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Enterprise Content Management

A Challenge for Organizational Information Management

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Abstract: Enterprise content management is one of the terms used in the context of management of whole organizational information content in integrated structure, and includes document management, records management, web content and workflow management. This study evaluates the enterprise content management as a new challenge for organizational information management with its scope and components.

Keywords: organizational information; enterprise content management; information management; enterprise information systems

1 SCOPE AND COMPONENTS OF ENTERPRISE CONTENT MANAGEMENT

From past to present, as the indispensable components of social life, enterprises have had the need for information and records systems to perform their services and to ensure their continuum at various levels. Information systems related to administrative and financial affairs, and the systems for the management of personnel affairs and customer relations, in-house and external correspondence, communication, records and archives might be considered in this context.

ECM defines the solutions for the management of structured, semi-structured and unstructured enterprise information, source codes embedded in content and the components of metadata for publishing, storing, distributing and using the existing content for enterprise purposes. The concept has developed with pioneering efforts exerted on in-house information systems and web content management [1]. Figure 1 demonstrates the cycle of integration of structured and unstructured content, which lead the development of ECM approach. As it is seen on the figure, the data created or obtained as a part of the business processes are integrated into the content management system by means of recordkeeping software, and they turn into a cycle with the predefined processes of access, storage, management and capture.

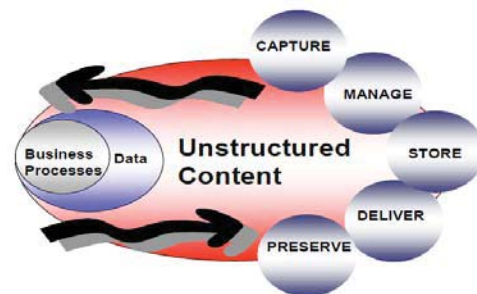


Figure. 1 Integration of Structured and Unstructured Information [2]

The Association for Information and Image Management [3] defines ECM as the incorporation of the technologies for capturing, managing, storing, preserving and delivering the documents or content related to organizational processes. Today, approaches and solutions go beyond “web content management” and evolve into the management of the convergence of all front end applications and tools with the back end records/document management systems and databases. The development of content configuration and exchange standards, particularly of XML, and the technological approaches introduced by the integration of webpages, databases, applications and multiple access tools have facilitated convergence on the organizational scale [4]. The concept of ECM has increasingly gone beyond technological solutions and evolved in such a manner to contain the strategies, tools, processes and skills that are required for the enterprises to manage their information assets in the life cycle [5].

Content management is based on the integration of the information on how to manage a given content with its

existing types and structures as long as necessary [1]. Effective content management requires the provision of necessary data from heterogeneous internal and external sources in different environments, conversion of the file format and creation of an integrated product. Within the scope of content management, controlled editing, review, validation and multichannel information, distribution, updating the release and content, definition of the technical aspects of these applications, completion of the necessary workflow for processing and publishing the content (should include defined policies at every level) are required. The creation of controlled storage areas, which include the definition of back-up conditions, version control and revision history management, is also within the scope of content management applications. The content levels should be defined at various stages for storage. Other issues to be addressed within content management are definition of long-term storage conditions of the information sources in e-archives, disposition and disposal applications and format change [1].

Metadata definitions of the digital content have an extremely important place in ECM applications. The elements of metadata should provide information on the content components and configuration, and the creation, ownership and the prospective features of usage of the content for activating access and reuse. However, serious efforts should be exerted for defining the content sources, which were created in different formats, within a common metadata system. Corporate taxonomy refers to integrating the whole content logically or conceptually. It is required to provide the suitable conditions to enable the users for accessing the content created in line with a certain logic or surfing the content (for example, shared collections/storages should be defined and virtual semantic webs should be created to access the content within enterprise portals) [1].

The infrastructure conditions below, which are particularly enabled by information technologies, are considered significant for ECM applications. Enterprise content has to be defined and integrated within the framework of the life cycle (creation/provision, storage, processing, workflow, long-term archiving of the release and heterogeneous con-

tent and the integration of the processes). These applications include plenty of components ranging from the management of personal e-mails to the definition of business-oriented critical content. In order to manage the content, user-oriented intuitive interfaces that are integrated with “front end” content creation and scanning solutions have to be designed. It is necessary to inspect constantly the content providers, webs and storage tools and to confirm the sufficiency in terms of capacity requirements in the related environment, which contains high amounts of content.

Technological innovations, such as XML for independent content application formats, reduce the dependency on certain content formats and structures determined by dealers, and facilitate content sharing between enterprises. Nevertheless, problems of information security cause grave concerns. For this reason, e.g., technological integrations for user key, electronic signature and management of digital rights, content encryption and secure data networks should be addressed together with content management solutions [1, 6].

The Figure 2 below demonstrates the fundamental components of content management applications.

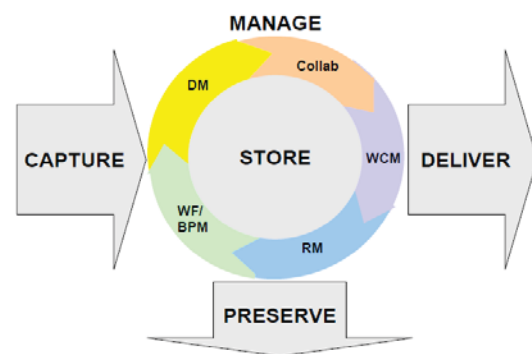


Figure. 2 The 5-Component Model of ECM [2]

As it is seen on the figure 2, content management studies include the integration and delivery of the content obtained through the cooperation between different content servers with the studies of web content management, records management, workflow and business process management, and document management.

2 OPPORTUNITIES PRESENTED BY ENTERPRISE CONTENT MANAGEMENT AND FUTURE EXPECTATIONS

Enterprise content management, bringing an integrated application into the organizational operation, incorporates the applications of records/document management, web content management and digital asset management under a single structure, which were previously carried out individually and separately, and ensures the effective use of the content in line with the organizational objectives. These applications are used by different user groups with different specifications in enterprises. These are generally the users who use the content management system as administrators, or the external users or in-house users of the enterprise content management applications.

Benefits of Enterprise Content Management

- The creation, management, distribution and archiving of the information used in organizational processes via common channels,
- Starting from its creation, the information to be used in organizational operations is managed throughout its life cycle (creation, editing, distribution and archiving) within the enterprise,
- The distribution of the content created within the enterprise to the desired department or the related field and delivery of the right content to the right user are ensured,
- With respect to costs, an economical structure is provided for business processes [7].

Enterprise content management platforms convey the information to a given destination. This destination might as well be a mobile application, a printed brochure or electronic news feed. In addition, enterprise content management solutions may carry out the processes for archiving the content based on automation. This is an important component in terms of enabling the reusability of the content created in enterprises.

The reasons why enterprises tend to prefer content management applications are as follows

- Compliance of the processes created in the enterprise with the standards,
- Efficiency ensured by delivering the right information to the right user at the right time
- Provision of better customer services
- Possibility of effectively archiving the content [7].

By the related market, it is observable that there are many enterprise content management systems and that certain enterprises are taking initiatives for creating content management systems within their own structures. These enterprises are generally aiming at facilitating the processes, such as the delivery, display, printing, creation and provision, management and security, storage, disposition, retention, release and distribution, and customization of their digital content. Moreover, the principal focal point of enterprise content management systems is to enable the provision, storage and release of the digital records for organizational use, and along with these applications, the management of the digital records from their creation until their disposition.

In certain studies, it has been reported that the market of this field and the organizations working on enterprise content management has reached up to a value of 2.3 billion USD for software and 7 billion USD for services in 2007, and that the increase of value from 2006 to late 2007 is 15%. It is also stated that, 60% of 2000 enterprises shall be engaged in standardization of enterprise content management, according to the estimations of late 2006 [7].

3 CONCLUSION

Along with new opportunities, the changing conditions have provided the development of many researches and projects with the threats towards security, authorization, breaches of confidentiality and long-term preservation, and the need for coordinated applications at every level have led to the creation of standards. In spite of the problems encountered therein, the digital environment has a highly powerful attraction. Nevertheless, it is necessary to select the content to be digitalized, to determine the metadata defining areas, and to define other conditions designating the activity within the system. Another

important factor is to decide on the environment, in which the information is to be presented digitally. The limited capacity of the structured formats, which might be considered the priority preference at first glance, brings more hybrid solutions to the fore.

With the increase in and diversification of the use of digital content, the opportunities developed for the interoperability and integration of different systems become one of the most significant factors that pose a threat to the traditional information and records management in enterprises. One of its reasons is the requirement of different knowledge and skills for the creation, provision, release and disposition of the information in new environments. The scope of the ECM applications encompasses the design, management, security and continuity of the systems, which contain customer, personnel, administrative and financial records related to different units of the enterprise and other sources of information and records, web content and e-mails, and the systems enabling the execution of the processes falling into the expertise of the individuals in the same platform from different points.

Seeing that these applications include enterprise information, records and archive management activities, it is going to be impossible to create solutions with the traditional records management and archive approaches in the near future, and the qualified labor force in this field will become increasingly inactive and marginal. Despite these threats, structuring the enterprise information and records management services under the conditions mentioned in this study is going to pave the way for redefining the field as a rising star within management sciences.

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