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Enterprise Content Management in Technical Communication

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Abstract: The goal of this project is to examine how the evolution of Enterprise Content Management (ECM) is helping to shape the role of Technical Communicator. Technical communicators are often at the forefront of Enterprise Content Management, as their job involves the creation, utilization, and distribution of most corporate content. The research conducted for this project examines the impact that Enterprise Content Management, influenced by evolving technology, has had on the expectation associated with the skillset of a technical communicator. Additionally, how technical communicators can grow and expand their skillset to serve as leaders in an ever-evolving industry is explored.

Introduction

The term Enterprise Content Management (ECM) describes the process or strategy used to develop, allocate, archive, discover, and analyze an organizations information for dispensing pertinent content to users on demand. ECM is often accomplished through the utilization of an Enterprise Content Management Systems (ECMS); business software that serves as a collaboration platform. ECMS examples include: G2 Crowd, Quality One, and Gordon Flesh. Microsoft's Office 365 is an ECMS used throughout the world in both corporate and academic organizations. Office 365 encompasses Office Suite (Word, Excel, PowerPoint, OneNote etc.) as well as Exchange (Outlook Email), SharePoint, Yammer, Teams, and OneDrive among many other collaboration applications. Like other ECMS, Office 365 is hosted in the cloud and content can be accessed on demand by multiple devices, including mobile devices.

ECM was a manual process for many years; documentation was created manually and mailed to various locations around the globe (depending on the size of the company) for distributing, processing, and archiving. The ECM technology of the late1980s and early 1990s serve as the foundation for today's ECMS. This foundational technology was made up of functionality such as workflow, document management, and imaging. However, technology companies often focused on one area of ECM software resulting in consumers purchasing multiple products to achieve workflow, document management, and imaging capabilities. This paperless office idea continued to grow through the late 1990s as did the desire for a multifunctional product. Technology companies started to offer a multifunctional technology (workflow, document management, and imaging) called a suite but the products were still relatively standalone, and no integrational compatibility existed. In 2001 the term ECM began to be used by the technology industry to refer to the suite of tools. In the years since

ECMS have continued to evolve and become more interactable; continuously evolving to meet the growing demands of technological advancement in the workplace.

Technical communicators have always played a part in helping corporations, in one form or another, organize content in a way that is both easily accessible and digestible to its end-users. The role of a technical communicator is to develop, edit, distribute, and archive enterprise content. The implementation of ECMS, however, have forced both the field of technical communication and information technology (IT) to evolve. Consequently, ECM is thought of less as a technical communication function and more as an IT function. Because those in IT roles are not often trained in technical communication or end-user collaboration, organizations are encountering a skill gap. This skill gape must be bridged to allow ECMS to achieve their intended value. Tasks associated with ECM are complex processes which require different levels of automation. More complex processes, geared toward specific ECM applications, require a complex skillset, while entry level processes could be a skillset easily acquired on the job.

Technical communicators willing embrace automation and grow their skillset have new career opportunities and are in a unique position to become leaders in the field. Technical communicators must lead the conversation both among themselves and with their employers, around the evolving skillset and expectations that lie ahead for the field (Anderson, 63). Organizations are utilizing collaboration platforms more than ever and the need for ECMS governance, analysis, and standardization is eminent; which is a space where technical communicators excel. Technical communicators need to align themselves with those who drive change to ensure proper arguments are made for the value of technical communicators and skillset they bring to the implementation and sustainability of ECMS.

The research conducted for this paper will be done by drawing on both my professional experience in the field as well as examining scholarly literature written on the subject. This paper will discuss the evolving expectations in technical communication employment, value-add opportunities that technical communicators can contribute to an organization, and the personal development required for technical communicators to grow their skillset.

Evolving Expectations in Technical Communication Employment & Skillset

In the United States traditional technical writing jobs are beginning to be become a thing of the past while the job market outside of the United States is growing. The same trend is also seen in Society of Technical Communicators (STC) memberships. The role of a technical communicator in the United States has started to evolve; companies value solutions, output, and productivity in documentation over language quality. This is a fact that would not have been true twenty years ago. Contract technical communicators are employed to add content into an ECMS; they are hired to complete data entry tasks rather than develop and edit technical documentation. While the output a technical communicator is expected to produce

is evolving, the professionals associated with the industry are also changing; multiple titles that encompass the technical communication skillsets is a clear testament to that fact. Technical communication is no longer thought of a standalone profession; it's at a very delicate place integrating with other roles and responsibilities and aligning itself with evolving advancement is the future of the profession. For technical communicators to progress with the evolving definition of ECM, they need to adapt their skillset to align with the technology used to manage content in today's market.

Many technical communicators do not meet the expectations of hiring managers; technical communicators that do not have the skillset to develop, manage, distribute, or archive information in an ECMS are of little use to an organization. While many technical communicators can be taught the skills needed to successfully operate within an ECMS, companies hiring contract workers do not benefit from the time it takes to train employee. It is beneficial for technical communicators to learn the most popular ECMS application software such as SharePoint to ensure they are employable and able to be of a greater benefit than performing simply data entry tasks. It is also imperative that technical communicators understand how their current skillset fits into the bigger ECM picture to ensure they capitalize on the skillset they already have.

Value Add Opportunities for Technical Communicators

Technical communicators have a skillset that can add value to ECM in the following areas: ECM technology selection, security and compliance policies, content governance, ECM analysis, and unified content strategy.

ECM Technology Selection

Most companies recognize the need to implement an ECMS but selecting a technology to support the needs of an entire organization can prove to be a difficult task. To stay competitive in today's market, companies need to be agile and so does their technology. When choosing an effective ECMS, an organization must consider a technology that can be easily adapted for individual department needs and requirements. Most departments within an organization have the same basic infrastructure and therefore have similar technological needs. According to ECM Technology: What You Need to Know, Jenkins and Schaper write, "ECM as a set of departmental applications is most effective when supported by a common data structure and a combined set of technologies" (5). Companies that purchase agile ECMS that are customizable (forms, logos, content changes, optional add-in, etc.) are able meet most business process needs with a single product. However, there are departments, especially in large corporations, that are not able to utilize a commonly consumed technology thereby requiring a special solution to meet their business needs. In these cases, business explore one of two options: an entirely separate ECMS which meets the needs of the

individual department but is not common to the organization, or a hybrid between the current ECMS and a second system to aid the department in addressing their unique business concerns. For example, while popular ECMS applications like SharePoint can facilitate most of an organizations day-to-day ECM needs, it isn't suitable for storing federally regulated documentation. One solution would be to store and process federally regulated documentation in a separate system; a second solution would be to create a hybrid solution where stored documentation would be fed to the current system during processing. Jenkins and Schaper state, "Typical ECM applications are built to meet the content management needs of a particular department and are driven by a line of business manager with a particular productivity problem. These departmental solutions provide a shoe-in for larger enterprise installations (5)."

Technical communicators have an opportunity to use their skillset to help organizations choose an ECMS technology that will provide a strong foundation for internal business processes. Technical communicators have the unique skillset to understand how end-user experience ultimately drives the requirements for new technology. Additionally, they also understand the important role that effective communication plays in how well a new technology is received. Adding a technical communicator to the team involved in evaluating ECMS technology, can provide a great benefit to the business due to their ability to translate user needs into technological requirements.

There is often a gap between how a future technology is thought to be used and how an end-user actually uses that technology. Businesses employ an enterprise architect to conduct an enterprise analysis (utilizing a standard set of deliverables) to make recommendations about future technologies. However, this analysis is missing end-user case studies. Technical communicators are needed to act as a glue between IT and the end-user. Technical communicators help fill the gap by using their skills to assess (through surveys, interviews, case studies, user cases, etc.) and reveal the gaps between existing ECM strategies and end user utilization practices. Without comprehensive data about their end-users' expectations and information needs, organizations can produce artifacts that fail, even though they are astatically pleasing and read well. Such is the work of our technical communicators. (Dubinsky xi).

As ECMS technology becomes more widely used for day to day business activity the product offering associated with ECMS has also grown. These product offerings have become large in number and boast similar functionality, which is a source of frustration for businesses who are trying to choose the products that will offer the best return on investment. End-users must dictate the ECMS that works best for their needs. Businesses can't rely on product vendors to provide service offerings or risk assessment required to find the best fit for their company. Technical communicators who are able to recognize this gap in the industry have a unique advantage to demonstrate a skillset that is invaluable to the business. Technical communicators must step out of their traditional roles and actively participate in shedding

light on areas where their skillset is needed because it's unlikely the business will make the connection organically.

Security / Compliance Policies

Regardless of the organization, security concerns around ECM are ever present, though the degree to which an organization needs to secure their documentation can vary. Banks, for instance, must adhere to specific federal regulations for federal regulation compliance. For example, in a bank, information combinations such as customer name, address, and any information on a loan application can never be kept in a location where an unauthorized user may be able to access it. Additionally, there are other categories of information combinations that are strictly prohibited by federal law to be stored on commonly utilized ECMS applications, such as SharePoint, because they're not able to meet strict security compliance guidelines. Anderson expands on this issue by stating some argue that compliance regulations are the biggest driver of ECM adoption. Implementation deadlines and audits as well as high-profile prosecutions and litigations have created a 'culture of fear' in organizations" (1). ECM solutions offer organizations a way to control every aspect of the lifecycle of information—how it is created, routed, managed, accessed, and archived—and thus help organizations meet strict compliance regulations." Technical communicators often know how to develop good relationships with their end-users and are often tasked with understand the specifics of internal processes. Leveraging this relationship and understanding can help businesses develop the type of compliance policies that will best serve their organization.

Organizations determine what ECM security and compliance strategy to implement, to ensure its specific business compliance needs met. Trained to create organization out of chaos, technical communicators can be a big help in the ECM security space. Their ability to conduct interviews with SMEs and obtain the necessary requirements needed for the business to make appropriate ECM implementation choices is essential. It may be difficult for individual departments to articulate their business needs due to their lack of familiarity with ECMS. Additionally, it may be difficult for an organization to gain consensus from individual departments on what information should be accessible to specific individuals and/or groups and what information should be available to all employees. When departments fail to reach a consensus, a silo approach to ECM may form. In the article, "Development in Practice: Enterprise Content Management" referenced the following when discussing security and ECM, "While security and privacy are often the first thing to come to mind when access is discussed, many knowledge managers suggest that it is a bigger challenge to encourage people to share" (Smith and McKeen 647-659). Knowledge managers frequently disagree with others in their organization about access. "Our management tends to want to restrict access quite broadly if I'd let them. I always tell them that the default is complete access unless they tell me otherwise" said one focus group manager. Someone must therefore

pay attention to both how and where content should be restricted and shared" (Smith and McKeen 647-659). Then information isn't readily available to those who lawfully need to reference it, a decrease in productivity is usually the unfavorable result. When informed technical communicators serve the essential function of bridging the gap between individual business units as well as bridging the gap between the enterprise and IT, the likelihood of miscommunication is significantly decreased, and successful implementation of an effective ECM security and compliance strategy is an inevitable outcome.

Content Governance

Content governance within an ECM is a crucial but forgotten component of establishing solid ECM within an organization. For an ECM to be effective it must facilitate policy and procedures for the creation and distribution of content across lines of business. While content governance and security are different things, adhering to governance policy and procedures can significantly reduce the risk of security concerns around content stored in an ECMS. Organizations that rollout ECMS without policies and procedures on how that technology should be governed are essentially rolling out technology that will only serve as another place for people to store their content in siloes. Without proper guidelines, the implementation of an ineffective ECMS is inevitable.

The creation and implementation of governance policies as part of an ECM strategy provides a place for a technical communicator to exercise their expertise. Every enterprise is different and therefore the creation and implementation of governance for its data is unique. The opportunity for technical communicator to provide guidance in this space is great. Governance around user permissions, naming conventions, metadata, search capabilities and standards, document retention policies, etc. are areas that can easily fall under the umbrella of technical communication. Technical communicators have an opportunity to educate companies on the importance of enterprise wide governance strategies and the pitfalls that are encountered when departments attempt to create governance guidelines for themselves. Smith states, "The benefits of content management can … be fully realized only as part of an overall knowledge management strategy. Any attempt to implement it in isolation is likely to produce a very poor return on investment" (647-659).

Technical communicators can also help organizations define the roles and responsibilities that will be required to effectively operate within their organizations ECM strategy. Enterprise roles and responsibilities vary based upon organization needs and requirements, but most organizations have the same basic needs. The Smith and McKeen article defines these roles and responsibilities as workflow management, access management, technical support, content standards and templates, EMD strategy, and communication. This documentation is often displayed in technical documentation such as workflow and business process flows distributed throughout an organization (647-659).

ECM Analysis

The analysis of ECM is imperative to enabling the business to understand what documentation they have and how they use it. A good enterprise analysis ensures the ECMS and implementation approach chosen is the most suitable for their organization. Jenkins and Schaper explain, "In order for companies to succeed they need to make use of the information and content that exists within and around their organization. For ECM to be widely adopted, they need to emulate the way people work without disturbing their daily routine. This involves creating a digital place where people can work in much the same way they worked together in departments or at office locations" (4). There seems to be a consensus among sources that for an ECM to be effective in any organization it must not change the way people work so drastically that they will need to modify a large percentage of their daily routine. Businesses need to understand how their employees conduct their daily routines at both the department and enterprise level to ensure the big picture is considered in all aspects of the ECM decision making process. "ECM as a part of a departmental application is effective when supported by a common data structure and combined set of technologies. In other words, each departmental application typically requires the same basic technologies and infrastructure but has a specific set of needs that are unique to that line of business. ECM systems that can easily adapt to meet a departments unique set of needs, while maintain a common data model, are inherently more flexible and future proof. Implementing ECM applications on a common data model, results in lower total cost of ownership and faster implementation, leading to greater productivity and higher returns on technology investment" (Jenkins and Schaper 5).

As so many people are choosing flexible or alternative work arrangements, it is more important than ever for an employer to understand how their employees work. People no longer need to be in the office to ask a peer a quick question; they can do this over Skype. A lot of people have traded in the "water cooler" conversations for Yammer or other types of company social collaboration platform. Those face-to-face conversation can still happen they just happen over the internet instead of in the conference room. As the flexible work or alternative work arraignment is preferred among millennials, the fastest growing population in the work force, it is important that a company's technologies meet the demands of its driving workforce. ECM platforms (servers that sit on company property) that exist will need to be replaced with cloud-based computing or a hybrid solution, allowing employees on demand access to information from various remote location. Every company is different and therefore their needs and capabilities are different, that is why proper ECM analysis is vital to ensure the business is able to make the technological choices that are right for them.

Technical communicators are often in the trenches with ECM data, this affords them a great opportunity to talk to end-users and enterprise architects about how data is used and accessed in today's business processes and the options for the best approaching moving forward. As

Skype, Email, IM, and other collaboration applications are part of ECM it makes sense that informed technical communicator, who a charged with understanding user experience, would be able to advise enterprise architects and those charged with ECM on how users currently interact with ECM capabilities and how they might best utilize them in the future.

Unified Content Strategy

One the biggest themes as you may imagine from a book titled, Managing Enterprise Content: A Unified Content Strategy, authored by Ann Rockley and Charles Cooper, is that organizations must have a strategic approach to ECM, i.e. enterprise content management strategy. The failure to implement a unified content strategy could be harmful to a company due to the fact that the individual departments within an organization historically work in silos. Without a proper unified content strategy each department is free to layout their own approach to content organization, distribution, communication, etc., which often leads to a duplication of work throughout an organization. According to Rockley and Cooper, "When walls are erected within an organization vital information is hidden from all the areas that need it. Poor communication is evident when one group fails to inform another that something has changed, that something exists, that something is wrong, or that something has been discontinued. Poor communication can exist within a group or department." Additionally, when organization fails to implement a unified content strategy enterprise wide changes are often addressed using a silo approach, meaning that each department of the organization will come up with their own strategy for addressing the same change. Duplication of work occurs throughout the organization wasting valuable company time and resources. Rockley and Cooper address this issue by stating, "The content silo trap prevents organizations from collaborating in significant ways. If each group solves its problem independently and all initiatives come to fruition they likely result in incompatible technology solutions, disparate process changes, and increased cost. In addition, one group may be forced to use a product or implement a process that's inappropriate for their purposes" (Ch. 1). In the article Development in Practice VIII: Enterprise Content Management authors Smith and McKeen, echo that thought by saying, "The knowledge management function itself arose as a result of organizations' growing awareness that information technology without good information management practices will not be effective. It is therefore knowledge management's job to help develop an overall ECM strategy that will ensure these practices are in place and effectively integrated with technology where appropriate" (647).

Technical communicators who chose to increase their skillset to include ECMS, can help companies create a unified strategy whether they are there from the conception of the ECMS initiative or years after the fact. Many companies that have implemented ECMS do so without a thoughtful strategy; essentially, they did not conduct a good ECM analysis before

they come up with their approach strategy for the technology they chose. The number one deciding factor when it comes to technology with most companies is budget. Unfortunately, when a company allows their budget to dictate their technology choices they often spend a lot of money on technology that the end-user will not use. Technical communicators are eliciting information, analyzing that information, and determining an approach strategy almost every time they develop a new document or document policy. Technical communicators understand that the end-user is the driving force behind any process or procedures adoption and utilization. Companies that leverage an informed technical communicators ability to assess the needs of the end-user can implement an ECMS that will be of the most benefit to the enterprise.

Personal Development in ECM

Technical communicators have an amazing opportunity, in ECM platforms, to become leaders in the field in multiple ways. However, technical communicators can't provide their core skillset in areas like ECM analysis and strategy unless they develop a skillset that will give them a strong working knowledge of an ECMS. Just as there are multiple mediums within mainstream social media, there are also multiple applications that comprise ECMS which a technical communicator can become a subject matter expert (SME) in to build upon their skillset. Office 365 has several applications that require varying degrees of proficiency; some of the most widely used applications include: Exchange (Outlook Mail), SharePoint, Yammer, Teams, OneDrive and MS Office Suite. It is imperative that a technical communicator become familiar with the applications that are most commonly utilized within an ECMS (preferably the most popular on the market or the that is utilized in the organization where they are employed), and understand how they are utilized within an organization, and how the applications are interactable with one another. This skillset will lay the foundation for all collaboration within an organization. Some organizations will choose to use a single ECMS, while others may choose to use a single platform with multiple "add on" applications. It is imperative that a technical communicator become familiar with the most popular ECMS and associated applications to ensure they are able to meet the requirements associated open positions in the field.

Formal Certifications

A foundational skillset can be learned by taking various certification courses and exams, often offered on a vendor's website (Ex: https://www.microsoft.com/en-us/learning/mcsa-office365-certification.aspx). Certifications often have layers that require pre-requisite courses and can often be time consuming and expensive. Additionally, it is imperative that a technical communicator understand which courses or certifications will work best for them to

ensure they are able to build on their unique skillset and satisfy their career aspirations. According to an interview, it was discovered that some users felt the certifications they obtained in SharePoint (Microsoft Office 365 application) did little to nothing to prepare them for the skillset needed to perform their day to day task in the application (SharePoint Super User Group Survey). Many ECMS are highly customizable and therefore are unique to each organization. While tasks such as uploading, editing, and deleting documents are consistent across all SharePoint applications, the processes, procedures, and interfaces are unique (customizable) to each individual organization. Most organizations create ECM processes and procedures internally to compensate for this deficit.

Professional Training Online

Independent websites (Lynda.com and Pluralsight.com) provide affordable training on ECMS at multiple levels. It can be beneficial for some technical communicators to use this method to educate themselves because it allows on-demand training that can be tailored to the most pressing educational need. They are also overview modules available to allow technical communicators to quickly gain an overarching view of ECMS. The only drawback to these resources is that training for the latest versions are not always readily available and the subscriber is at the publishers' mercy in terms of content. While costly, this can be solved, by holding subscriptions to multiple websites, ensuring a larger range of content is available when needed.

Research and Findings

The secondary research I chose for this topic primarily consisted of focus groups, surveys, and forums as method for conducting content on the subject. I conducted minimal primary research for the paper, a single interview, and heavily drew upon my personal experience. I was careful to select texts that were written over the last twenty years to ensure a current industrial snapshot. There isn't a lot of conflicting data and/or dialogue written on the topic because the foundation for the information rests upon industry and technological trends. A large percentage of the information centered on the same basic theme and provide the same basic output. It would have been interesting to see some analysis around those who didn't like using ECMS or more content around common pitfalls users and organizations face when implementing an ECMS and how to address those issue. Unbiased feedback can be difficult for researcher to collect because employees can be timid about providing negative feedback against their place of employment and much of the non-scholarly literature on this topic consists of rhetoric that is produced by service providers and product owners. However,

independent review websites, forums, and blogs lend end-users an avenue to access products and give their opinion on what they think of the evolution of ECM in their organization as well as how common ECMS are being utilized within their company without fear of penalty.

As expectations around communication and communication platforms have evolved the technical communicator must also evolve. While it is true that the core skillsets of a technical communicator remain the same, the way those skillsets are utilized have changed. Imagine a manager, in the compliance department, who refused to see that the world was changing, not necessarily what is done but how it is done and would make every excuse possible to justify their inability to embrace new processes and procedures. Everyday this manager would go into Outlook and print their calendar for the day, taking several pieces of paper to accomplish the task. They would then walk around with multiple papers in hand running here and there trying to get to the right meeting in the right location. The managers led a compliance team; team members were required to create and edit many policy and procedure documents on a regular basis. The manager, set in their ways, never allowed employees to bring laptops to meetings; instead they were required to print multiple copies of documents for meetings that would then be marked in pen and taken back to individual computers for editing. In the processes using several pieces of paper and essentially commandeered the copy machine from the rest of the floor. Although the core skillset, the ability to create and edit documentation for the end-user was the same, the way in which the documentation was created and edited was different. This managers discomfort with change inadvertently caused the entire group to work harder than what otherwise would have been necessary.

When a technical communicator embraces changes and looks at technology as a value-add to their skillset, this can not only have positive consequences for both the technical communication team but also for the users. In terms of technology, imagine a manager in complete opposition to the manager mentioned above. This manager worked for the same company (same technology available) and had the same amount of paperwork associated with the job. This manager knew the future of the company was within the technological investments the company made to streamline their internal process, therefore providing better customer services to their clients. This manager was able to utilize an employee that was once a member of the previous manager's team and capitalize on the knowledge that employee had in an ECMS. In a years' time that employee was able to automate several internal processes. Processes that essentially consisted of papers being delivered from one desk to another, taking several days to processes, where now delivered to their inbox via email. This allowed days to be shaved off the overall processes, which in turn increased customers overall satisfaction.

My findings conclude that technical communicators that choose to grow and expand their skillset in ECM can serve as leaders in the industry. It is imperative that technical communicators take it upon themselves to take on demand training and set professional development goals for themselves. According to my research, technical communicators who are willing to develop their skills in the areas of ECM in relations to products, security and

compliance, governance, strategies and analysis can only benefit both themselves and the practice. It is also important that technical communicators continue to capitalize on their core skillset and elicit and analyze information in a way that is most beneficial for them and their employer. Employees may be cautious about giving their honest options to researchers, but they may be more comfortable giving them to a technical communicator who is interested in helping an organization move forward. As technology changes, the way people use technology also changes, which is why it important that technical communicators understand the user experience, which technologies are being used and how they are being used. This puts technical communicators in a great position to help users think of ways to expand on current technology and help companies to truly understand how internal technology is contributing to their narrative.

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