INFO110 Information Systems

Version 2

Spring 2022

Word count: 1833

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Introduction

Background

For our report, we will dive into Omega 365. Omega 365 is a global corporation providing services such as software development, project personnel, engineering & architecture, design & communication and IT consulting. The organization is a well-known international company, which employs over 1600 employees. We will be evaluating the module called Document Control which is a part of the organization's main product Project Information Management System, also called PIMS.

Motivation

We chose this organization mainly because one of the students in this group currently works at Omega 365 as a software developer. He has not only access to a great amount of information systems that could help a lot when evaluating the module Document Control, but also access to many employees at the organization that are very experienced in the field.

The fact that one of us works here is not the only reason for choosing Omega 365. The company itself is very interesting and has been pivotal for many years in the IT department. From complex subsea IT solutions, to day-to-day IT systems used by thousands, Omega 365 has and will keep delivering top tier industry grade solutions for many years to come. The information system we have chosen follows the strict criterias of perfection that Omega 365 uses for their products. Nevertheless, nothing is ever perfect and everything can be improved. Thus, we believe that our evaluation of Document Management will give Omega 365 a valuable insight in how useful the system is for their users.

The information system & our evaluation methods

As mentioned above, we will be evaluating the module Document Control, part of the bigger system PIMS. PIMS is a project management solution, which is mainly sold on a company to

company basis. It is a modular system which means that a company can choose which of the modules it needs for its project management.

We plan to collect our data through dialog with the company itself, approved insider documentation from our contact and collecting open source data online. We will evaluate what value PIMS gives Omega's customers.

About the organization

Omega AS was founded in 1987 as Futura datasenter, which mainly sold computers and other hardware. Shortly after its founding they moved over to software solutions, which is where the early version of PIMS was created. During the shift towards more software driven solutions, the company rebranded to Omega AS in 1991.

After the rebranding the company has mainly been focused on the oil and gas industry, but has also expanded into other fields in the business sector, such as architecture and subsea solutions. Omega started in Ølen, and in 1995 established the headquarters in Ølensvåg, and since its expansion has created several offices in Norway, and others internationally. To list a few, there are offices in Canada, USA, Lithuania and Denmark. Currently they are in the process of a new rebranding, from Omega AS to Omega 365 AS. The two biggest branches of Omega AS are the consulting branch and the software development branch. The software development branch is called Omega Solutions, and is in charge of the development and maintenance of the PIMS technology. The PIMS technology is sold on an 80% basis, where a company hires developers from Omega to customize the software to the company's needs.

External Factors

Since PIMS is customized for each customer, the customer is one of the main external factors for Omega. Having good communication between the developers and the customers is therefore vital. Specifically for document control, having a good system for keeping track of the documents in a project is integral, and can help with efficiency and structure. Typically a customer would also want to customize the module for its specific needs. We have decided to evaluate the document control module, since it is the most popular module in the PIMS solution.

We will give a detailed description of the module, as well as present the results from our different kinds of data collection. From the data collection we will try to figure out what performs well, and what could be improved.

Interests and stakeholders

The interests and stakeholders in the information system are the ones driving the product forward and those able to request a change. We have identified two main direct project interests affecting the information system: the clients and the company. Firstly, the company, or roles such as project managers, developers and testers. These are the ones designing and developing the product. They make the goals and take decisions for the future of the product. Secondly, we have the clients, or the ones actually using the system. They describe the demand and what is desired, so they are able to request a change or addition for their needs. Additionally, they are important due to being the ones receiving the results from Omega 365, and then testing and using it in the production of their own products.

In addition to the direct interests, we have the indirect interests. First, we have the competitors. By having a similar product, they can by implementing more and better features make their version more desired, and hence making clients transfer to other competitors' solutions for their use. The other ones would be the one setting the premises, for example laws and regulations. These are demands the company would have to follow no matter the direct interests. Omega 365 is also following the ISO standard, with more regulations than just GDPR, for extra quality in their products, and hence contribute to a more sustainable future.

It is an important aspect to keep these interests satisfied to have a successful product. All the way from design to execution to results and gain.

The Document Management module

The document management control is an information system where a user can keep track of documents easily in big projects. For instance, document control management can store all

project documents created internally in a company, as well as what is received from external vendors and contractors. The system ensures that all users receive the current version of the documents. It also stores earlier versions of the documents so that users with the right permission can go back and review previous revisions if necessary. Users can also search after specific documents in the project based on ID or file content which makes it easy and efficient for users to navigate to the correct documents. The document control warrants the users to access the project documents over browser or mobile devices and do not require an application.

The system also has a review and approval feature. The system can quickly distribute documents for review or approval. Controllers in the system will easily identify documents that are ready for review and initiate the review process. The reviewer can easily mark areas in the documents and add comment boxes. Document control will identify the reviewed documents and send them back to the originators.

The document management control additionally has a correspondence feature. Document control can track emails, faxes, letters and other types of correspondence and it can easily store emails relevant to the project. The correspondence is searchable which makes it easily accessible for the users. Finally, the document control manager contains a valuable report system that gives key information to document controllers. The controllers receive information about review status, overdue reports, documents delivery plans, document lists and transmittal lists.

The picture below is of a RIS-model which shows the workflow of the Document Management System. The RIS-model we've made mainly focuses on the document creation/review process, while there are as stated above other features to the system, if we were to add each of them it would have made the model too big.
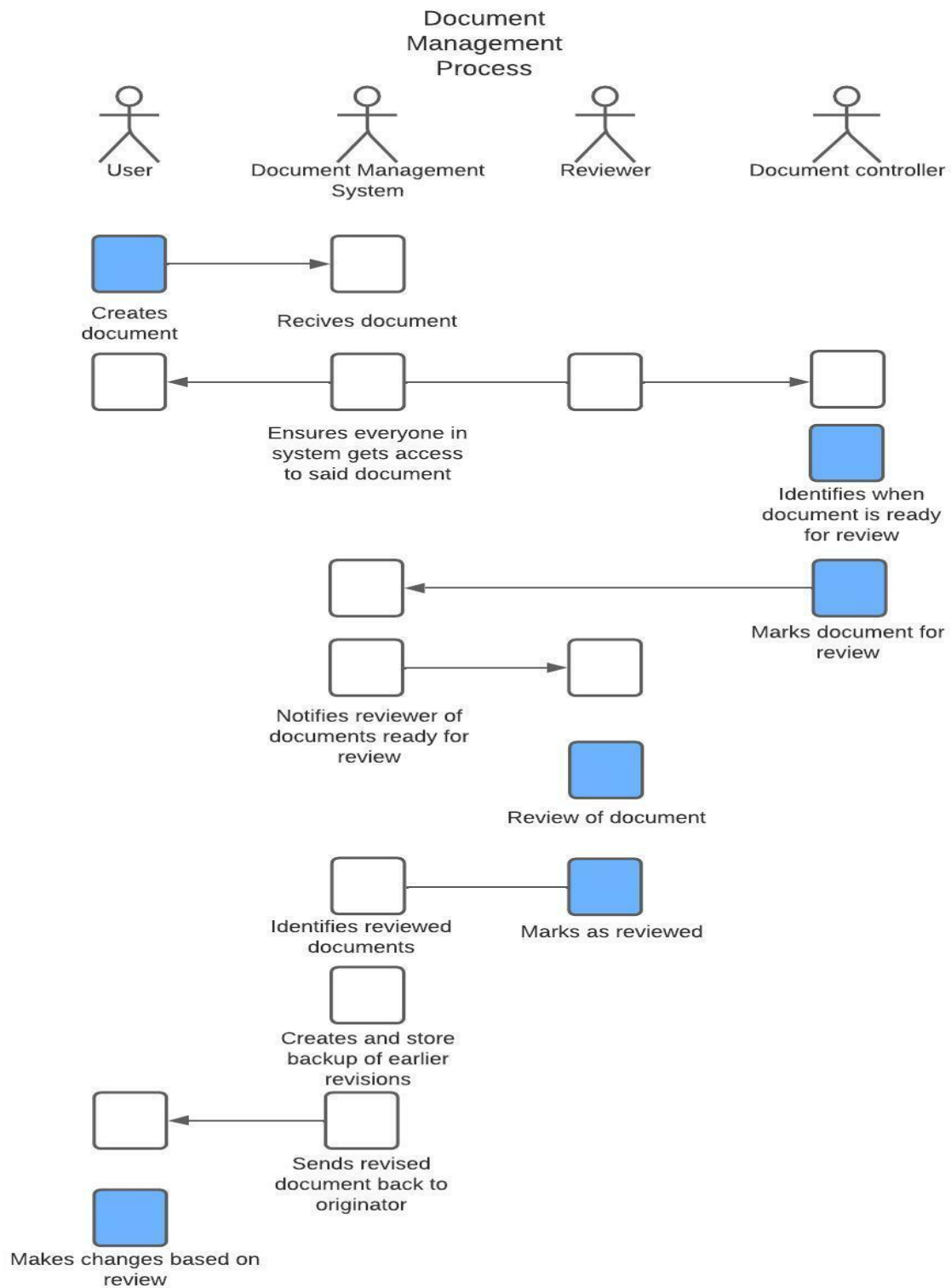
Figure 1: RIS-model diagram of the workflow in the Document Management System

Early stage evaluation and data collection

An important aspect from Rainer, Prince and Cegielski book "Introduction to Information Systems" is how critical the information systems are for the organization's processes. They state that information systems increase how easy and efficient one can communicate and share information concurrently. Their work dives deep into how the technology plays a central role in the three following points: Executing the process, identifying and collecting process data and monitoring the systems performance.

Our plan with the data collection and evaluation is to find out how much value Document Management gives the users of the module, both customers and the developers/employees maintaining it. This gives us multiple aspects we can look at, some of which are: how intuitive and easy to use the application is, does it make certain activities more efficient and does it open up for new ways of conducting business.

Source: Kenneth C. Laudon & Jane P. Laudon (2014), Management Information Systems: Managing the Digital Firm, Thirteenth Edition, Pearson.   22

The data collection will happen in many different ways as we proceed with the project, but we have developed a methodology that leaves us with two main strategies for giving us as much insight as possible about the customer and developer experience, and how satisfied its users are with the system:

To get an inside view of how well the system works and if it is achieving its goals, we will create and hold a closed survey to some of the employees of Omega 365. This will hopefully give us a bigger view of what the most frequent users of the application, the customers and developers, think about the system and what their perception of it is.

Secondly, we will dive into the information system ourselves and do our own data collection and testing certain features using demo accounts. To be more specific, some of the things we plan to

test are how many actions a user needs to perform in order to reach the modules goals, how efficient this solution is and how simple and intuitive the application is to use.

The plan is to first conduct our own testing on the module and then compare our results to the data retrieved from the questionnaire that we will hold for some of the employees of Omega AS. We think that structuring our evaluation of the data in such a way will bring a valuable insight to how well the module is performing, seeing as we will get data from the company itself and the module's most frequent users, but also data from a third party perspective due to our own testing.

In the world of information-systems, one application is never truly finished or deemed perfect. Continuous monitoring, development and assessments will be in place, and hopefully the work that we do here will substitute these operations. By collecting our data using these strategies we will find out if and why the module works as planned, what the best performing aspects of the module is, but also and perhaps most importantly what aspects can be improved. In the following part the data from our data collection, the questionnaire and module testing will be presented and evaluated in an organized manner.

Sources

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