SharePoint Transition: From an Isolated Hierarchical Network Structure to a Collaborative Web-Based Repository Environment

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ABSTRACT

Documents findability, file duplication and redundancy, versioning issues, lack of structure standardization, non-standard file/folder naming conventions, limited information categories, and reduced security are problems that affect companies with hierarchical network folder structures. The main causes of these problem are the limited collaboration and the lack of governance on the isolated network folders by the different user types that generate and consume digital media content. The migration to a web-based collaborative platform was studied and deployed in an effort to increase productivity, collaboration, and knowledge sharing between internal and external teams and groups. It was found that by considering the existing information architecture, implementing a governance procedure, training users and involving the intended end user when developing sites plan structures, a transition to SharePoint can be effective and possible.

INTRODUCTION

Despite technology proliferation and how technology advancements simplify, improve, and automate many life aspects and tasks, there are situations were uncontrolled use of technology causes poor performance. For instance, the transition from the ink-paper world to the digitalization world brought great benefits to businesses on storage footprint reduction, documents management and documents protection. However, moving forward with that digitalization, considering only the case were different user types in a company generate digital media content on shared network folders, the lack of governance and limited collaboration has brought innumerable issues that are aggravated when a company deals with a vast network repository of files and folders. Some of these includes, but are not limited to, documents findability, file duplication and redundancy, versioning issues, lack of structure standardization, non-standard file and folder naming conventions, limited information categories, and reduced security.

This paper studies and deploys a transition from a shared network drive storage system to a web-based collaborative environment using SharePoint based on proven methods and techniques to improve the enterprise team localize management system by: increase collaboration for real-time documents editions, increase media content security, and increase productivity by faster media indexing searching of documents.

LITERATURE REVIEW

Whether it is a personal computer, a small business, or a large enterprise, digital media content generation is a fact in today's technology driven world. The content generation process carried out by diverse individuals using the file server structure brings a series of challenges to large enterprises such as: limited findability, limited security, lack of collaboration, and uncontrolled documentation. This has increase the need to find effective solutions to deal with those challenges. One of those solution is the transition of the hierarchical folder structure to a web-based environment using SharePoint. The following review of literature lists the major aspect to consider when migrating to a web-based environment using SharePoint, discusses the benefits and best practices of transitioning to SharePoint, and concludes listing factors requiring avoidance and further attention when contemplating a transition to SharePoint.

Information architecture (IA) has been recognized as a term applicable to the practice of making easier product functionality and findability to reduce and minimize user efforts on executed tasks. As far as a decade ago, "it was found that the information architecture behind a SharePoint deployment have impact on user experience and site management and that IA decisions and tasks must be part of a SharePoint project plan to avoid two main aspects: users having the struggle to find relevant business content such as spreadsheets, presentations, and documents and users having cumbersome tasks when dealing with the organizational taxonomy presented when transitioning from file servers to SharePoint" [1]. Similarly, "a solid information architecture is crucial pre-requisite for site development and deployment performance" [2]. Some of the information planning factors that must be considered are: "business objectives and organizational structure, type of content, content classification and confidentiality, content life-cycle, users of content, their behaviors, common tasks, and expectations to have a good foundation on information architecture" [2]. Therefore, having in place a well-planned IA system is necessary to take advantage of the benefits of SharePoint when transition to it.

Most of the non-academia sites on the world wide web advertise and claim that SharePoint provides unmatched collaboration, better productivity, enhanced security, among others benefits. Recently, it was confirmed that "SharePoint implementation in a retail environment enables collaboration and knowledge sharing efficiency, provides a great benefit on managing project content and documents for the retailer by allowing teams to collect data faster than before, and to disseminate and build reports enabling collaboration" [3]. Additionally, "SharePoint enhances productivity and business functions by cutting down content creation and content delivery time" [3]. Furthermore, "SharePoint provides the means to overcome disorganization of resources, inability to track versions, inefficient sharing of information, and the difficulty to track progress and keep interest members on the same page regarding information content when dealing with online dissertations of students" [4]. As noted, SharePoint without a doubt presents and serves to overcome several hindering factors on productivity, collaboration, and content generation. However, knowing the benefits is of no good if a SharePoint transition or migration cannot be implemented in the best possible way.

A variety of specific practices, solutions, and frameworks have been suggested to address the best possible way to perform a migration to SharePoint. For instance, "planning and analysis of the following aspects: Inventory and Audit (information architecture and taxonomy), preparation of information, architecture plan for SharePoint customizations and Integration, and migration test plan with pre-migration and post-migration checklists are the key elements to a successful SharePoint migration" [5]. In addition, applying a "Smart Content Framework with the six building blocks: metadata, insight, governance, policy, privacy, and enterprise and web of lifecycle management allows to reframe information as an asset, establish standards, and mitigate risk associated with managing content assets" [6]. Furthermore, the "development a formal strategy that addresses seven key components: purpose, governance, people and objectives, requirements and analysis, information architecture, technology, and maintenance and enhancement, will streamline business processes when setting up SharePoint [7]. Regardless of the specific best practices, solutions or frameworks employed, there are some topics that are not covered or addressed using the aforementioned techniques that must be considered when transitioning to SharePoint.

Globalization and the fast-paced technological environment has pushed many enterprises to adapt technological advancements and solutions for the mere of trends. The enterprise behavior of approaching technology first when deploying SharePoint products is "haphazard and confusing mainly because the end user is not familiarized with the functionalities and structure of the system such as: standard practices in information architecture, content management, absence of ownership, findability, taxonomy and metadata" [7]. Also, if implementing a transition to SharePoint, the end-user and his involvement in the system transition must be taken in consideration. For example, when completing a transition to SharePoint at least "two type of trainings to the end-user are needed to solidify its application. These trainings are basic SharePoint navigation and Advanced SharePoint for the development of SharePoint sites" [4]. The generation of digital media content by individuals, regardless the environment type, is a continual process that imposes challenges on the same content. Fortunately, transitioning the origination of content to SharePoint, as reflected by the literature review, can bring unmeasurable benefits if the project manager uses proven best practices, solutions, frameworks, and considers information architecture, end-user trainings, and real purpose of the migration.

METHODOLOGY

This section will discuss the methods applied to study and deploy the transition from a network-based storage system to a SharePoint Platform. The literature review of SharePoint-based migrations consisted of studying the benefits, the best practices, tools, and factors to transition effectively to a SharePoint web-based platform. The literature review provided the necessary insights to maintain the project planning and execution on the optimal success route by influencing key developmental decisions.

To reach project completion the project was divided in four phases: proposal, initiation, development, and closing. During the proposal phase an overview of the project was presented including aspects such as: goal, objectives, deliverables, schedules, business impact, and success criteria. During the initiation phase a Holacracy project team was built to avoid the traditional hierarchical management structure and give team members increase autonomy and self-sustaining capabilities.

Teams were organized by functional areas where meeting discussions were centralized on solving members' issues rather than leaders'. Following project development on phase 3, a customized Kanban Board tools was implemented to track project tasks and progress. The tool distributed and tracked the workload of tasks based on four categories: To Do, Work In Progress (WIP), Development (DEV), and Completed. Figure 1 shows the customized Kanban Board that was implemented.
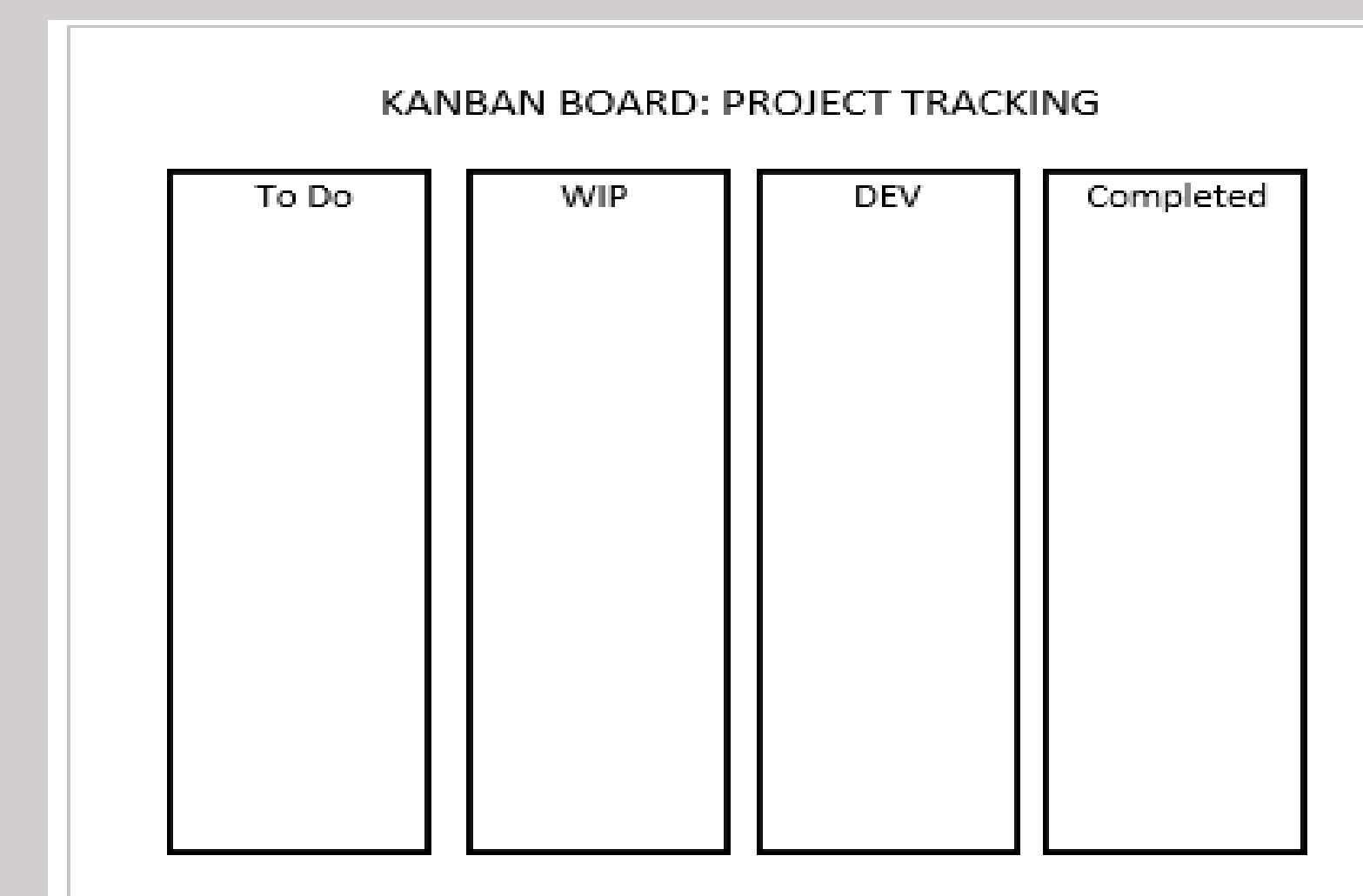
KANBAN BOARD: PROJECT TRACKING

| To Do | WIP | DEV | Completed |

Figure 1: Customized Kanban Board for Project Tracking

The Agile methodology was applied on phase 3 of the project to the development of the SharePoint sites requirements, sites plan structures, and sites contents. The main intent of applying Agile was, that even though SharePoint is not a heavy-coding based platform, team member could delivery high quality deliverables aligned to end user needs and company goals. Agile was used due to the limited project completion time frame and the need to value collaboration, team interactions over comprehensive documentation and detailed design sites plan. Two iterations were performed to find optimal sites requirements, sites structure plan, and sites contents with end user involvement. Some of the end users' specified requirements were: site shall have document versioning management, site shall provide a space for collaboration, site shall include shareable calendar for internal and external team communications, site shall be divided into functional sectional groups, site shall custom security rules and permissions based on user type and media content type, and site shall show all related product documentation in one page for easy content navigation. Furthermore, the current network content was analyzed and information owners were identified to clean, segregate, and prioritize information based on security and use need. During the closing phase, phase 4, the project deliverables were delivered, and project related documentation and evaluation was performed.

RESULTS AND DISCUSSION

From the study of the SharePoint migrations through the literate review it was found that three aspects are required to successfully transition to a SharePoint Platform. The first aspect is to have an information architecture in place that considers product functionality and findability to reduce burden on end user when using the platform. Also, it was found that the IA system must include aspects aligned to business objectives, media content type, and users' behaviors. Moreover, it was found that a governance procedure is a must to have document when transitioning to SharePoint. In this case, the project manager had a turning point on the execution of the project because before the literature review a governance procedure was not in the scope of the project. The governance procedure is a key document needed before deploying SharePoint sites to lay down the principles and controls for using the web-based platform. Without the governance procedure the web-based platform will suffer the same pitfall of uncontrolled technology use and its purpose will not be served. The governance procedure specifies the roles and responsibilities for different user types, defines terminologies, defines and explains the components of the web-based platform, describes permissions levels and additional security details when managing media content and user types. Also, the governance procedure defines interactions and user limits.

Finally, the last finding during the study of SharePoint migrations is that user training is essential for a successful transition. Users need to be train on the basics concepts of the platform and receive advance training if user will be a site owner, which is the individual building and editing the site From the deployment of the SharePoint Sites while applying the Agile Methodology it was confirmed and validated the importance of the end user in the development process. End-user involvement during the iteration processes was key to define site requirements, sites plan structure based on non-transitioned content, and sites content. The site plan structure refers to what the user envision, intent, and expect the site to provide them on a daily basis. Also, after defining the site plan structure, which is a group of templates, the end user engagement was key to understand what site content was needed to fill the different sections of the site plan structure and based on that content how the custom-made security rules and permission were going to be applied. Table 1 summarizes the key findings of the project.

Table 1 Project Key Findings for SharePoint Successful Transition

Finding #	Finding Description	Weight Importance
1	Information Architecture	25%
2	Governance Procedure	25%
3	User Training	20%
4	End-User Dev Involvement	20%

CONCLUSION

This project paper outlined the study, deployment, and methods applied to transition a network-based storage structure to a collaborative web-based environment using SharePoint. This with the aim of increasing collaboration, productivity, knowledge sharing, and security by reducing common pitfalls on network-based system such as: inability to find documents easily, duplicate files, versioning problems, limited security, among others. The major findings occurred during the planning and execution phase of project where it was found that an effective SharePoint transition is achieve if project manager consider the following aspects: information architecture platform, governance policy, user training, and end user vision and perspective for deployed sites. The most insightful takeaway from the execution of the project is that project managers must consider every project as a research project and set aside time to review literature based on the topic of interest.

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