THE ROADMAP FOR USING SHAREPOINT TO ENHANCE ORGANIZATION AND MANAGEMENT FUNCTIONS: HEALTHCARE ORGANIZATION—CASE STUDY

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1. INTRODUCTION

In healthcare organizations, handle a massive amount of data effectively and efficiently will have an implication on the decision-making process and knowledge transfer management. Absence or inefficient technological solutions can cause multiple problems at all levels, starting with losing data, repeating processes that consume time, low quality, poor communication among team members especially in remote locations, low accountability and in some cases fluctuating overall performance. In addition to, Work routines such as collecting signatures or approval from designated executives can be a long process, especially in a bureaucracy organization, that interpenetrates a lot of mistakes, incorrect versioning control as an example. Documents versioning control should provide a guideline on how to add numbers, dates, and name to the documents while keeping the substantive changes. This seems hard when team members will work on a massive amount of documents. Information technologies allow team members to access the right information at the right time without errors occurred. Eventually, lead to a constant level of confidence in information from all parties.

Several studies have confirmed that Enterprise Content Management (ECM) particularly is a powerful management tool designed to manage information better [6,8,9,10]. Enterprise Content Management (ECM) were defined by the Association for Information and Image Management (AIIM) as “it is a dynamic combination of strategies, methods, and tools used to capture, manage, store, preserve, and deliver information supporting key organizational processes through its entire lifecycle” [16]. From the definition we can identify the main key elements of ECM which are:

1) save data
2) find information and
3) deliver information. For any organization it is critical to fulfilled these key elements while managing the changing procedures, reforming structures and dealing with continues growing of structured-unstructured data.

The optimum utilization of data usually requires powerful information solutions that will support the decision making, transfer the knowledge and improve the overall performance. Enterprise Content Management (ECM) is a powerful management tool designed to manage information better. Microsoft SharePoint, in particular, can solve multiple problems, start with losing data, repeated processes that consume time, low quality, poor communication among team members especially in remote locations, low accountability and in some cases fluctuating overall performance.

OBJECTIVES: To provide an empirical roadmap for utilizing SharePoint for data capturing, saving (categorizing, finding), data manipulating, and information delivering.

METHODS: Data was collected from multiple sources including an online survey and phone interviews, as a preliminary phase. then, a model presented by researchers to demonstrate real activities, relationships, and performance.

RESULTS: a road map proposed to utilize the available features of SharePoint. The case study has focused on three (3) major features: 1) Document Management and 2) SharePoint Workflow, and 3) Business Intelligence (Status Indicator KPIs list and Dashboards).

CONCLUSION: Enterprise Content Management representative by SharePoint can promote the healthcare administration activities to some extent, and to move forward the collaboration and accountability work environment.

Keywords: Enterprise Content Management, SharePoint, Administrative Policy and Procedure (APP), Organization Chart, Key Performance Indicators, Workflow, Business Intelligence.

2. STUDY DESIGN

2.1 Study Settings:

In a local healthcare organization, located in more than five geographical locations, capacity in total more than 1500 bed, and more than 4000 employees, the existing organizational structure is highly centralized, a functional structure for most of the departments [7,11]. A medium size unit (20+ employees) in which tackling the...
organization and management (OM) activities overall the organization. (OM) activities may include developing and maintaining the Administrative Policies and Procedures (APPs), additional to organizational structure and charts approval. Therefore, managing documents, providing instance reports, coordinating with other departments in remote locations in the organization and communicating effectively with the team members are the main daily activities.

2.2 Methods:
The current study is a case study performed based on data collected from multiple sources. Data were collected through online survey and interviews with key workers in the organization to explore current situation and identify the future needs. Another source of data was the opinions of SharePoint professionals and users at similar organizations. Finally, a model presented by researchers to demonstrate real (OM) activities, relationships, and performance.

Interview conducted by phone (for remote locations) and face to face interviews. The semi-structured interview was mainly conducted with the managerial level or/and departments representatives due to their involvement in the development of their department Org. charts and APPs.

First, as a preliminary step, we started to map the current process in nominated department Organization and Management Department (OandM), we use basic flowchart and cross-functional diagram (Microsoft Office Visio) to highlighted the main drawbacks and areas for desired improvements. By further several interviews one-by-one with the policy and planning specialists (internal customers), we were able to visualize the required updates and linked them to available features. Secondly, we assess the existing engagement (collaboration), efficiency and effectiveness of the (OM) services by surveying representatives and their perception toward automating the services. The Online Survey (close and Open-ended) by using Monkey Survey to measure the following dimensions:

a. Measure the whole organization engagement (collaboration) in creation/revision of APPs/Org.Charts.

b. Measure the APPs/Org.Charts effectiveness in providing appropriate services to all organizational departments.

c. Measure the efficiency of APPs/Org.Charts services on providing services in a timely manner.

d. Measure the overall satisfaction on OM services with regard to APPs/Org.Charts.

In all dimensions, respondents are asked to rate their responses in Likert response categories ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). This allowed us to collect responses not only in each category but also the average rate for each item. The overall rate for each dimension; the higher the scores, the greater the satisfaction of respondents surveyed over one hundred and eleven (111) employees regarding their satisfaction and suggestions on APPs/Org.Charts processes. The respondents who participated in the survey represented a wide variety of occupations experiences and from all the branches (locations).

Knowing that the pilot testing of the survey was conducted on 13 January 2016 to collect feedback on whether the survey's wording and clarity were apparent to all respondents. The modified survey was then distributed by email with daily follow-up for those who didn’t respond. By the end of 27 February 2016, the response rate was eighty-one percent (81%). Internal consistency (Cronbach's alpha) showed a score equal to 0.96, which is considered high.

3. RESULTS:

3.1 Results from the online survey:
Results show overall rate of satisfaction equal to seventy-one percent (71%). This indicates that there is an opportunity for improvement in the current process. Considering the comparison between the process dimensions, efficiency had the lowest rated among other dimensions for both APPs and Org.Charts, while the Org.Charts process is slightly more effective than APPs as per respondents' opinion. Most of the respondents’ comments were emphasized on the importance of assessing the compliance to APPs. Variation among the organization branches been commented on strongly by respondents as they report differences in settings, titles, processes for one function which lead to non-compliance or ineffective APPs/Org.Charts. Some of the respondents find the APPs confusing due to mismatched flowcharts and procedures in APPs and outdated APPs/Org.Charts that had been still used by the departments in other branches. All the previous points constitute a challenge and a waste of effort for all team members.

However, an efficiency which implies the time consumed to process and finalize APPs/Org.Charts have been scored sequentially (29%–20%) as disagreement. Hence, all respondents who disagreed have commented on the long time taken to process and approve both APPs and Org.Charts. Some of them suggested sending the APPs/Org.Charts electronically to other branches during the reviewing and approval stages, other finds seven (7) days is enough for the related department to review and provide feedback on an APP while another find three (3) weeks is enough to review an Org.Charts. Eighty-six percent (86%) of respondents supported the APPs/Org.Charts automation, in conjunction with the Digital Signature, which will increase the effectiveness and efficiency tremendously.

3.2 Proposed Solution
All the previous problems can push the top management to search on the feasibility of (ECM) solutions to
solve the previous problems and to boost the new strategy in the organization before things worsen. It is an effective way to manage the data while in several studies and project managements theories, they asserted on the importance of identifying the actual needs of the organization and measuring the receptivity team members or customers to use the technologies, knowing that it will increase the transparency and accountability [4, 15]. Microsoft SharePoint is known as a feasible (ECM) solution that provides a number of features and more flexibility in customization.

Upon prior, a road map proposed to utilize the available features of SharePoint for a real (OM) model. The case study has focused on three (3) major features: 1) Document Management and 2) SharePoint Workflow and 3) Business Intelligence (Status Indicator KPIs list and Dashboards).

3.2.1. Document Management:

SharePoint serves as a portal to organize, share and maintain documents. It provides a documentation management in a form of Online Library System. The potential uses of libraries are to provide electronic collaboration among the team and improve communication. The implementation of portal SharePoint for managing documents is the first step toward electronic collaboration among different departments. Besides, give team members an alternative and simple way to enable them to add, delete or modify their documents electronically and remotely [4, 12].

The implementation of SharePoint could start with creating document libraries. The portal is a bridge to deliver documents for users in an effective way as follows [5, 14]:

- Store, Manage and Track electronic documents in a secure manner.
- Easy search and fast retrieval of documents.
- The versioning feature is available to control documents effectively.
- Meta-data associated with a document which could be one or more attribute. It is described as data about data that provide an effective way to locate files, share, and grouping [3].
- Essential permissions will be provided to the users which known as access control.
- Create an alert and send an email when an item is added, modified or deleted.
- Direct link to the specific document is available.
- Create reminder to specific users on specific dates (ex. to review document).

The (OM) unit will ensure that each department in the organization has a folder/subfolder created and categorized by the branch. For APPs/Org.Charts, the following documents can be stored for further use by all (OM) team members:

- Approved Org.Chart
- Related APPs documents
- Department’s vision, mission, goals, and objectives
- Department’s main functions
- Department’s Business plan
- Approved Manpower plan and budgetary approvals

3.2.2. SharePoint Workflow

The SharePoint workflow is one of the valuable SharePoint features that mainly aim to routes a document to one or more designated executives for their signature, approval, and feedback. It can track the current status of routine procedures, and it could be customized or created from the scratch to match the exact need of the users. The flexibility of SharePoint workflow makes it beneficial for who works in coordination, follow-up, and dissemination among several users. SharePoint workflow can proactively monitor its self, this means the tracking, forwarding, and notification actions done automatically [14]. While the stream of the workflow is running, we can monitor the progress and make modifications. Some steps could be handled in parallel or serial [2, 15]. SharePoint - version 2010 - provides at least five (5) pre-programmed workflow types. The process owner can add a version of the workflow template for a list, library or the site collections, while termination option of the workflow is obtainable. The process owner can initiate specific options to the workflow versions as who workflow assign tasks to, deadline, instructions, and notifications [1, 14].

In the standard process for Org.Charts development and maintenance, the routing of a single document - for revision, approval, and signature - in parallel and sequential steps, results in shortcoming in productivity and efficiency. For more details, a stream of incoming documents is handled one at a time by the process owner, each document will be revised and directed - unlimited number of times- to the originate department for feedback and approval. Then, streams of documents will be routing between designated executives for signature before returned to the process owner again. Finally, the documents will be disseminated according to a certain agreed protocol in the organization (Figure 1: Organizational Charts Development and Maintenance). SharePoint workflows can be utilized to simplify the standard process regarding the feedback, approval, and signature routines. First, Minor customization on SharePoint Workflow versions will be applied to include more options like instructions and notifications, followed by the permissions settings to the team members. The supervisory level can monitor the workflows to check if satisfactory or needed more modifications. The same procedures can be applied to the APPs process, where the streams of documents regularly routed to different designated departments and executives for revision, feedback, approval and finally signature.
As well a series of actions will be taken to disseminate the APP to the whole organization based on the organizational protocol.

### 3.2.3. Business Intelligence (Status Indicator KPIs list and Dashboards)

Integrated business intelligence tools in SharePoint such as the dashboard, scorecard, and reporting, will...
fulfill the critical information requirement and provide single centralized portal, with personalized views. Dashboards is a powerful tool to display performance information through the Key Performance Indicators (KPIs) and server-based lists. Calculating, integrating and displaying KPIs in single view make them more indicative [4, 13].

In the existing case study, the key performance indicators have been identified for both functions (APPs, Org.Charts) with the consideration of the fact that all documents must be revised and approved every two (2) years. Accordingly, two (2) web part pages created and the following KPIs status information have been set, mostly calculated automatically and few are fixed value submitted by the owner, as some of the Org.Charts KPIs (Table 1: KPIs Status for Org.Charts). Then, simple dashboard created based on the indicator status web part pages that visualize the critical indicators for APPs and Org.Charts separately.

4. CONCLUSION

Some of the healthcare organizations in Saudi Arabia are suffering from ineffective documents management systems which are based on paper works and poor communication. Enterprise Content Management representative by SharePoint can promote the activities to some extent, and move forward to the collaboration and accountability work environment at the same time. It’s been known that SharePoint is not a new solution, but certainly, it’s more advanced than the traditional approaches. SharePoint provides an opportunity to enhance daily activities and to make the best use of available resources for decision making. In the current case study, a road map proposed by the researchers to achieve the desired situation for the management. More data analysis is needed to measure the improvements or the impact of the SharePoint implementation on the key performance indicators (KPIs) and whether the SharePoint has successfully attracted the attention to the most important activities and increases the team satisfaction.

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