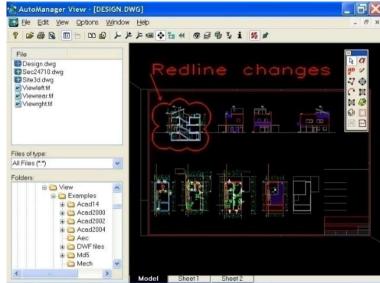
Using redlining a user can as it were, make notes on a CAD drawing, see figure to the right. The draftsman can then view these notes and process them in the drawing. Depending on the chosen viewer, the notes can also be recorded in OpenIMS[®].

6.20.1 PDF-version of a Document

Due to the standard function to convert documents to PDF (for example Microsoft Word or PowerPoint), documents can be

viewed directly in PDF without the relevant Office package being necessary. The OpenIMS $^{\circ}$ conversion server must be set up for this.





6.20.2 Auto Desk Vault Integration

An AutoDesk Vault server has a Webservices interface. Based on this interface, OpenIMS® can retrieve documents from AutoDesk Vault or change a drawing stage within the Vault environment. This way you can ensure that all approved drawings in the DMS record are available for all members of a project. Draftsmen can thus make optimum



use of the Autodesk Vault platform while the rest of the organization through the OpenIMS® platform has access to all the right information. You can also share the drawings with your external customers or suppliers in an online project environment (Extranet).

6.21 Subscribe (Subscription)

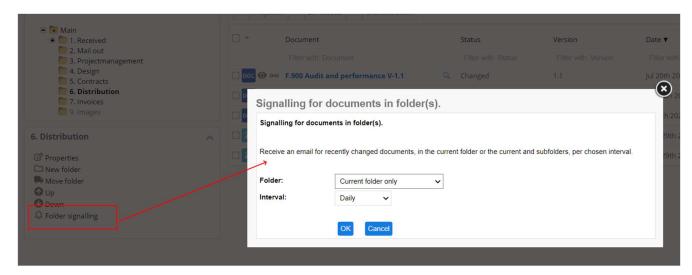
On documents

A user can subscribe to documents within OpenIMS®. This means that the user receives an e-mail notification when the document on which the user subscribes has been changed.



At folder or record level

You can select the main folder of a record and indicate whether you want to receive periodic (hourly, daily, weekly) messages of all changed documents in the relevant folder or underlying folders.



6.22 OpenIMS® Containers

In some cases, applications manage more than one source file, including its own folder structure. To manage the files of this type of applications in the DMS, the container functionality will have to be used. You can think of the following applications:

- Software development tools such as Delphi, Visual Basic and others.
- PLC development tool including its output.
- Information and calculations derived from a DOS application.
- 3D drawing packages.
- Calculation programs and others.

You should see the container within OpenIMS® as a kind of cupboard drawer. You open the drawer, fill it with information and close the drawer again. OpenIMS® then stores everything in the drawer and puts it as one object in the DMS. This object can again use the standard facilities such as version management, metadata and its workflow within OpenIMS®.

When a user selects a container in the DMS, its contents are placed in a specific local folder and then opened so that they can access the contents. When the user is done, he closes the folder, after which the entire contents of this folder are placed in the DMS and a new version of the container is created. This can be compared to working with WinZip where WinZip is the container.

6.23 Digital Signature

There are a number of different matters surrounding digital signatures:

- Internal (for example approving & initiating an invoice).
- Signing an outgoing letter (digital version legible signature).

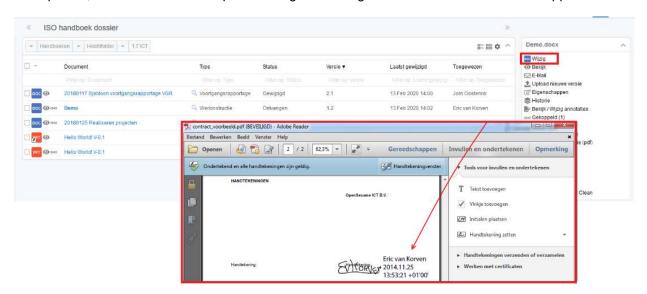
6.23.1 Readable Digital Signature

Each user could configure a signature in his/her profile in the form of an image. OpenIMS® can, at a certain state in the workflow, add the signature into the document and convert it to a PDF/A version so other users cannot abuse the signature.

6.23.2 Digital Signatures in Compliance to Law and Regulations

The OpenIMS® platform can be linked with various certificates from various suppliers. It is also possible for OpenIMS® to work with tokens (smart cards, fingerprints, etc.). Additionally OpenIMS® can add digital signature certificates in bulk to converted PDF documents.

For example, a user can create a contract or agreement, route it through the organization, and automatically convert the document to PDF during a given workflow step. The user can then provide the document with its own digital signature. As in the attached example, this can be done directly from Adobe Acrobate with, for example, a certificate from Cosign or based on an extra PDF viewer from Cosign itself. After the signature has been placed, the document can be protected against changes and sent to a customer or supplier.



6.24 Mobile Devices (iPad, Surface, Tab and Smartphones)

More and more organizations want their applications made available on mobile devices such as tablets. There are several options available for this. OpenIMS[®] usually meet current guidelines so they can be accessed via devices using a web browser without any required modification.

You can search, consult, upload photos and videos from a tablet, but also carry out workflow actions such as approving an invoice or commenting on a document. This is possible out of the box and gives you access to your company documents anytime and anywhere. In addition, it is also possible to have a special app developed for a specific platform.

6.24.1 Supporting the Apps Goodreader, iAnnotate or Pages

OpenIMS® supports the Webdav standard to exchange documents via a universal interface. Based on this feature, you can connect to the DMS and also take the documents Offline on your tablet and possibly synchronize them again later.



6.25 Reporting Functionality (Data Warehouse Support)

The results of the search engine can be processed in a report. Above each search result the option: "Show as report" is offered. If this report is selected, all search results, state in the workflow and the version number is displayed.

A user can print the report, add it via a bookmark/save his favorites in the web browser, via drag & drop/cut & paste and process it as a hyperlink in an e-mail so the receiver is able to look into the report online.

Datawarehouse export

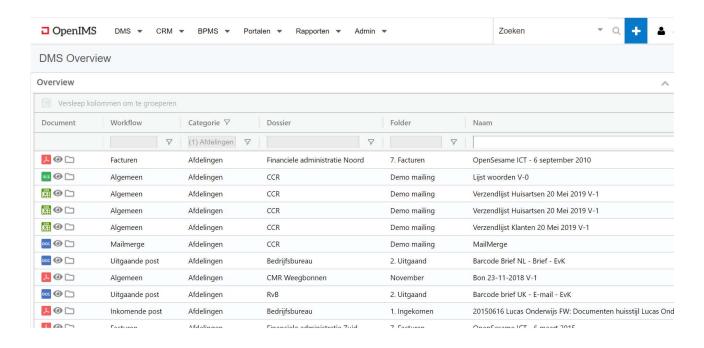
All information in the DMS is saved in XML format and can be offered in an CSV format via an export facility or placed in a relational database. The CSV information can be imported and processed daily by means of an import function (ETL tool) from a data warehouse. You can think of environments such as QlikView, Cognos or SAS.

OpenIMS® reporting environment

The OpenIMS® platform can make the information available in its own reporting environment. In addition to a set of standard reports, the user can also add new reports or have new reports developed on request. To create a report, knowledge of SQL is required, in addition to an instruction of the used reporting tool.

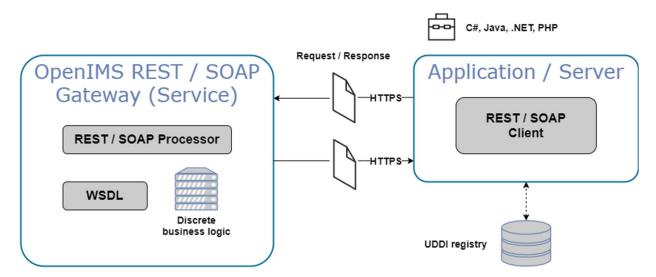
6.26 OpenIMS® Overview

OpenIMS® Overview is an overview functionality/reporting tool that can process 100,000 records real-time from the DMS. These files can be filtered and sorted at super speed. It is also possible to save custom views for easy loading later.



6.27 Connections to External Systems

OpenIMS® has a standard build in SOAP/REST Gateway from which the full OpenIMS® functionality can be accessed from other systems or other systems can be manipulated by OpenIMS®.



This makes OpenIMS® ideal for being part of an SOA architecture. The OpenIMS® SOAP Gateway (Web Services) allows software developers to easily integrate with OpenIMS®. This gateway allows software developers to develop applications independent of platform or programming language such as PHP, C#, .Net, Delphi, Java, Python, Ruby and C/C++. A number of sample libraries are also available for this purpose. It is also possible to refine the SOAP interface where desired so that it is possible to determine the best location to enrol certain functionality.

The OpenIMS® SOAP Gateway goes both ways. It is possible to address any OpenIMS® facility, but OpenIMS® can also address other systems. A practical example is a CRM-application that automatically creates a

customer record within OpenIMS® Document Management Server (DMS) when a new customer is added to the CRM application.

Various OpenIMS® implementations have now been carried out based on this Gateway. Links have been realized with Cordys (SOA application), Microsoft .Net CRM applications, Pallas Athena (Flower), Baan, Beaufort (Reat), Exact, TenForce, Selligent, AFAS, eMagiz, MetaCOM and SAP, AutoDesk Vault, SAS, SugarCRM and others.

OpenIMS® can integrate with SOAP, Webservices, (D)COM(+), Java, JSP, J2EE, XML, XSLT, ASP, PHP and Perl and others. Huge amounts of proven components are available for the Open Source Apache and PHP environments.

Providing XML

OpenIMS® works internally entirely on the basis of XML objects. These can be consulted by means of the SOAP protocol and adjusted if desired.

6.28 OpenIMS® - Dropbox Integration

Dropbox is an environment which is easy in use to synchronize files between different computer systems. For example between your home PC, Office (Windows, Linux or Mac) or mobile phone/tablet. You can post (and update) the documents via a central account and/or share them with other Dropbox users.

By integrating OpenIMS® DMS with Dropbox, functionality can be realized such as;

- Sharing documents (technical drawings, design documentation, films) with external parties, including the provision to also change these documents.
- Offline client for the DMS, so that users in the field still have the necessary documents available.
- Working on documents that are also archived in the DMS.
- Distribution of manual documents and instructions for work to multiple locations within an organization.
- Consult documents on a mobile application such as a telephone or tablet.
- Save photos, films and documents from a mobile application (on a tablet or phone) directly in the DMS and then access them on your Intranet.

Dropbox integration needs to be implemented additionally in OpenIMS®.

6.29 OpenIMS® - Seafile Integration

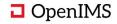
Seafile is an alternative to Dropbox which you can integrate in your own infrastructure or deploy at your service provider.

By integrating OpenIMS® DMS with Seafile, functionality can be realized such as;

- Sharing documents (technical drawings, design documentation, films) with external parties, including the provision to also change these documents.
- Offline client for the DMS, so that users in the field still have the necessary documents available.
- Working on documents that are also archived in the DMS.
- Distribution of manual documents and instructions for work to multiple locations within an organization.
- Consult documents on a mobile application such as a telephone or tablet.
- Save photos, films and documents from a mobile application (on a tablet or phone) directly in the DMS and then access them on your Intranet.

6.30 OpenIMS® - Network folder Synchronisation

It is possible to synchronize parts of a network with a DMS record. Some applications want to fully manage the structure on a fileserver itself. Through synchronization of directories OpenIMS® still can provision these documents to the DMS.



6.31 OpenIMS® - Cluster, Fallback-environment and DMZ

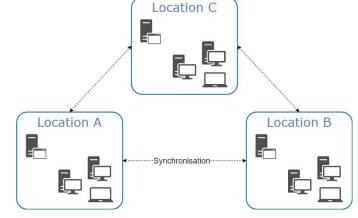
The architecture of OpenIMS® is designed in such a way that an organization can deploy multiple production servers. For example, when there are multiple (international) branches, many hundreds of users, or if very high availability is required. Using synchronization profiles, these servers can exchange documents with each other in order to provision all documents throughout the organization.

An OpenIMS® server park can be set up in several ways. For example, you can place an OpenIMS® server at each location and have these servers synchronized with each other periodically. This has the advantage that

the network connections between the branches are taxed to a minimum.

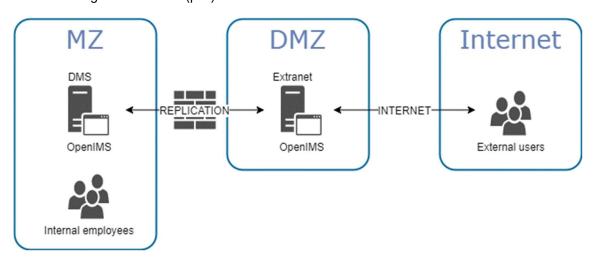
Centralized backup facilities

In addition, the synchronization environment can be used to make backups of all information. Because all systems are mirrored, an organization can suffice with a central machine where all backups are created. As a result, management activities with regard to the decentralized machines can be kept to a minimum. When a new OpenIMS® server is enrolled within the OpenIMS® network, it will synchronize automatically with the other OpenIMS® servers.



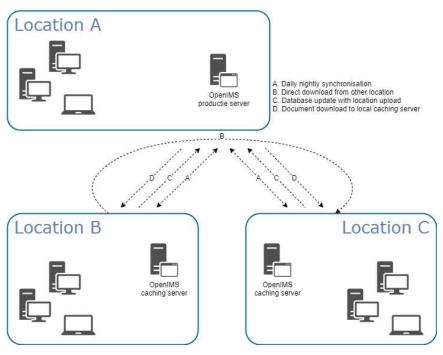
6.31.1 DMZ

More and more organizations want to share documents or collaborate on documents with other organizations. However, in perspective of security it is usually not allowed to connect the entire DMS to the Internet. Together with the customer, it is determined which set of documents or project records are shared with external parties and how these external parties can access this information. It is possible to publish documents (push) and retrieve changed documents (pull) to an extranet environment.



6.31.2 File Caching

In addition to the aforementioned facilities, so-called file caching can also be used. This means that a central OpenIMS® server is set up that can be accessed from different locations (for example countries). Depending on the available bandwidth in these locations, document retrieval from the central server may be delayed. Using an OpenIMS® cache server in the other location, all approved files are periodically synchronized to this cache. When a user wants to consult a document, it is checked whether it is present locally (in the cache) and is opened; otherwise the latest version will be retrieved from the central environment and cached.



Create new document on location

If a user creates a document on location, a record is created on the production server so that all DMS users see that the relevant document has been created. After a set period (this can be once an hour, immediately after upload or every day), the physical document is also moved to the production server.

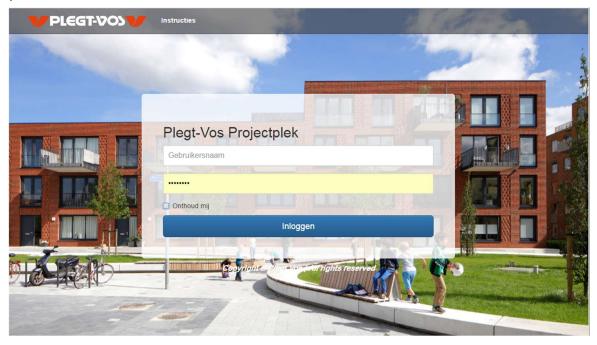
Document from location A to B

If a document is created on location and registered as a record on the production server, it can also be called up directly by a user in another location. It is then not downloaded from the production server, but from the relevant location.

6.32 Sharing Documents (Document Extranet/Portal)

The previous paragraph described the so-called DMZ. We often deploy a DMZ setup to share a subset of documents with specific users and user groups. Think about provisioning product documentation, project documents, invoices etc.

By using OpenIMS®, very user-friendly and attractive environments can be offered, which not only make documents accessible but also made fully available in the corporate identity of the customer. See the below pictures.



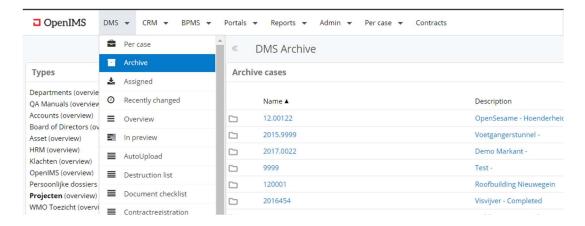
6.33 OpenIMS® as a Document Store for Applications (such as ERP)

Not only will your users produce documents that you would like to structure, but also your business applications as an ERP system or document generator will create documents. You can think of outgoing invoices or quotes. You can also offer this information to OpenIMS® either via an XML message with the relevant file in an import directory, but it can also be done via a Service Bus or link at API level. These systems can then also retrieve the documents via an API or generic URL.



7 ARCHIVING DOCUMENTS AND RECORDS

An archive function is available for archiving records and their documents.



The archive configuration is quite flexible in terms of usage. You can choose to copy users authorizations for reading documents one to one into the archive so that employees can consult archived documents of, for example, projects. Of course, it is also possible to only give an archivist access to the archive. The most suitable solution is examined together with the customer. There is also a special search index in which archived documents are placed. Of course, documents in the archive are no longer editable.

7.1 Configuring Retention Periods

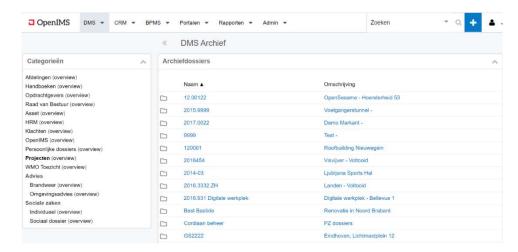
An overview is available for administrators in which retention periods can be configured per (type of) record and type of document.

A default retention period of 5 years is used for document types that have not been defined.

7.2 Archiving a Record

An administrator can archive a record via the "Add to archive" function. Each document is linked with a destruction date, which is calculated on the basis of the previously defined archive periods per type of document, per process or case.

The archived record overview shows the archived records.

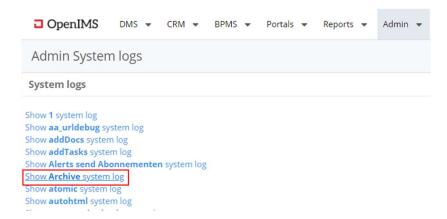


The following properties are added to all archived documents:

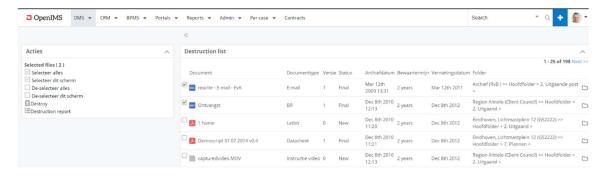
- Archiving date.
- Date of destruction.
- Archive period.

7.3 Archiving Log

An administrator can look up which documents have been archived via a log.



7.4 Destruction Overview



The destruction summary shows all documents with a destruction period and where the destruction date has passed.

7.5 Destruction of Documents

You can destroy the documents that you have checked via the 'Destroy' link.

Please note that after conforming the destruction of the selected document, the documents are destructed and beyond repair.

7.5.1 Adjust Destruction Date

If a document to be destroyed must be retained, an administrator can go to the relevant document and adjust the retention period. The destruction date is then recalculated, causing the relevant document to disappear from the destruction summary.

7.5.2 Destruction Log

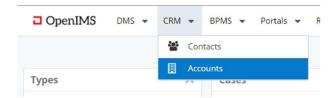
The destruction log allows you to see which documents were destroyed during destruction by an administrator. You can access the destruction log from the system logs overview.

8 INTEGRATION WITH SUGARCRM

The OpenIMS[®] platform is integrated with Sugar (SugarCRM) in which an organization can capture and manage customer information in a standardized fashion.

8.1 Unified User Interface

Much attention has been put into standardizing the OpenIMS® user interface in regard to SugarCRM. As a result, users hardly notice the transition between managing relationship data (CRM) or working on documents (DMS). From within the OpenIMS® DMS you can navigate directly to companies or persons within the Sugar environment.

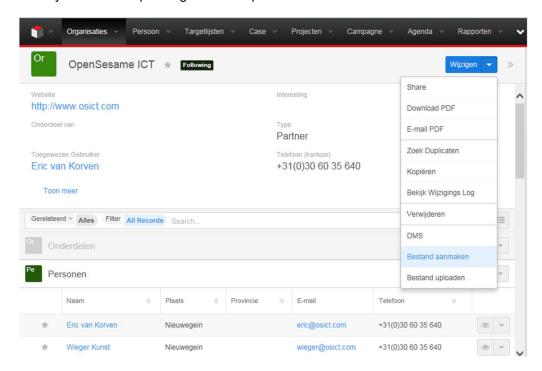


8.2 Adjustable User Interface - Portal

Sugar's portal can be used as a starting point for a user's work. A few standard portlets are available for OpenIMS® and this number can be expanded in consultation with the customer.

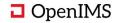
8.3 Navigating between Sugar and OpenIMS® Records

From the relationship you can navigate directly to the relevant DMS record and from the DMS you can navigate directly to the corresponding relationship.

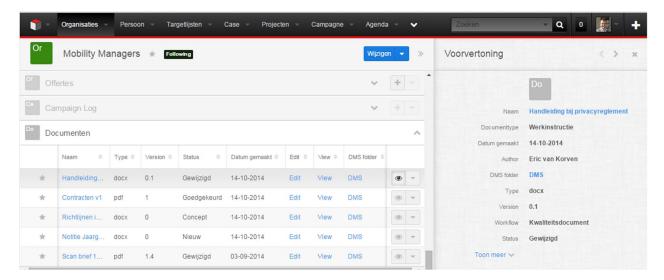


8.3.1 OpenIMS® Documents Module for SugarCRM

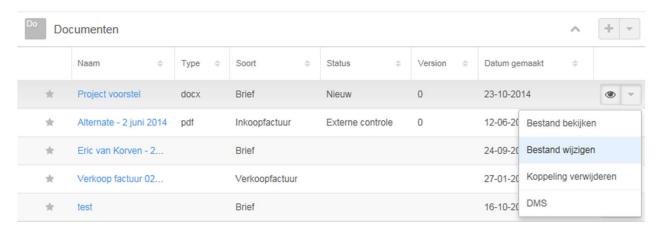
All documents that are linked to a Sugar module such as organizations, contacts, projects, service calls or complaints are also displayed in Sugar.



This creates an integrated platform in which, for example, sales users can carry out all activities related to Sugar and all documents are stored in a structured manner in the DMS.



A user can also edit DMS documents from Sugar or create documents based on standard document templates from OpenIMS®. In addition, there is an upload function available to upload external documents directly to the DMS from Sugar.



8.4 Mail merge (and labels) Microsoft Office and OpenOffice

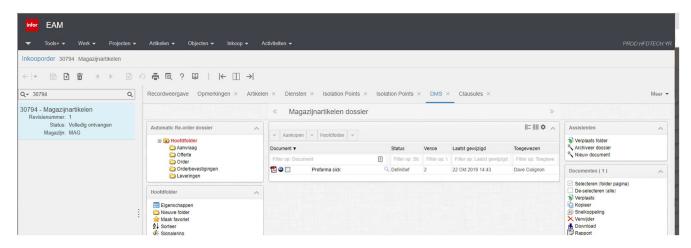
The system of relationships, depending on the version of Sugar, also supports the possibility of creating mail merges or compiling labels. This is possible on the basis of the supplied plug-ins or on the basis of third-party plug-ins.

8.5 Other Systems - Solutions

The OpenIMS® platform has also been successfully linked to systems such as Microsoft Navision, Microsoft CRM, Selligent, .NET Microsoft CRM applications, Baan and SAP.

Some platforms have a rudimentary form of document management. With which the OpenIMS® platform can be seamlessly integrated. Because the OpenIMS® fully web-based platform is an application it may provide a link to the appropriate DMS record or present the DMS record as an embedded application (for example using an iframe). The main advantage is that an employee does not have to open a second application, in order to still be able to view the correct information, within the application with which he already works.

A linked record is shown within the application 'Infor EAM':



Employees can edit data through Infor EAM but also view, retrieve, upload and search for documents.

9 MANAGEMENT OF MANUALS

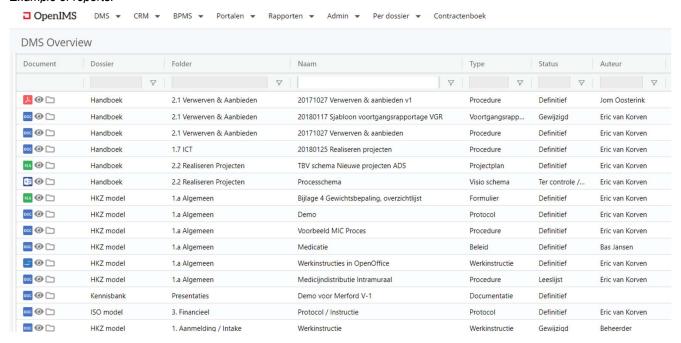
Many organizations work with work instructions, checklists ,sop's and protocols that together form a quality manual, and in some cases even several quality manuals.

Manage

In recent years, dozens of manuals have been set up using the OpenIMS® platform. Maintenance is carried out in the Document Management part and providing access to all interested parties is facilitated through an Intranet or Extranet part. The following standard facilities are available:

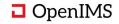
- Working with document templates (with metadata directly in the document, such as expiration date and version)
- Authorization workflow
- Audit Trail / version management (document and metadata)
- Publication of documents (per document and document format, such as PDF) to, for example an Intranet or Extranet
- Full text search function
- Reports for supporting handbook administrators
- · Statement of approval for supporting managers
- Adjustable recall periods
- Establishing document relationships
- Document level properties such as document type, process, department, owner, expiration date
- Adding documents on a reading list

Example of reports:



Many quality systems (including the manual documents) are separated from the internal document management system (DMS). In order to keep everything neatly together, employees who manage the manual often have to update those documents to the DMS, if done systematically correctly. By using the OpenIMS® platform you will prevent that this will diverge.

You can indicate in the DMS which quality document should be used in a specific type or record. When creating a record or status transition within a record, the required (quality) documents are automatically prepared. This prevents employees to work with incorrect and/or outdated versions of documents within records or projects. This could, for example, be a checklist for testing an installation or building a machine. In addition, when creating new documents, the DMS can automatically fill in the project metadata. This prevents all kinds of unnecessary and error-prone actions by users.

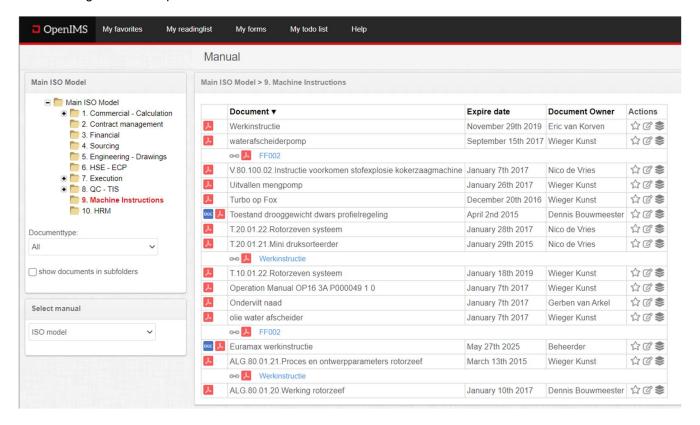


Consult

The consultation environment is completely designed in the corporate identity of the customer, so that it matches seamlessly with, for example, the customers Intranet. The consultation environment only shows the latest approved version.

The consultation environment consists of facilities such as:

- Show the latest approved version of a document
- Full text search engine with search filters and search term suggestion
- Show document relationships
- Provision to create a list of favorites
- View list of favorites
- Reading list with the provision to tick-off documents



10 OPENIMS® CLOUD INFRASTRUCTURE

The cloud infrastructure is set up in the Netherlands. With this, the environment meets, among other things, the requirements of the Dutch government and EU standards.

The cloud infrastructure is multi redundant and located in independent data centers and are technically and legally separated. This makes it possible to achieve reliable high availability with a near real-time fallback environment for optimal service.

ISO certification

The OpenIMS® Cloud infrastructure has ISO/NEN certifications such as ISO 9001, ISO/IEC 27001, ISO 14001 and PCI DDS (Payment Card Industry Data Security Standard), in which sustainability within the data center also plays a major role.

Renewable energy

All data centers are 100% wind energy powered.

11 CONTACT

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