Document Management System – A Way to Digital Transformation

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Document Management System – A Way to Digital Transformation

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Abstract

One of the key activities of any company is the management of documents, which are created on a daily basis. Classic document management cannot follow the needs of the market for companies with a desire to be agile and modern. Therefore, companies need to offer employees a solution that allows them to carefully store and archive documentation, while at the same time giving them enough time to perform their main daily tasks. Electronic management of documents not only influences companies' workflows, savings and adaptions to market needs but also influences their digital transformation. It is also necessary to consider the influences on the environment. The influence of the production and use of paper in daily business has burdened the environment a lot in the past and it is about time that this matter is addressed. Implementation of a document management system (DMS) is now almost a must-have for companies wanting to be competitive in the market and with a desire to digitalise its processes, and is also surely a good step in the right direction for the environment. The aim of this paper is to define the advantages of disadvantages of a DMS as part of companies' digital transformation as well as to provide an overview of the process of implementation and to analyse future trends and predictions in this field. For better understanding, the authors also included some examples of the implementation of a DMS in Slovenian companies.

Introduction

Nowadays companies need to digitalise if they want to remain and compete in the market. So-called 'lean' companies have already looked for in-house processes that are time-consuming and replaced them with digital versions, while at the same time making sure that the process meets all the necessary standards and laws.

Karna (2016) defines a business process as a set of activities with a specific input at the beginning and a result at the end of a process. He further defines the digitalisation of a business process as the conversion of a series of analogue inputs and outputs of a process into electronic or digital and states that a clear vision and a well-defined strategic plan are key to success. In general,

digitalisation means supporting the business process with the help of available information technologies (Toman, 2018). Ensinger et al. (2016) view digitalisation primarily as support for achieving higher efficiency, better profitability and productivity, as well as an aid in reducing operating costs. According to Koščak (2017), digitalisation is intended to eliminate the recurring tasks of employees, thus enabling them to perform tasks that are crucial for the company's operation. Ernst & Young (2021) believes that digitalisation of processes offers new ways and opportunities for companies/banks and thus a competitive advantage over others.

Business information solutions play an important role in digital transformation. Organisations use these solutions to digitalise their business processes and workflows. Among the most important business information solutions that are implemented in companies are (Sternad Zabukovšek et al., 2020): ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), SCM (Supply Chain Management), DMS (Document Management System), BPM (Business Process Management), HRM (Human Resource Management) and MES (Manufacturing Execution System).

Since one of the key activities of any company that is going to digitalise its processes is the management of documents, the authors of this paper decided to describe and analyse the importance of Document Management Systems (DMS). Classic document management cannot follow the needs of the market for companies with a desire to be agile and modern. Therefore, companies need to offer employees a solution that allows them to carefully store and archive documentation, while at the same time giving them enough time to perform their main daily tasks. On the flip side, a DMS is not only a practical software application but also enables the digitalisation of business processes in the first place. This means that companies can benefit from the following: implementation of digital processes, automatation of workflows, enabling of data-driven decisions, a boost in efficiency, increased flexibility and ensuring data and legal security (Easy Software, 2020).

As is common knowledge, the management of documents not only influences in-house company workflows, savings and adaptions to market needs, but also influences the environment (Docxellent, 2019). The influence of paper production and paper use in daily business has burdened the environment a lot in the past and it is about time that this matter is addressed. Implementation of a DMS, which is now almost a must-have for companies wanting to be competitive in the market, is surely a good step in the right direction.

The aim of this article is to define the advantages and disadvantages of a DMS, describe the process of implementation, analyse the critical success factors and to show some examples of the implementation of a DMS in companies. Among the terms that are frequently found and used in existing DMS-related literature are: EDMS (Electronic Document Management System) (Rosa et al., 2019), (Sprague, 1995), Content Management (Jurubescu, 2008), and Document Management Software (Ferrill, 2019).

Theoretical Background

The history of document management dates to the late nineteenth century with the invention of the archive. In 1898, Edwin Grenville Seibels designed a vertical file system. This method remained the main way of storing documents in the business world for most of the 20th century (Biels document management, 2021). Finding specific documents among piles of paper required a lot of time and energy, as well as manual filing among reams of paper. Finding and modifying documents has often meant that employees, managers and business owners are unable to focus on other important tasks. Even worse, however, is the fact that paper documents could be quickly lost in the event on a accident, such as a fire or flood. Most often, however, paper documents were simply stored (Biels document management, 2021). The development of information technology contributed to paper documentation beginning to take an electronic form. In 1980, primitive forms began to evolve into more modern systems with the appearance of document imaging processing (DIP) systems. These were the electronic versions of archive cabinets where documents were stored and indexed. Slightly more advanced systems made it possible to route documents within the organisation. A common example was incoming mail that was scanned and distributed within an organisation (Zebec, 2010). Document management changed dramatically in the 1980s with the increasing availability of computer technology. The development of servers enabled organisations to electronically store documents on centralised computers. This marked the beginning of the DMS. Meanwhile, the invention of scanners made it possible to convert paper documents into digital documents. The rise of personal computers allowed companies to create and store documents on office computers. Together, these developments have fueled the transition from physical to digital document management. However, the distribution of personal computers was very unstructured. Due to network shortcomings, there was no version control, audit trails or security. Better and more powerful DMS were needed (Biels document management, 2021). The first electronic record management system (hereinafter: ERMS) appeared in the 1990s. The vast majority of the systems managed content

indexing. ERMS standards were developed in the mid-1990s, and instructions for Europe were written in MoReq (Model Requirements for the management of electronic records) and IDA (Interchange of Data between Administration). In 2006, the company Serco Consulting, together with various experts, began developing updates to the MoReq2 document, which then replaced the base document. The main problems of the basic MoReq document were that there was no proper tools for maintaining and developing recommendations, as well as for testing software compliance with MoReq requirements (Zebec, 2010). A DMS and an ERMS are interconnected but certainly different. The global ISO 15489 Records management standard was first published in 2001 (Part 1 was revised in 2016). This standard includes the core concepts for records, records system and metadata for records, policies, records control and processes for creating, capturing and managing records (ISO, 2016). The difference between a DMS and an ERMS is that a document can be changed while a record should not be changed. Looking at the DMS, each document can be processed for a longer period of time by multiple users, while the record itself remains unchanged. These days systems can be encountered that are primarily intended for document management with the help of an information system – DMS. The progress of information systems that support the operation of DMS is rapid, constantly evolving and its meaning is gaining in importance.

The term DMS stands for Document Management System, which means a document management information system. Information systems, therefore, monitor documents through all lifecycles from creation to archiving (Hrašovec, 2011). A DMS, therefore, represents an information system that enables the capturing, management and storage of data. The key task of a DMS is to make it user-friendly and enable information to be accessed quickly and efficiently. It also enables a simple flow of documents within the organisation and long-term storage of documentation (Odobašić, 2016).

In general, DMS solutions can be divided into four basic types (Cracraft, 2021):

Basic DMS solution – these solutions are mainly found in small companies. Such solutions are fairly simple to use. They are often only used for file sharing, while some other programmes can be used for protection. A basic solution is not suitable as it lacks the functionality of an audit trail, certification and signing, as well as the history of insights.

Archival DMS solution – these solutions are often found in universities or large libraries, where they are used to store articles. This solution does not allow editing, but they certainly make it easy to search and read articles.

Commercial DMS solution – these solutions are mainly used by companies that have a lot of documentation. Such solutions allow for much better control over documents as well as much more elaborate access to documents.

Industrial DMS solution – these are the most developed solutions. They are mainly used by large companies. The solutions consist of several repositories in conjunction with a company's systems in order to provide sufficiently large databases.

Most organisations are faced with an increasing amount of information – both in paper and electronic form. Organisations understand why digitisation is urgently needed as they find storing it is much more time-consuming if the information is in paper form. They also note that the environment is more secure with the use of a DMS, which is an additional argument for using an electronic form of business (Docxellent, 2019).

A 1998 study on document management carried out by Coopers & Lybrand stated that 90% of documents are mixed, a document gets copied 19 times on average, 7.5% of all documents are often lost, 3% of documents are incorrectly archived, a professional employee spends almost 5-15% of their time reading documents and 50% of their time looking for documents, and an average employee spends 30 minutes to 2 hours a day looking for a document. The President of the Association for Intelligent Information Management (AIIM), John Mancini, has speculated that these numbers have no basis and no ground (Scan123, 2012). Whilst carrying out research for this article the authors found that there are a few studies covering DMS, including present statistics and future predictions.

A DMS offers organisations many advantages, but also some disadvantages. Canteli (2021) summarises the most important advantages:

1. Cost savings – managing big data documents represents a high financial cost for any company. With a DMS, a company can automatically, simply and quickly facilitate the management of certain processes, which significantly reduces costs, such as printing, use of human resources, etc. This can be used for more profitable business processes.
2. Time savings – a DMS allows companies to provide quick access to information without having to go into the office. This is something that is beneficial to all DMS users and frees them up to focus on other activities they need to perform.
3. Improving business processes – a good DMS reduces the number of steps required to perform a process or procedure, which directly contributes to increasing the

agility and efficiency of business processes. Employees are thus able to more quickly find the information or documents they need for their work.

4. Compliance with regulations – ensuring compliance with legal norms and regulations as well as providing updates is essential for all companies. However, fulfiling these obligations can be complicated, especially in organisations that are additionally subject to legal provisions. An appropriate business DMS will support the implementation of the regulatory and legal framework while protecting data and information.
5. Electronic audit trail – one of the consequences of the last financial crisis was an increase in audits – both internal and external – which many companies have to carry out to confirm that all the established norms and laws have been met. A DMS enables the recording of all the steps necessary for the execution of a specific activity within the DMS.

Some other statistics (Finances online, 2021) explain why the use of some features in a DMS are crucial for companies and their employees (the main use is for e-signatures). In the continuation, productivity losses due to manual document management are also shown. The highest risk (92%) is of losing files, while recreating missing documents accounts for 83%, time lost preparing documents stands at 50%, etc. The last chart shows that the top Cloud services requested by employees are: file sharing (80%), communication (40%), social media (38%), content sharing (27%), enterprise content management (20%), IT development (20%), marketing (20%), sales productivity (18%) and business intelligence (16%).

The disadvantages listed below are from the case study of Higl (2011), who points out the following:

1. Initial investment – the very high initial investment is mainly based on the purchase of equipment such as computers, printers, scanners, servers, etc.
2. Staff training costs (for end-users and technical staff) – the training of technical staff and users should be carried out prior to the implementation of a DMS, otherwise it is not possible to successfully start the whole process.
3. System malfunction – in the event of a malfunction of the system, the process can completely stop, thus required the support of technical staff.
4. Improper distribution of work among users – work is very often poorly distributed among users, so there can be a delay in the process, which additionally interrupts the entire work process.
5. Adaptation – a very important challenge in the process of implementing a DMS in a company is adaptation to the existing system. Adaptation represents not only a systemic change but also a change of the company's existing work processes to make the DMS compliant.

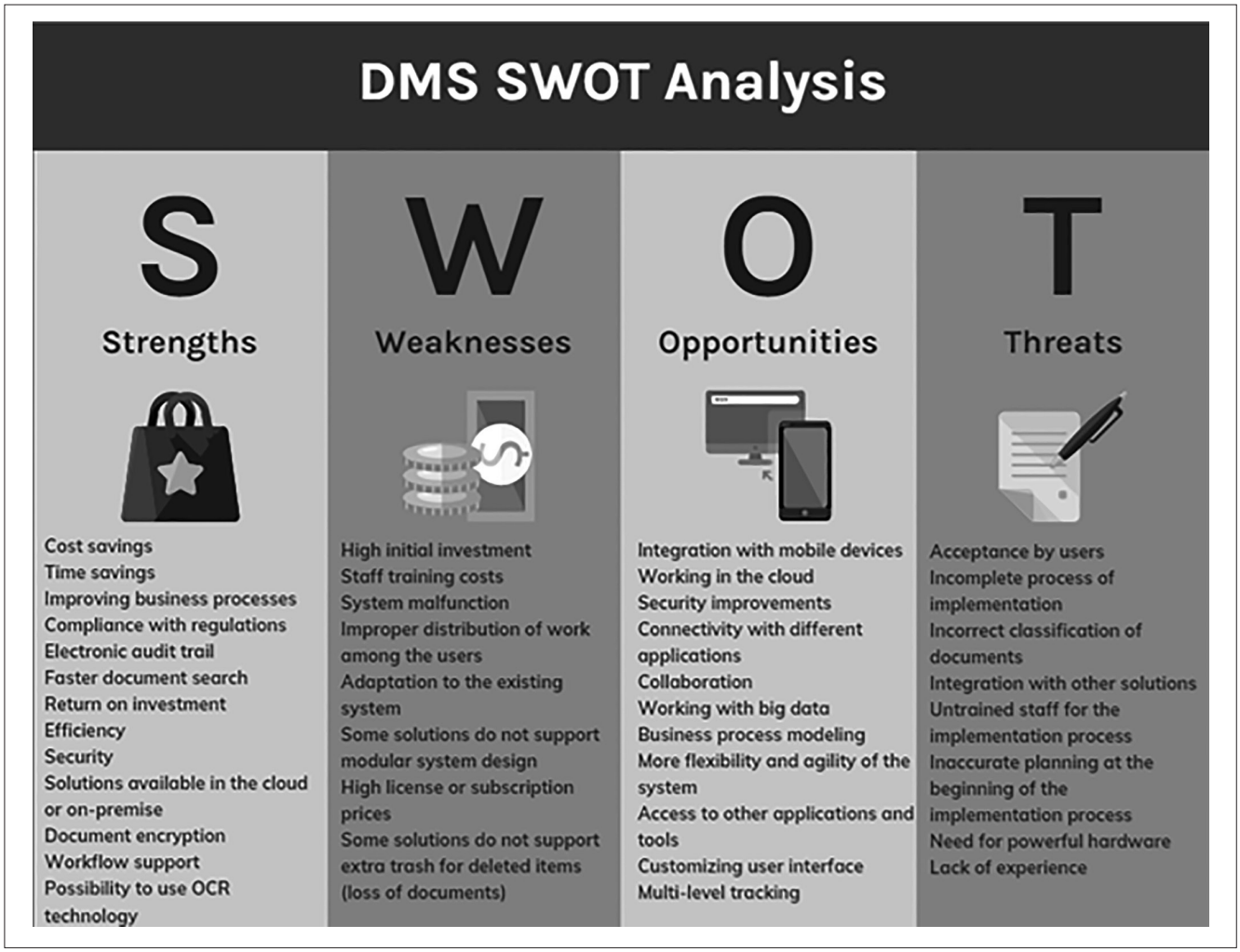
According to the AIIM, 50% of DMS implementations are unsuccessful. While researching the critical failure factors (CFF), the authors of this paper found that not much research has been carried out in this field, or those that have been were performed over 10 years ago. Unsuccessful implementations or failed implementations are often a result of various factors and are explained differently by numerous authors. Fortune & Peters (2005), for example, believe that if the implemented system does not meet the employees' requirements, it is considered a failure. Downing (2006) believes that employees (end users) play an important role and if they are not included from the outset it is more likely that the implementation will fail. Some reasons for this are given by Patel (2010), who believes that there are several critical reasons why implementations fail. These are:

- incomplete process of implementation, which allows only partial use of the system
- users do not want to use the new system with all its functionality, or they do not know how to use it; therefore it is very important that users are involved in the implementation of the system from the outset
- incorrect classification of documents, therefore it is important to harmonise the organisation system and the DMS system
- integration problems in cases where the solutions are incompatible with each other
- solutions are often implemented in stages, meaning the system technology must be modular
- the people performing the integration are not sufficiently trained to work with the new technology
- the process was not properly and fully described during preparation for implementation of the DMS

Many of these disadvantages of a DMS, as well as unsuccessful or partially successful implementations, can be prevented. This can be achieved through sufficient preparation prior to implementation of a system, through early involvement of users in the implementation, by correctly defining the compatibility of the organisation's system with the DMS, with a good project manager and experts in system integration, as well as management support in the implementation of the DMS.

Based on research on the advantages and disadvantages of implementing a DMS in companies as well as the literature review, the authors of this paper carried out a SWOT analysis, which is shown in Figure 1. As can be seen, the SWOT analysis shows the most important strengths, weaknesses,

Figure 1
DMS SWOT analysis



Source: Author's own analysis

opportunities and threats in the process of implementing and adopting a new DMS in an organisation.

Discussion on DMS Implementation Process

The process of digitalisation of business is a very complex area, which includes both a change in the process as such, as well as a change in the thinking of users. If the reciprocity of the two is not ensured, the implementation will not be as successful as it could be.

Implementation of a DMS requires the involvement of many people and a huge amount of time. The keys to the successful implementation of a DMS project are:

- a well and thoughtfully chosen project manager
- correctly selected participants (both internal and external experts)
- the appropriate way of introducing a DMS, as well as the appropriately chosen digitisation strategy

Above all, a project that covers the entire organisation must be well planned. In the beginning, it is necessary to prepare a project launch document, which includes all the key project information, covering (Fajdiga, 2011):

- project starting points
- project organisation
- project timeline by individual phases
- financial plan of the project
- project supervision
- the team that will lead the project
- project supervision

To successfully implement a project, the following basic guidelines should be considered (Raynes, 2002):

- clear definition of the project objective
- the project team must not be too large and must include members with knowledge and experience in all necessary fields
- clear definition of responsible persons
- clearly defined deadlines for project implementation
- clear definition of financial resources
- the project must not be too large (the project must be divided into individual phases)
- the implementation of a DMS must not be outsourced in its entirety, as it does not know the internal system, the needs of the users, the work of the organisation and its culture

Implementing a new DMS in companies is more than just installing software. Not all the users of the new system will be happy to accept the new way of doing business. Therefore, it is very important that the implementation of a DMS comes with support from the top management of the company. Many authors identify different critical success factors (CSF) for DMS or ERPs (Enterprise Resource Planning), some of which are described below.

Beheshti et al. (2014) highlight the 12 most important CSFs of a DMS: top management support, project management, interdepartmental communication, user training and education, clear goals and objectives, change management plan, business process reengineering (BPR), vendor support, use of consultants, minimal ERP customisation, user involvement in evaluation, modification and implementation and organisational culture.

A study conducted by Alshibly et al. (2016) found that 37 factors are critical to the success of DMS implementation, which are grouped into six categories. These CSFs are shown in Table 1.

Table 1
Categorisation of CSFs for DMS implementation

Factor group	CSFs
Technological readiness	Architecture readiness; Infrastructure readiness; Process readiness
Top management support	Top management, leadership, and commitment toward DMS Top management encouragement toward utilisation of DMS Clear mission developed regarding business objectives Top management encouragement toward formal/informal communication Gaining commitment and support of chief executive officers Planning and project management
Training and involvement	Providing employees with adequate information of DMS-related principles through training Adequate training and support for users Employees are trained on DMS job-specific skills Involving DMS end users Management always updating their knowledge Involving all levels within the organisation and external stakeholders Actively encouraging employee participation in DMS-related decisions
Resource availability	Prior existence/development of necessary infrastructure Sufficient financial resources provided to support DMS implementation Human resource availability Technical resources (e.g. software, equipment) are provided Requirement-driven procurement planning
System-related factors	DMS functionality; Effectiveness of DMS; Efficiency of DMS; User-friendliness of DMS; Usability and understandability of output; Integrating systems and technology; Demonstrating benefits; Piloting and testing
Work environment and culture	Policies and guidelines; Communication; Aligning projects with business objectives; Ensuring a project has a clear agenda; Change management; Sharing expertise; A spirit of cooperation and teamwork; Supporting team-based approaches to problem solving

Source: Alshibly et al., 2016

Downing (2006) identifies seven key CSFs for implementing a DMS in an organisation:

1. Make the process transparent
2. Manage user expectations
3. Focus on people
4. Focus on processes
5. Educate people to work with processes
6. Keep sight of the big picture
7. Understand changing communication dynamics

All the authors mentioned the importance of people when implementing a DMS in companies: people in top management, users with their expectations, experience and training, as well as the organisational culture in the company. All of them also highlighted the importance of the functionality of the DMS that is implemented.

It can be said that CSFs have a significant impact on the implementation of a DMS in organisations, mainly because they are key factors in the success of the implementation of a particular process. It is therefore important that CSFs are identified as soon as possible and considered during the process of implementation of a DMS. When performing a search using the keywords 'critical success factors' and 'DMS' through the Scopus database, only eight bibliographic units were found. The authors (Sternad Zabukovšek et al., 2020) only found six bibliographic units when performing a search using the keywords 'digital transformation' and 'DMS'. Therefore it can be concluded that there is a lack of research and articles relating to the field of CSFs as part of the implementation process and of a DMS and as a part of digital transformation.

Below the authors describe the implementation of a DMS in two companies in Slovenia: Post of Slovenia and Telekom Slovenia.

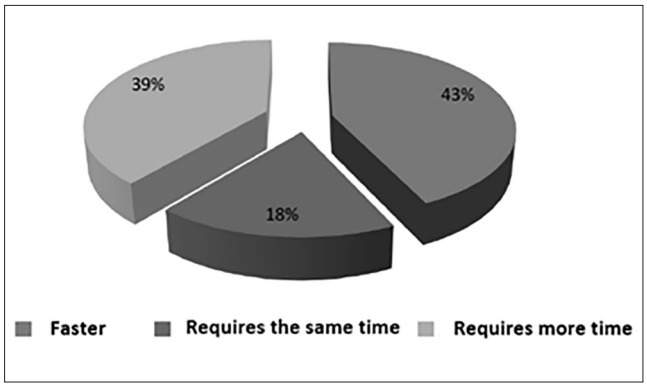
Post of Slovenia

One of the companies in Slovenia that decided to implement a DMS is Post of Slovenia, which opted to implement the Gama System eDocs based on a tender. The management of the company decided to implement the system in three phases. The first phase, which has already been completed, included implementation at the management board of Post of Slovenia, where the majority of documents are generated daily.

Research was carried out to ask the company's employees about their user experience and satisfaction with the use of the new DMS (Hrašovec, 2011). The main findings show that employees are divided in their opinions, as 43% of them believe that the DMS has helped to improve the speed of the preparation of data, while 39% are of the opinion that more time is required. The remaining 18% believe that the preparation of documents requires the same time in both cases (Figure 2). The results may change because the research was carried out shortly after implementation when employees were only just becoming familiar with the system. The analyses show that the process of processing, distributing and managing documents is much faster than the classic way of processing.

Figure 2

Speed of the preparation and distribution of documents in e-form compared to the classic way of working

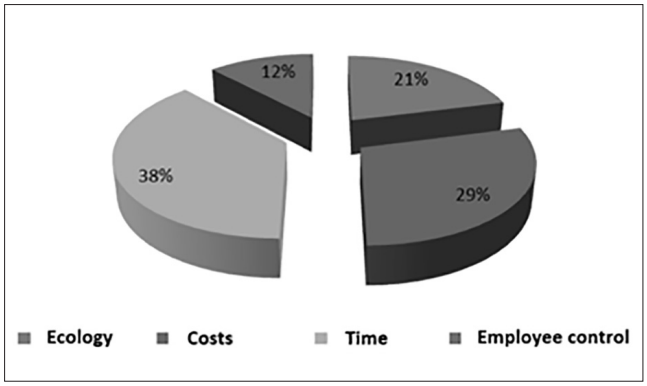


Source: Hrašovec, 2011

One of the survey questions was connected to what area employees expect the most progress following adoption of the new DMS. The results are shown in Figure 3. As can be seen below, 38% of the respondents believe that the DMS will contribute the most in terms of time, 29% believe that it will contribute the most in terms of costs, 21% in the field of ecology, while only 12% believe that the DMS is primarily intended for employee control.

Figure 3

Areas where respondents expect the most progress



Source: Hrašovec, 2011.

The results of the questionnaire showed that employees are very satisfied with the new system, which could be attributed to the fact that the new system, and consequently the new way of working, saves them a lot of time and worry in terms of losing documents and time-consuming searches of archives. Somewhat surprising was the fact that most of the respondents believed that a digitally signed document could be equivalent to a physically signed document. The result could be attributed to the good awareness of the company's employees, who are kept regularly informed by those responsible at the Post of Slovenia (Hrašovec, 2011).

The good practice in Post of Slovenia can also be an incentive for other Slovenian companies that have to deal with a lot of documentation on a daily basis. Introducing a DMS would make everyday work easier for employees, while also saving a lot of time and costs.

Telekom Slovenia

Telekom Slovenia is one of the companies in Slovenia that has been trying to achieve its goal in the field of DMS for more than a decade. The company has a subsidiary for the introduction of paperless operations – Avtenta – which is one of the providers of solutions for the management and implementation of SAP solutions and DMS on the Slovenian market. Telekom Slovenia strives to keep the growing share of documents in electronic form, therefore it uses signatures with a digitally qualified certificate to sign documents and offer users the option of signing documents via a digital tablet. More than 70% of them are also input documents, which, in addition to some other sets of documents related to the main work processes of individual organisational units, are already being digitised. According to data, in 2013 Telekom Slovenia recorded an annual cost of paper consumption of EUR 30,200, two years later it fell to EUR 22,800, while in 2017 the costs were further reduced to EUR 19,200 (Bratanič, 2018).

The successful transition to using a DMS in Telekom Slovenia is also evident from the data in the year 2017 when the company received 33.6% of its invoices in electronic form, which is 4.4 percentage points more than the year before. As the company is constantly trying to send as many signed contracts and other documents as possible to users in electronic form, it also encourages its suppliers to use a DMS (Bratanič, 2018).

It can be concluded that the implementation of any new process in a company is a very demanding task, which needs to be prepared very thoughtfully. Many companies have already implemented a DMS or other document system successfully, however, there are still a lot that did not have a fully successful implementation. The authors of this paper believe that thorough identification of CSFs is an important basis for the successful implementation of a DMS. As the technology of document systems is constantly evolving, the newest trends associated with DMS are described below.

Trends in DMS

In recent years, many new trends have been seen that are associated with the era of digital transformation. The new versions differ from the previous ones, mainly in the new functionalities that are added to the system, which make them even more user-friendly. Digitisation is environmentally friendly – something for which an increasing number of organisations are striving – it provides quick and easy access, a long document life while reducing the organisation's costs and enables users to spend time on more important things in their work. The trends that might be important in the future are: integration with mobile devices, working in the Cloud, security and connectivity with different applications, and collaboration. These trends are explained below.

Integration with mobile devices – for many users, a smartphone is a basic device through which they are able to monitor business events and connect to them. The way of working not only simplifies access to e-mail access but also to other applications that are available to the user. In addition, these days many users are constantly travelling and require constant access to important documents. Therefore, it is becoming increasingly important that DMSs are also accessible from mobile devices (Pan Solutions, 2022). Mobile versions of DMS thus primarily focus on ease of use, which is adapted to the device, and do not offer all of the functionalities of the entire DMS. This usually encompasses the possibility of reviewing, signing documents and communicating with co-workers (Žorž, 2019). The development of new versions of mobile devices will enable the use of the increasing functionality of DMSs on mobile devices.

Working in the Cloud – working in the Cloud is a functionality already used by many organisations and companies. The Cloud ensures constant access to documentation, regardless of whether or not a user is working on their own computer, the only requirement is an internet connection. Use of the Cloud is expected to grow in the future, as organisations will be able to prevent space-related problems and provide integrated and user-friendly solutions (Mirror Review, 2022).

Security – to date, security has been more or less limited to the audit trail, which reports on every activity related to documents and information in a DMS. Additional security can also enable accessible and functional rights to be defined at several levels. Thus, it is possible for certain

groups of users to restrict access to certain documents or to perform certain functions, such as printing, transferring or forwarding documents (Mikroprimar, 2021). Developments in technology and improvements in various systems has also led to an increase in cybercrime, which will require additional security improvements in the future. Providers of various DMS solutions will thus continue to be forced to adapt their solutions not only to comply but also to secure businesses. Nowadays, most DMS providers offer secure solutions, with locked paths along which the entire DMS runs, however, this area will required upgrading as a result of the implementation and use of the Cloud (Vrecl, 2019). The disadvantage, however, is the protection of the whole process when it is redirected to the Cloud or mobile devices.

Connectivity with different applications and collaboration – many different certified interfaces, such as connect to Outlook, connect to SAP, connect to Sharepoint and others, allow users to connect to applications and devices. Thus, data exchange and integration with solutions for accounting, human resources, ERP, CRM and BI are possible for most generally established products (Mikroprimar, 2021). Allowing multiple users to edit the same document is a functionality that will require further development. This so-called collaboration supports many systems, albeit only partially (Vrecl, 2019). Connectivity and collaboration will be also important in the future, as organisations still use many different applications that are currently not connected to interfaces and are used separately. It also appears that due to the trend of working from home and working from different locations, the need for collaboration will continue to grow as organisations strive for even faster ways of working.

The pre- and post-pandemic market is very different, and this will also be the case in the future. Among the expected trends are: smart and AI-enabled processes, machine learning infrastructure and augmented analytics (SoftAge, 2020; Dermody, 2021).

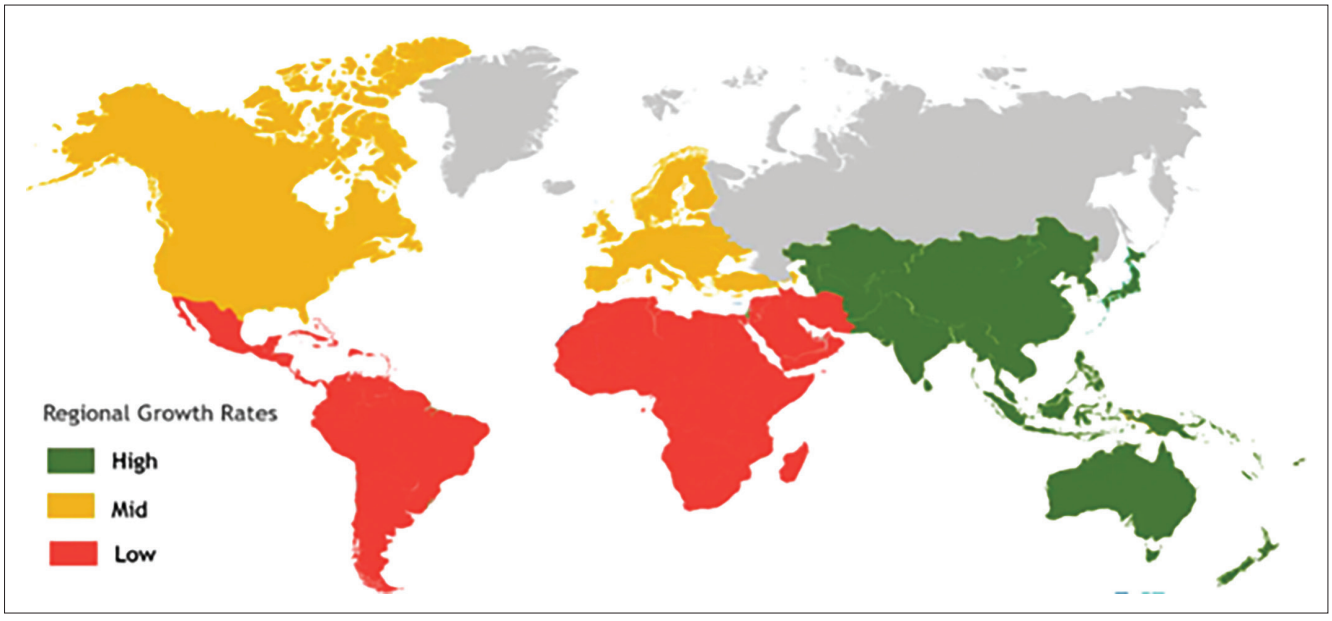
Predictions About Investments in DMS

The global document management system market was valued at USD 5.51 billion in 2020 and is expected to reach USD 11.47 billion by 2026 and grow at a CAGR of 13.05% over the forecast period (2021-2026). The DMS market is ever-changing, driven by the need for increased efficiency in the workplace. The improving technologies and efficient execution of DMS are expected to gradually eliminate the concept of traditional paper files (Mordor Intelligence, 2021).

Figure 4 shows the growth rate of the DMS market by geography. As can be seen, the implementation of a DMS is a priority in Asia-Pacific, where the highest growth was recorded in 2019, when digital onboarding for institutional clients was launched by Citi Bank in Asia-Pacific. The new digital solution helps replace the manual legacy paper-driven and courier-based documentation process and comes off the back of a global documentation rationalisation programme that reduced over 70% of service agreements and forms. number is increasing every year, thereby creating an opportunity for DMS providers to tap into the market (Mordor Intelligence, 2021).

Figure 4

Growth rate of the DMS market by geography (2020-2025)



Source: Mordor Intelligence, 2021

Conclusion

Companies nowadays are increasingly looking to digitally transform their processes, as they have discovered that this is the only way they can be competitive on the market and gain from the benefits of digital transformation, which are: enhanced data collection, stronger resource management, data-driven customer insights, better customer experience, better digital culture with collaboration, increased profits, agility and productivity (Virtru, 2021). Paperless business is crucial for any business these days, not only to reduce costs but also to enable employees to work from different locations, store documents in one place and control access to documentation (Paychex Work, 2015).

The field of DMS is a very broad, yet relatively unexplored, one. The implementation of a DMS allows companies to store documents in one place and systems are user-friendly. The process of implementation requires good preparation, which includes a good strategy as well as the active participation of users (Abdulkadhim et al., 2015).

The authors of this paper first researched the current trends and requirements for digital transformation of companies. They discovered that one part of digital transformation relates to the implementation of different solutions, such as ERP, CRM, DMS, SCM, etc. In this study, the authors focused on DMS, which are defined as systems that monitor documents within companies through all lifecycles from creation to archiving. Therefore, a DMS is an information system that enables the capturing, managing and storing of data. IBM (2022) defines document management as a system or process used to capture, track and store electronic documents such as PDFs, word processing files and digital images of paper-based content. Thereafter they describe four different types of DMS solutions: basic, archival, commercial and industrial. They found that the most important advantages of implementation of a DMS are: cost savings, time savings, improving business processes, compliance with regulations, and electronic audit trail – all of which are divided into measurable and immeasurable advantages. There are, however, also disadvantages such as: initial investment, staff training costs, system malfunction, improper distribution of work among the users, adaptation, etc. Based on the research, in which the advantages and disadvantages of implementing a DMS in companies was described, and based on the reviewed literature, the authors also carried out a SWOT analysis.

In the next part of the study, the authors explained that the process of implementation of a DMS is very complex, while also highlighting the benefits for companies, i.e. a reduction in paper consumption while also reducing the negative impact on the environment. As an example, the authors selected two Slovenian companies that have already implemented a DMS and described the companies' experience. The employees of these companies believe that the DMS will contribute the most in terms of time, costs and in the field of ecology.

The conclusion can therefore be reached that if companies would like to remain competitive in the future they must digitalise their processes, as doing so enable employees to work faster and more efficiently. The most common first step when introducing digitalisation into companies is to eliminate the piles of paper. From the research undertaken, it is evident that the introduction of a paperless business is suitable for any company, however, it is necessary to determine how such a solution will improve the efficiency of business processes. On the flip side, however, they are numerous cases of unsuccessful or partially successful implementations of a DMS in all areas of business information solutions. Since the field of DMS is very current and relatively little research has been carried out to date, the authors of this study believe that the research of CSFs when implementing a DMS would contribute to more successful implementation and use of DMS by organisations and to a reduction in the number of unsuccessful or partially successful implementations.

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Upravljanje dokumentnih sistemov – pot do digitalne preobrazbe

Izvleček

Ena ključnih dejavnosti vsakega podjetja je upravljanje z dokumenti, ki nastajajo vsakodnevno. Klasično upravljanje z dokumenti ne more slediti potrebam trga, če želimo imeti agilno in sodobno podjetje. Zato morajo podjetja zaposlenim ponuditi rešitev, ki jim bo omogočala skrbno shranjevanje in arhiviranje dokumentacije, hkrati pa jim bo dala dovolj časa za opravljanje njihovih tekočih dnevnih nalog. Elektronsko upravljanje dokumentov ne vpliva le na potek dela v podjetjih, varčevanje in prilagajanje potrebam trga, vpliva tudi na digitalno preobrazbo podjetja. Po drugi strani pa lahko rečemo, da vpliva tudi na okolje. Vpliv proizvodnje papirja in uporabe papirja v vsakodnevnem poslovanju je v preteklih letih močno obremenil okolje in skrajni čas je, da nekaj naredimo na tem področju. Uvedba informacijskega sistema za upravljanje z dokumenti (DMS) je zato skorajda nujna v vsakem podjetju in vsekakor korak v pravo smer tudi za okolje, saj tako podjetja digitalizirajo svoje poslovne procese in postanejo konkurenčna na trgu. Namen prispevka je predstaviti proces, uvedbo ter prednosti in slabosti upravljanja DMS kot del digitalne preobrazbe ter analizirati prihodnje trende in napovedi na tem področju. Za boljše razumevanje vključujemo tudi nekaj primerov uvedb DMS v slovenska podjetja.

Ključne besede: upravljanje dokumentnih sistemov (DMS), kritični dejavniki uspeha (KDU), uvedba dokumentnih sistemov, digitalna preobrazba, digitalizacija.