



# Creating guidance on information management for a software development company

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**Creating guidance on information  
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Mikko Niskanen  
Business Information Technology  
Bachelor's Thesis  
May, 2019

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Year	2019	Pages	38
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The objective of this thesis was to create a new guidance on information management for a software development company, based in Helsinki. The guidance is meant to support the new information management systems that the company has started to use. The material will enforce new ways of working. It will also give step by step tutorials for the employees on how to use the new systems.

The knowledge base for this thesis includes sections on information classification, user centric design and the tools used in the development. The implementation part of this thesis was divided to two main parts: design and development. In the first phase was designed the content and layout of the guidance material. The material included workflows of the new systems. The prototype application demonstrated step-by-step the efficient way of using the new systems. The graphs will provide visuality.

The outcome for this thesis was that all the guidance material was created, and the workflows and graphs were implemented in the official documentation. The prototype application was terminated and never taken into the use since the company decided to start developing a larger learning management system.

Keywords: Sharepoint, information management, user guidance

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## 1 Introduction

Transferring from old information management system to a new one can be a technical challenge as its own for companies and organizations but on top of that the employees and end-users bring in their own challenges. The change resistance inside the organization can be rough and to mitigate this, companies need to have good communication about the change as well as good guidance material for the new systems.

This thesis was done for a software development company that produces software for consumers and businesses and offers consulting services for businesses. The company is based in Finland with many offices around the world. For this thesis the company decided to stay anonymous and will be referred from now on as software company or just company.

The company's organizational structure has multiple business units which all have their own responsibilities in the company which oversee a specific field. Since the company has chosen to stay anonymous for this thesis the organization structure will not be revealed but the major business units are presented as in some parts of this the business units will be mentioned. The business units are: HR, IT, B2B, B2C, R&D and Finance.

### 1.1 Project Background

The company handles a lot of data and information and information management is a crucial part of operations. Information is spread across different information storage systems, each having its own purpose and classification. In the beginning of fall 2017 the company started moving towards a cloud environment and new cloud storages systems were taken into use which are meant to replace old on-premise storages.

Software company is using Sharepoint for its new cloud storage systems. Sharepoint is a web-based service where users can create websites which can be used for storing, accessing information, sharing and collaboration (Microsoft 2018). Sharepoint was chosen for the cloud storage since it fits to the company's existing Office 365 infrastructure and provides easy access from almost any device.

In the fall of 2017, the company launched Sharepoint as their next information storage solution which would eventually replace the old storages with the intention of fully integrating to Sharepoint by the end of 2017. However, the background research on the employee's (from now on referred to as the users) capability to take this new system into use had not been done and training and guidance materials on the new systems were minimal, which lead to confusion and it was discovered that the overall readiness to move to Sharepoint was low. Based on the failed launch of the new systems the company decided to run a project that would find out how much do the users know about the new systems and in what areas they

would need more guidance and training, as well as run intensive workshops for the users in where they will receive training on the new systems.

The idea for this thesis started out as the company needed more help and resources on the project and the incoming workshops. With the workshops the users will gain a deeper insight to the new systems and they will be able to share the information to all the new employees in the future, which will lead to the users teaching each other, rather than IT department having the responsibility of training every new employee in the Company.

The company wanted to produce visual guidance that would explain new processes in Sharepoint rather than traditional documentation. The decision was to create different workflows and graphs for these processes. These workflows and graphs will be used as a part of workshops in the company and they can also be easily adopted to future materials if the need arises. Workflows and graphs were also found out to be a good way to visualise how things work and it will help the users to see the bigger picture with more ease.

## 1.2 Baseline for design & development

To gain a deeper insight on exactly how data is handled inside the company, a survey was conducted with the intention to gain knowledge how do users save data, how much do they know about the new systems and in what area they need training. One of the key objectives of the survey was also to gather information on how much time is lost in the company while handling data with the old systems. Additionally, the company conducted interviews with the users to get more personal views from individuals from different business units.

## 1.3 Objectives and performance indicators

The objective of this thesis is to create guidance for the company's Sharepoint environment, how it works and how to use it properly and securely. The first objective of this thesis is to create a workflows and graphs for different components of Sharepoint. The first workflow will depict the site creation process in Sharepoint. This will give insight on how to create sites, how to identify where to store confidential data correctly and how Sharepoint is structured in the company. The second workflow will depict on a precise level how the permissions are handled in Sharepoint and how the users can share the sites content. The graphs will depict how does Sharepoint differ from the older storage systems and give an easier look on permission management in Sharepoint. The second objective is to create a prototype tool, based on the Sharepoint site creation workflow. The idea is to build a prototype of an application that will ask the users to identify their data and use case after which the application will print out the most suitable place for that data. The prototype will also serve as a test to the

workflow's adaptability since the prototype will follow the logic of the site creation workflow and it is a good way to see if the workflow can be implemented in the future as well.

One of the objectives of this thesis is also to have performance indicators which can be used to measure if the provided guidance has been enough for the employees. This is done by measuring how much of the old and new storage systems and comparing how much data is stored on both. The guidance can be considered successful if the used space on the new storages has increased and the used space on the old storage has either decreased or stayed the same. The first measurement was done in April of 2018 and the second in October 2018 giving the users a decent amount of time to migrate their data to the new systems.

## 2 Knowledge base and Information classification policy

Knowledge base for this thesis will cover the most important theoretical topics of this thesis and their relations to the client and the produced work. Topics that this knowledge base will cover are information security and classification, Sharepoint and how the client has utilized it, tools used in the development work and theory about user centric design.

Information classification can be described as a process in which information is evaluated based on its risk and while also considering its legal/regulatory compliance (Peltier 2013, 300). While in this thesis information classification is not the main focus it is important to understand the policies used at Company since it is relevant to the company's Sharepoint structure.

For this thesis the classification categories will be referred according to the following example by Peltier (2013, 303):

“Top secret - information that, if disclosed, could cause severe effects on the company's competitive advantage or business strategies. Confidential - information that, if disclosed could violate the privacy of individuals, reduce competitive advantage, or damage the company. Restricted - information that is available to a specific subset of the employee population when conducting company business. Internal use - information that is intended for use by all employees when conducting company business. Public - information that has been made available to the public through authorized company channels”.

Since the company has four classification categories, we will be using the Top Secret, Restricted, Internal use and Public categories provided in the example by Peltier.

### 2.1 Sharepoint structure

For this thesis it is important to understand the Sharepoint structure and site structure that the company has. They are using two different Sharepoint products for their cloud storage environment, Sharepoint Server and Sharepoint online.

Sharepoint Online is a cloud-based service which is hosted by Microsoft and as it is hosted in the cloud it does not require any special hardware installations or deployments. Sharepoint Online can be added to an existing Office 365 subscription plan or it can also be bought as a standalone service (Microsoft, 2018).

Sharepoint Server is product which allows organizations and companies to deploy and manage their own Sharepoint server on-premises and includes all the features as Sharepoint online (Microsoft, 2018). Major difference to the online version, apart from the data location, is that Sharepoint Server needs to be updated and maintained by the company itself.

Both Sharepoint Online and Server environments in the company are divided into 3 main site categories:

#### SHAREPOINT STRUCTURE

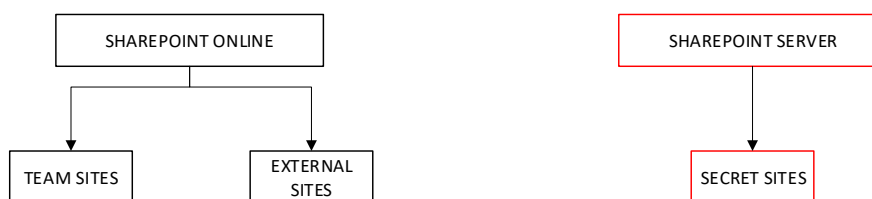


Figure 1: Company's Sharepoint structure

In Sharepoint online the company has created a site structure that is formed in a way that there are two site collections under which individual sites are created. One is for internal sites, such as team sites and projects while the other site collection is meant for sharing information with external parties. The online site collections are used to store only information which meets the restricted classification category and if there is a need to store more sensitive data on the online sites it must be encrypted with a strong password.

Sharepoint server is the on-premise solution used to store top-secret information. Personal sites are a category where every user can create their own personal site where they will have a limited space for personal sensitive data, while the secret sites site collection is used for sites that are accessible by certain groups such as teams or project groups.

## 2.2 Visio

The workflows will be built using Microsoft's Visio program. Visio is a diagram and flowchart application which lets the users build different diagrams and flowcharts such as organization charts, floor plans, engineering designs etc. and it is part of the Microsoft Office family. Visio



comes with a variety of built in shapes and templates which makes building flowcharts easy and fast, while still having a lot of customisation options. Visio also comes with the Visio online which gives the option for multiple users to collaborate on the same flowchart making it easier for all stakeholders to share their insights. (Microsoft 2018.)

While there are other flowchart programs available, Visio was chosen since it already existed in the company's catalogue and could be taken into use without any extra steps. As mentioned before Visio also offered collaboration options and there is a lot of documentation online about Visio which meant it was easy to search for information and help.

### 2.3 Powerapps

Powerapps was introduced in 2015 with the intention of offering an easy solution to business app development. The idea is to enable anyone to create applications using existing templates or creating one from scratch. With Powerapps Microsoft wants to offer users an effortless experience that lets normal employees create business applications. Powerapps is meant to accelerate the development time from weeks or months to even minutes, saving time and other valuable resources from companies. (Microsoft 2015.)

Microsoft Powerapps is a service which can be used to build custom business applications that can be connected to various business data such as Sharepoint, SQL Server, Dynamics 365. Powerapps allows users to create powerful and versatile applications without the writing code. Powerapps is suitable to create apps that can run in browser or mobile devices smoothly. (Microsoft 2018.)

Powerapps was the chosen platform to build the prototype application about Sharepoint site creation. Main reasons were that powerapps does not require extensive programming skills, it was already available in the company's environment and as the idea is to only build a prototype, powerapps allows to build the prototype relatively fast.

### 2.4 User centred design

There are two common errors that developers and designers make. First one is that how the technology will be used can be determined by the developer and designer itself and the second one being the mistake of assuming that every user is the same. It is a known fact that everybody is not the same based on just observing the world around us and how there are different people all around us (Ritter, Baxter & Churchill 2014, 4-5).

Ritter, Baxter & Churchill (2014, 4) propose that systems should be designed in a way that keeps the user as the key principle of the design. This means considering different human characteristics as well as capabilities in the design. They also propose that it is important to ask relevant questions about the users while designing the systems, such as: who are going to

use these systems and why, what are the user's goals when using the system, are the users willing to invest time into learning how the system is used and whether the users will use the system alone?

In this thesis the developed guidance on information management is intended to be designed and developed with the users at the heart of it. As the idea is to produce guidance material for the users about the new storage systems it is crucial that the guidance is easy to understand and that they can get a clearer understanding on how the new systems work on a general level as well as how specific areas of the systems operate.

### 3 Workflow design

Before the development of the information management guidance can start, clear design principles need to be defined for the workflows, graphs and the prototype app. Each of these categories has its own design targets and objectives that need to be met. It is important to understand what we need and what to build before the development phase can begin as it will speed up the development and act as a guideline for the development work.

The objectives of the workflows are to visualize the processes of Sharepoint site creation and permission management and offer the users a template which they can use to create their Sharepoint sites and share the right permissions. The workflows will offer a way for users to gain a better understanding of the new systems and when compared to normal text-based instructions, workflows will help the users to see the bigger picture and see the whole process outside of the box.

Workflows will be developed using Microsoft Visio flowchart program and the workflows will be built with the following example as a guideline:

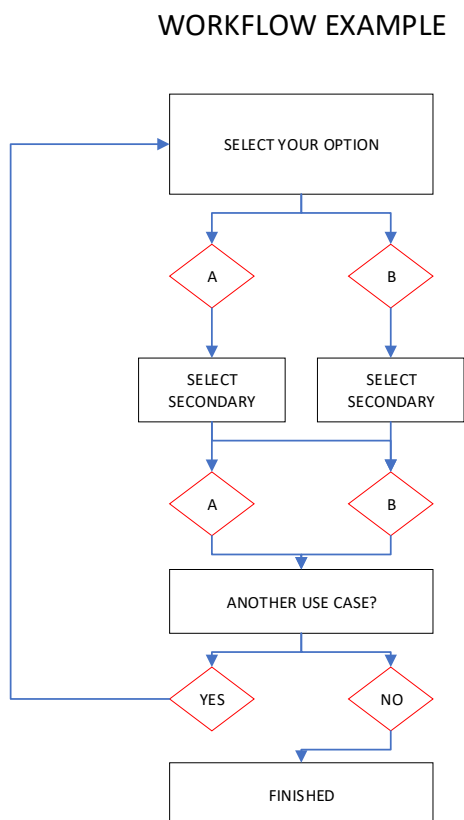


Figure 2: Workflow example

The idea is that both workflows have one starting question which then starts to branch out as the user answers these questions with simple yes/no type of answers. The workflows will function mostly like a waterfall, going from one question to another etc. Only in the very end the user is prompted with a question for another use case which will lead them back to the beginning. Reason for this is that when a user is creating a site they can only create one site at a time and we also want to keep the process simple so that the users won't get too confused and leave process incomplete if there was an option to create multiple sites at the same time.

While the workflows are a good and a simple way to follow the processes, there was also a need to build easy graphs that could be understood in a matter of seconds, rather than minutes. These graphs will be shown as a part of the workshops that the company is hosting, providing a clear and fast understanding of the subject. Two graphs were needed: one to show the differences in permissions and permission management in Sharepoint versus the old systems.

#### 4 Information management guidance

Information management guidance offers users helpful tools which they can use to gain a better understanding of the new cloud storage systems. This guidance also helps them to build their data structure and share the permissions to the right parties while pointing out the key differentials between the old and new systems. Rather than creating traditional documentation this guidance will consist of different visual components, such as workflows, graphs and a prototype application. These visual components will be used as a part of workshops that will educate the users on the new systems and the application will give them an easy tool for figuring out their Sharepoint site structure.

Site creation workflow starts by asking the user if they already have an existing Sharepoint site they could use. Every business unit already has a site created for them, so this question is important to avoid an overload of created sites. If they already have a site created the workflow instructs the user to create a folder inside the existing site and start building the site structure through there. If the user does not have an existing site, they need to specify what group will always have access to the site. The user must decide between two options, team (or groups or a function) or only themselves. This is important question which will define whether you need a Sharepoint site or not.

If the user chose that access is needed by a team or a group, next they must decide whether they have the need to share information outside of the company. If there is a need to share information to people outside the company, the site must be created in the external site collection if the information classification is confidential or lower. By default, the other site collections do not allow information sharing outside of the company.

Whether the chosen access group is a team or only the user themselves next the user must define the confidentiality level of the data that will be stored according to the information classification policy. For the personal sites, if the data clearance level is between public to confidential the user can use OneDrive to store their data but if the data clearance level is top secret the user must create a personal site in the on-premise Sharepoint server.

For team sites if the data being stored can be classified as top secret the team site needs to be created in to the on-premise Sharepoint server. If the classification is classified as restricted or lower than the site can be created in the internal sites site collection in Sharepoint online.

After the last step the user should now have decided on whether they need a Sharepoint site, where to create the site (online or on-premise) and to what site category they need to create it. Last part of the workflow is to decide if the created Sharepoint site needs to be integrated with Microsoft Teams. If the site will be integrated into Teams the user is asked if they want

to Share the whole site to Teams or just a folder. Teams has built-in apps for Office 365 which allow collaboration with different apps, including Sharepoint (Microsoft, 2018). The whole site can be added using the built in Sharepoint app but if only one folder needs to be added you cannot use the built in Sharepoint app, but you can use the Website built in app and paste the URL to the folder.

As the workflow is complete after this the user is asked if they have another use case, meaning if they need to create another site and start the workflow again. After finishing the workflow (and the following iterations if there is a need for more sites) the user should have all the sites set up and they are ready to start using Sharepoint.

#### 4.1 Permission management

Site permission handling workflow continues where the site creation left off. Once the site has been created the owner must Share the site/folder to the right persons with the right access rights. The company Sharepoint has 2 permission levels for the sites, owners and member. Owners have full control of the sites content, they can share sites and approve site share request coming from members and owners can also delete the site. Members can view, add, update and delete documents and sub-folders inside the site. They can also share individual documents and folders without the approval of the owner.

First thing for permission management is to set up another owner for the site. By default, the creator of the site has owner rights for the site, but it is recommended to add another owner to the site in the case that the owner leaves from the company, or something else occurs. This way it is easier for the users to manage permissions in the site themselves and this will also make sure that the site will always have an owner.

If there is a need to share the site to a wider audience for continuous access to all the contents on the site, the owner of the site can share the whole site either with member or owner access level. Sharing is done by navigating to the Sharepoint site, clicking Share and typing the names of people (or email addresses) you want to share the content. By default, sharing grants the member level access to the specified people but if you want to give them different access just click "Show options" and selecting the desired access level.

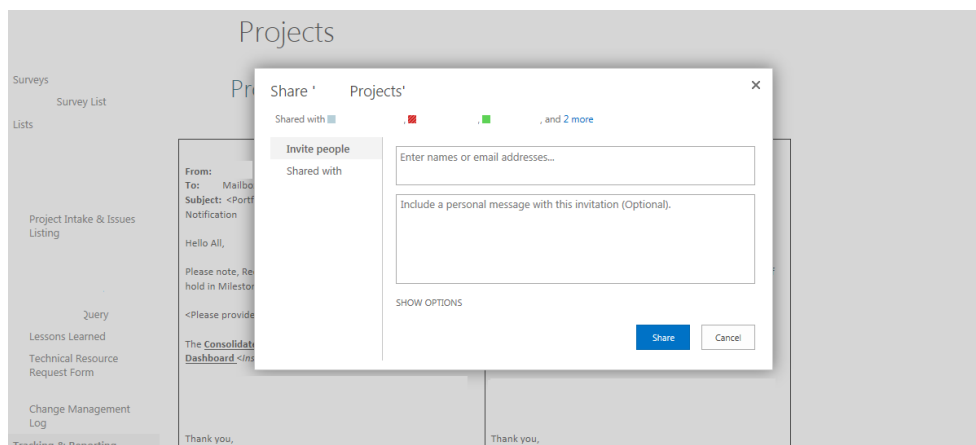


Figure 3: Sharing a Sharepoint site (Blundell 2017)

If you want to share a folder, you can do it via Sharepoint by selecting the folder and clicking Share. Then input the names (or email addresses) for the people you want to access that folder. Remember that these people will have access to everything that will be located in that folder and access to subfolders cannot be excluded from them.

If there is a need to share individual files or folders without sharing the whole site, the members or the owners of the site can do this depending on their use case. If there is only a need to work on a single document (Office 365 document) with somebody, then sharing that document is the best option. This is done by opening the document and clicking the “share” button located in the top right corner.

If the document/file in question is not an Office document, or you just want to share directly via Sharepoint, you can Share the file by accessing the file in Sharepoint and selecting the document and then clicking Share.

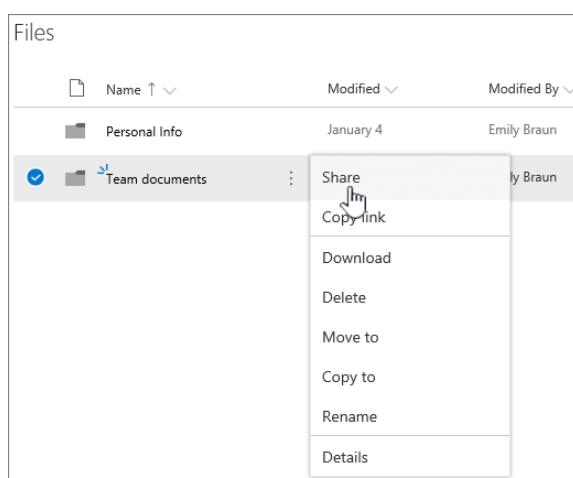


Figure 4: Sharing a document from Sharepoint (Microsoft 2019)

Next input the emails of the person(s) who you want to Share the document/file. From the dropdown menu you can choose and edit the permissions levels to fit your use case.

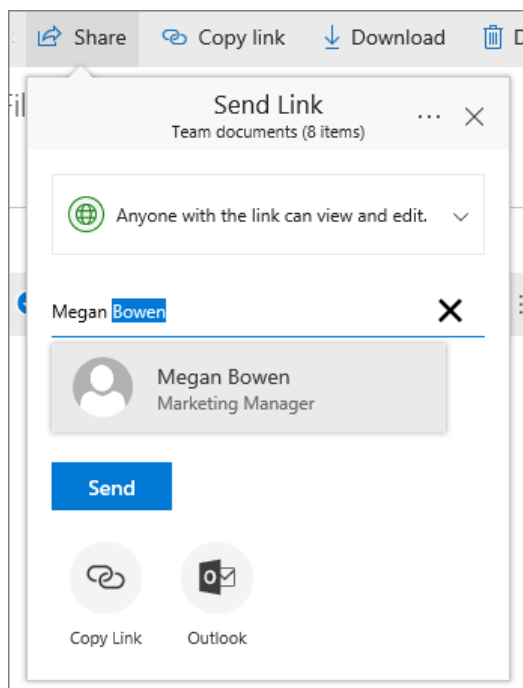


Figure 5: Sharing options (Microsoft 2019)

If you wish, you can share the document/file as a read only by unselecting the “Allow editing” option from the dropdown menu.

#### 4.2 Simplified permission management

This graph will compress the permission management guidance to simple 4 steps while at the same time describing the members and owners.

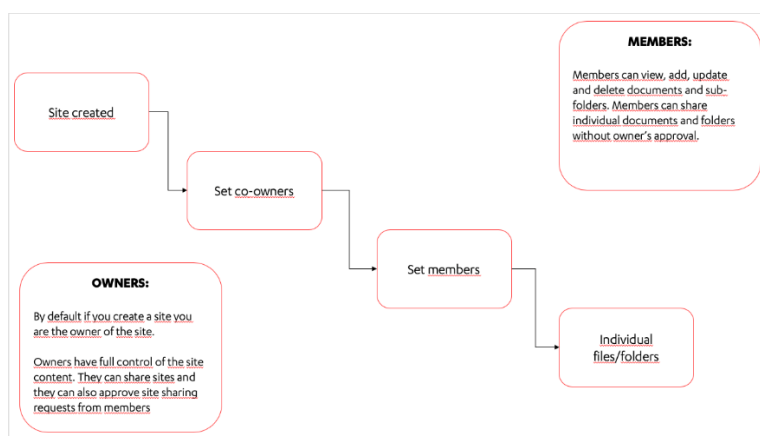


Figure 6: Simplified permission graph

The 4 steps in the graph depict the process of setting the permissions for the site. The first step is to create the site (or after the site is created the permissions can be shared) and after creating the site the next step is to set the co-owners for the site. Next set members and finally share permission to individual files or folders.

#### 4.3 Access management in Sharepoint and Network shares

This graph visualizes the key differences between the old system and the new system (Sharepoint).

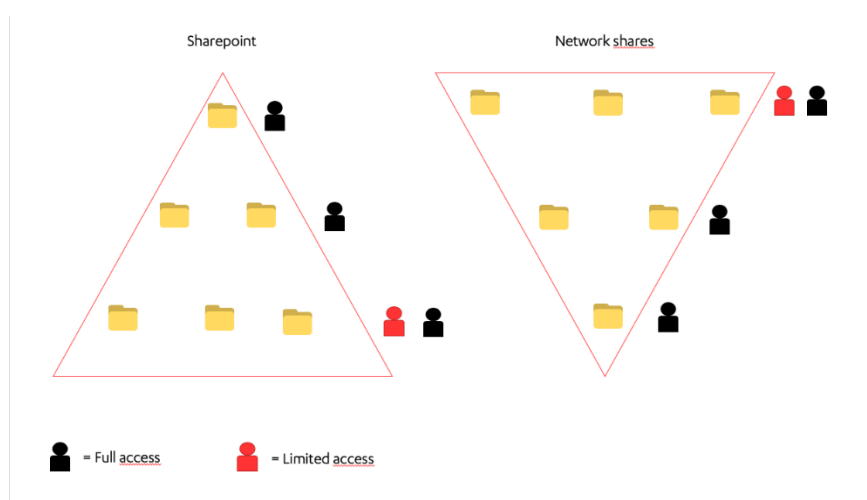


Figure 7: Differences between Sharepoint & Network shares

The two systems are almost the exact opposite of themselves. In the old system you could give a group access to a root folder and then restrict the subfolders to a smaller group. Sharepoint works in the exact opposite way. If you give a group access to a root folder, they will have access automatically to any of the subfolders and the subfolders cannot be restricted.

## 5 Application prototype

The prototype application of Sharepoint site creation tool is a simple way for the users to utilize the site creation workflow as an application rather than just a workflow. The tool is interactive and ask the users the most relevant questions regarding the site creation process and gives the users all the information they need to get their Sharepoint sites up and running.

### 5.1 Concept

Before the prototype was started, a concept version was created for the company representative to show that Microsoft Powerapps would be a good tool to build this prototype. The



concept version was meant to show how the prototype could follow the site creation workflow. The concept consisted of the following elements:

Elements:	Description:
Buttons	Buttons that when pressed, navigated to another page of the application
Text label	A question which the user answers by pressing the buttons
Text input	Text input to demonstrate the possibility of user input

Table 1: Elements of the concept model

The concept version demonstrated how navigation works in PowerApps and how there is an option for user input. Workflow in the concept was the following: On the front page there is a question, “Is the data [A] or [B] level?” When the user clicks button A it takes them to another page that has a text input field for the user, if they click the B button they are navigated to a page that displays a text label.

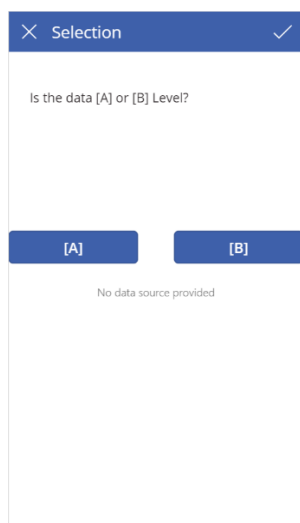


Figure 8: Concept version of the application

The company agreed that the prototype can be built with Powerapps and that we would move forward to build the actual prototype.

## 5.2 Design

The objective of the Sharepoint site creation prototype is to offer the users an easy tool which helps them to decide which kind of sites they need to create. The application itself will use the Sharepoint site creation workflow as its wireframe will follow the same decision-based logic. The idea is to offer the company an example of how the workflows can be implemented in other ways and the prototype is a great way to test it.

### SharePoint site creation app

#### Q1: Lorem Ipsum

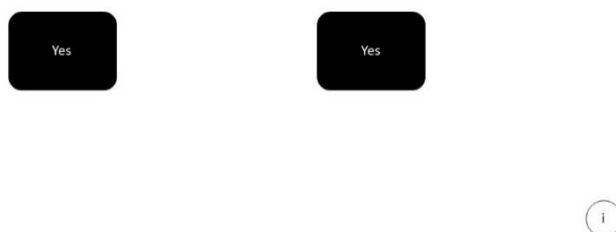


Figure 9: Sharepoint site creation app sketch

Microsoft PowerApps offers many templates for applications in different categories. However, for this project the prototype app was built without using any pre-made templates since we want to have a simple application that will showcase the core features and steps of the site creation process.

## 5.3 Implementation

As the prototype will not use an existing template, the first step of the implementation is to create the basic frame of the prototype. This means creating all the pages of the application, according to the Sharepoint site creation workflow. While some pages are different every page will have the following elements:

Elements:	Description:
Top bar	Displays the name of the application
User controls	Can range from buttons to dropdown menus and radio button selections
Help icon	Displays additional information about the page/workflow step
Help banner	When the help button is clicked the user is displayed more information related to the page
Text label	Primarily contains question regarding the workflow or some other important information

Table 2: Elements of the prototype

In Powerapps every page (or screen as Powerapps calls it) can be simply duplicated so creating the basic frame of the prototype can be done by duplicating the first screen and then modifying them.

Once all the screens have been created and they contain all the elements described in Table 2 the next step is to create the navigation of the application. This is done by utilizing Powerapps navigate function. Navigate function can be set to the OnSelect property of a button or a control which then upon selecting will change which screen is displayed. In navigate function you must also specify a visual transition, such as fade or none (Microsoft 2015). In this prototype navigate function is inserted to the buttons that the users use to answer questions. For example, if there is a question about needing to share information to external parties if the user clicks yes, they will be navigated to another screen and if they click no, the application will navigate them to another screen.

As the basic layout of the prototype has been built and navigation between the screens is working the next step was to build all the needed functions to the application, such as the help function and other main functions.

### 5.3.1 More information/Help

Every part of the application contains a help button which displays more information and helpful links to the user, regarding that part. The help function consists of the following elements:

Elements:
Help icon
Text label
Rectangle
Html text
Close button

Table 3: Elements of the help section

When the user clicks the help icon a rectangle will cover the screen making every control, except the close button, unavailable. Then the user is displayed a text label which contains additional information and a link to an intranet site with more information. When the user clicks the close button, the rectangle and the label disappear, and the user can continue to use the application. The help functionality is achieved using the UpdateContext functionality in Powerapps. UpdateContext is a function in Powerapps that is used to create context variables, which hold information temporarily and they are tied to a screen and cannot be used as global variables (Microsoft 2015). The help icons OnSelect property uses UpdateContext function which controls a context variable. This variable is a boolean variable meaning that the variable has two statuses: true or false. By default, the variable is set to false but upon clicking the help icon, UpdateContext function will change its status to true, which will then display the additional information.

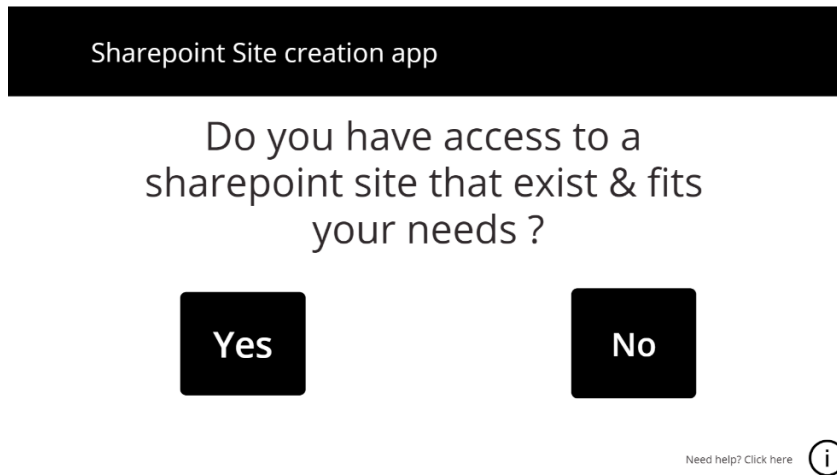


Figure 10: Start screen of the application

This variable is named “visible” and it controls the visibility of the rectangle, text label, html text and the close button. All these elements will only turn visible when the help icon is clicked and when the user click the close button, they will turn invisible.

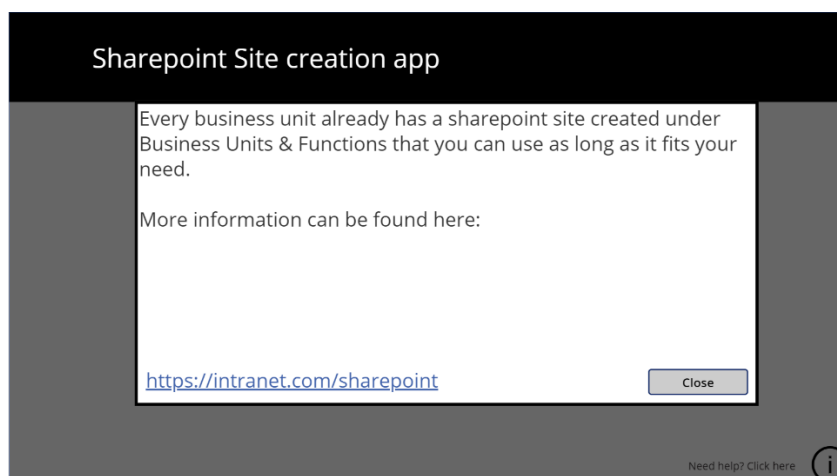


Figure 11: The help section when the help icon is activated

The user can then either navigate to the link in the help section or close it and continue with the application.

### 5.3.2 Naming the team or function

In the prototype the users will be asked to give the name of the team/function who will use the Sharepoint site. The users will input this name to a text input control in PowerApps. The text input in PowerApps allows the user to specify data by inserting it to a text-input control (Microsoft 2018). Powerapps stores the input and it can be called in other screens for example if we want a text label to show the input we simply specify the text field to: TextInput1.

Sharepoint Site creation app

Please give the name of the team/function that will be using this site.

Enter the team name  **Next**


Need help? Click here 

Figure 12: Text input for the team name

In case the user tries to proceed without giving a name to the team, they will be prompted with an error message that they have left the name blank.

### 5.3.3 Classification

After choosing the team name the user is prompted to choose what is the classification of the data that will be stored/handled in the Sharepoint site. The user will proceed to choose from a form with radio buttons:

Sharepoint Site creation app

What is the classification of the data that will be stored/handled?

Public  
 Internal use  
 Restricted  
 Top Secret

**Next**


Need help? Click here 

Figure 13: Classification selection list

Once they choose one of the classifications and navigate to the next screen the user is shown a reminder of what they chose. For this we used the if statement in PowerApps. The if function tests several conditions until it will find a result that will equal to true. If a true result is achieved the corresponding value is returned (Microsoft 2017). The user is presented with a text: “You chose X classification” and the text labels border colour is set to correspond with the classification. If the user chose Public the border colour will be green, if Internal use it

will be yellow, if restricted it will be orange and the top secret is used as default result and if the other statements are not true the border colour will be set to red by default:

*If(*

*Radio1.Selected.Value = "Public", RGBA(27,238,31,1),*

*Radio1.Selected.Value = "Internal use", RGBA(204,204,0,1),*

*Radio1.Selected.Value = "Restricted", RGBA(255,140,0,1),*

*RGBA(255,0,0,1))*

#### 5.3.4 External sites

One step for the users is to specify if they need to share information outside of their organization. The users are presented with the question and if according to their answer (yes or no) they will be navigated to the next step. Both buttons use the PowerApps “set” function. Set function is used to set a value to a global variable which holds data temporarily, such as how many times a button has been selected (Microsoft, 2018). In this case we use the set function to set a global variable, called ExternalSelect, to check whether the user has the need for sharing information to external parties which will be needed later:

*If(*

*Radio1.Selected.Value = "Top Secret", Navigate(Screen4\_2,ScreenTransition.Fade),*

*Navigate('MS Teams', Fade)) && Set(ExternalSelect, true)*

If the user click yes, ExternalSelect is set to true and if the user clicks no, then the ExternalSelect is set to false. We also check if the user has selected top secret classification and if they have they will be redirected to a warning page that confirms that they intend to share top secret information with an external party.

#### 5.3.5 Results

In the final step of the application the user is displayed a summary on their choices along with a suggestion name for the Sharepoint site, the classification level, the correct site collection for the site and a link to Sharepoint. After viewing the results, the user can either go to the beginning if they have a need to build another site or exit the application.

The suggested name for the site consists of two components, what was the chosen classification and what name did the user chose. This is one way for the users to identify what team/who represents the site while showing what classification can be used for the site (e.g B2B-Restricted).

*"Name: "& If(*

*Radio1.Selected.Value = "Public", TextInput1 & "-Public",*

*Radio1.Selected.Value = "Internal use", TextInput1 & "-Internal",*

*Radio1.Selected.Value = "Restricted", TextInput1 & "-Restricted",*

*TextInput1 & "-Top-Secret")*

Results will also show the chosen classification also separately as it is important to understand what can be stored to the site and what not. Site collection shows the user to which site collection the site must be created. In this label we will use the ExternalSelect global variable that was set before. If ExternalSelect is set to true, the site collection will display "External sites" in the site collection text label. If the user has chosen a top secret classification site collection will display "Secret sites" and if neither of these conditions are met, site collection will display the default result, internal sites.

*"Site Collection: " & If(ExternalSelect = true, "External",*

*Radio1.Selected.Value = "Top Secret", "Secret sites",*

*"Internal sites")*

Last thing that the user is shown is a direct link to Sharepoint which they can follow to create their site. User will either see a link to Sharepoint online or to the on-premise one. If they chose top-secret classification the link will show the URL to Sharepoint on-premise except if the ExternalSelect variable is set to true in which case the link will show Sharepoint online. In all other cases the link will direct to Sharepoint online since the internal sites and the external sites reside in Sharepoint online.

*If(ExternalSelect = true, "<a href='https://Sharepoint.online.com'>https://Sharepoint.online.com<a/>",*

*Radio1.Selected.Value = "Top Secret", "<a href='https://Sharepoint.onpremise.com'>https://Sharepoint.onpremise.com<a/>",*



"<a href='https://Sharepoint.online.com'><https://Sharepoint.online.com></a>")

Note that the URLs had to be modified for these snippets since the company wishes to stay anonymous and the real URLs cannot be included.

## 6 Results

In the beginning of this thesis the space consumed by the old and new systems was measured and it was measured again in the later part of this thesis. While the legacy systems space had increased slightly between the first and second measurement OneDrive and Sharepoint usage had increased significantly. The objective was that the legacy systems usage would have not increased during this project but since the increase was minimal when compared to the increased usage amount in Sharepoint and OneDrive, this objective can be seen as a success.

For the workflows and graphs the objective was to create visual guidance for Sharepoint. The workflows and graphs were later used as part of the Sharepoint documentation in company X as it was intended. The workflows and graphs were done on time and they met all the requirements even though they required a few iterations before they were finished. At the end of the project time management became a challenge as the last few improvements needed to be done fairly quickly but those were done in time.

The prototype application for Sharepoint site creation was created in a very short space of time and the implementation was started in the latter part of this project. This created some challenges as Powerapps was not a very familiar platform and it took some time to learn what are the capabilities of the tool. There were a few delays around some of the features in the app since they were harder to develop than initially thought. In the end the prototype was developed successfully, and all the required functionalities could be found from the first complete version. Unfortunately, the company did not pick the prototype for more development since they were starting to roll out a new learning platform and the Sharepoint site creation application idea was terminated.

## 7 Conclusion

The aim of this thesis was to create guidance on new information management systems for the employees of the company. The guidance was divided to three main categories: workflows, graphs and the prototype application and the main objective in all was to create guidance that would promote new ways of working and how can the new systems be used in the most effective way possible.

While this project provided some challenges that threatened the schedule of this project, all objectives and milestones were reached within time and all the guidance material was ready

on time. While the prototype application has been terminated and did not become a permanent tool for the employees, the workflows and graphs have been used as training material and guidance documentation and they have been.

At present the adoption rate for Sharepoint and Onedrive is on the rise which can be seen as a success indicator for this project. Employees are encouraged to use Sharepoint and move their data to Sharepoint. The only threat to this project is that the usage on the old systems was on the rise but it had not risen as much as Sharepoint usage.

In conclusion, the whole project was a success and the feedback received from the guidance materials has been good. The official guidance which uses the guidance materials created in this project has been well received and is being used consistently by the users.

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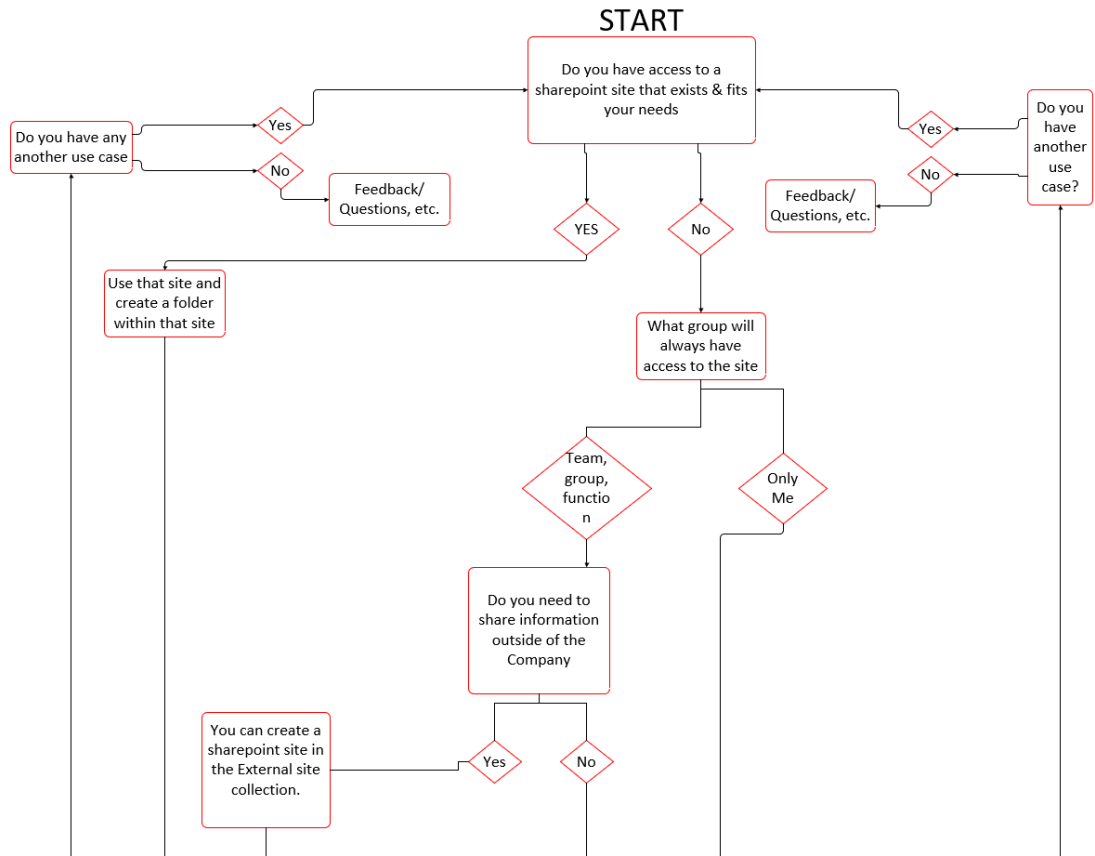
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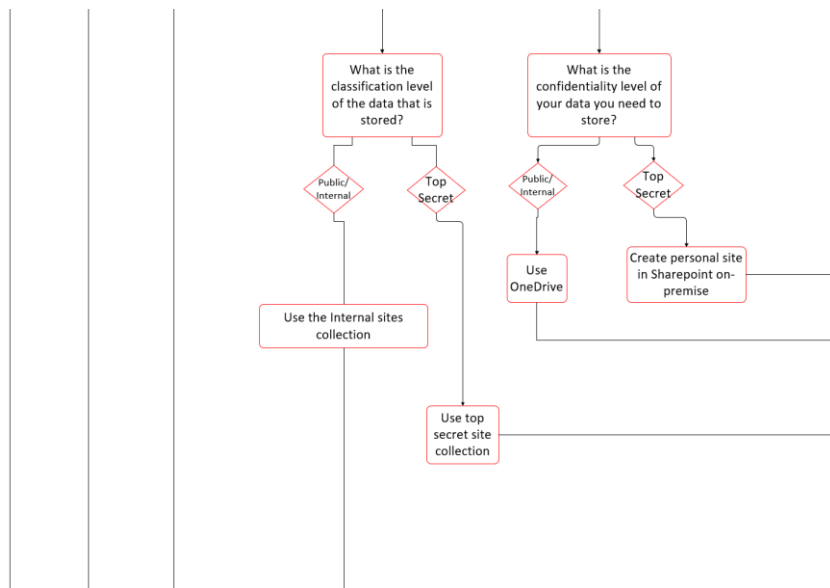
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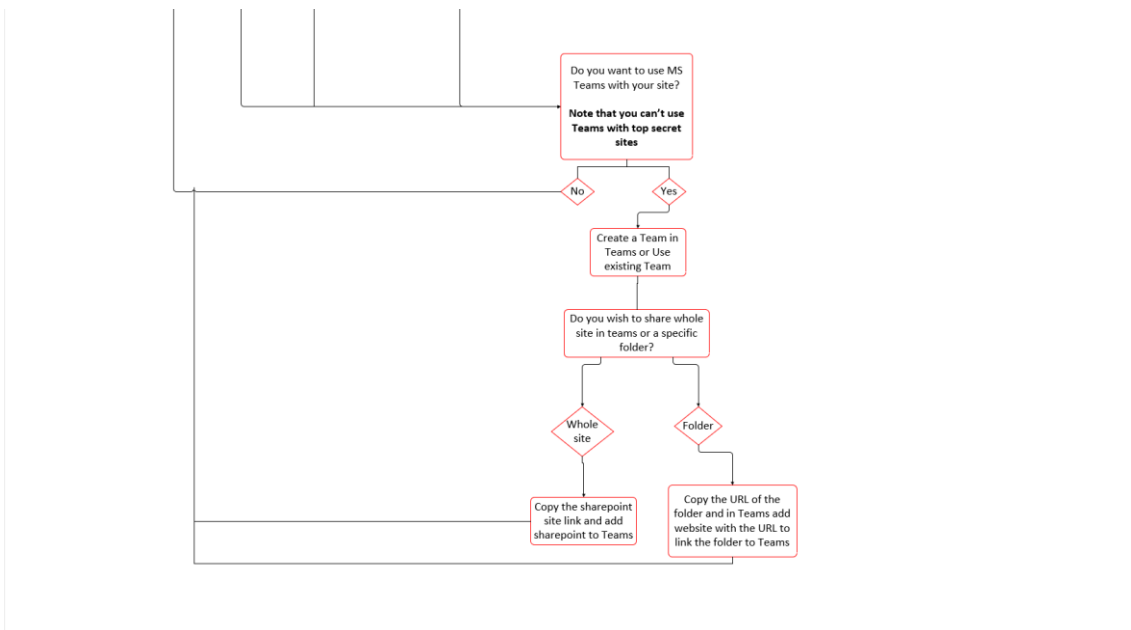
Appendix 1: Sharepoint site creation workflow part 1



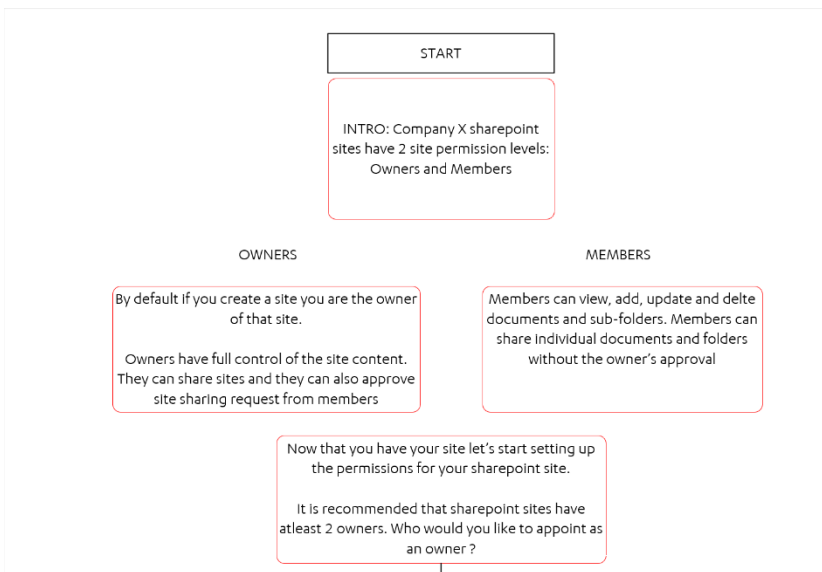
Appendix 2: Sharepoint site creation workflow part 2



Appendix 3: Sharepoint site creation workflow part 3

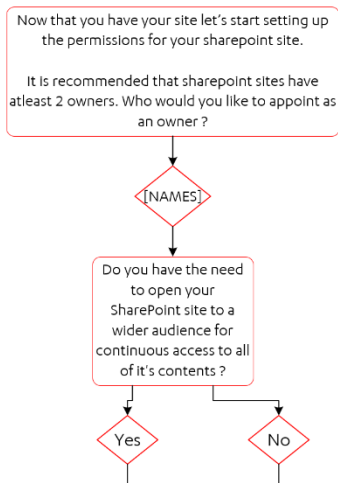


Appendix 4: Permission management workflow part 1

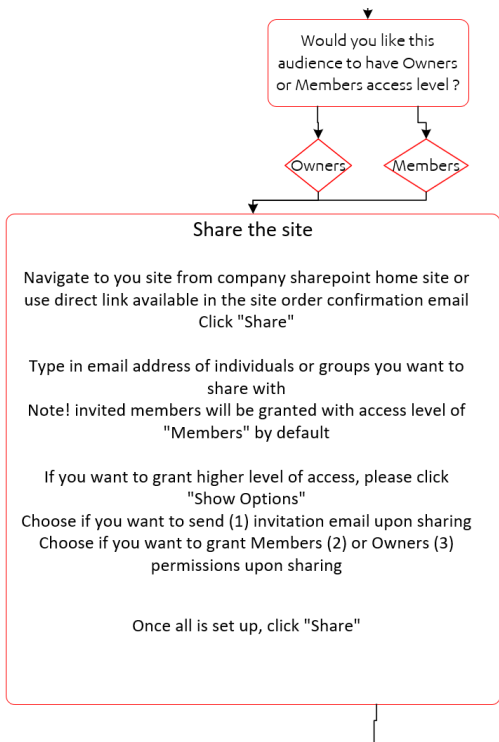




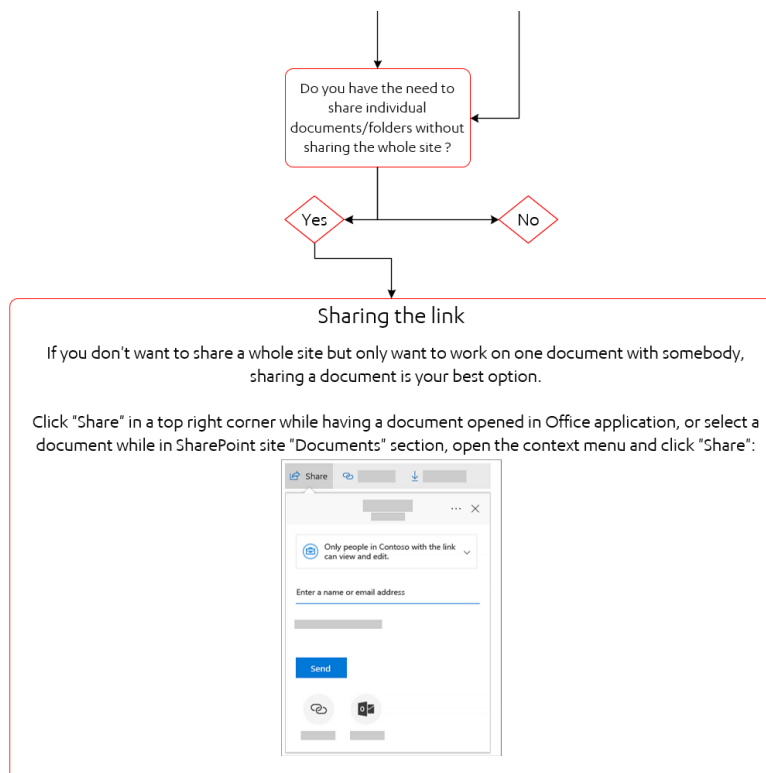
Appendix 5: Permission management workflow part 2



Appendix 6: Permission management workflow part 3



## Appendix 7: Permission management workflow part 4

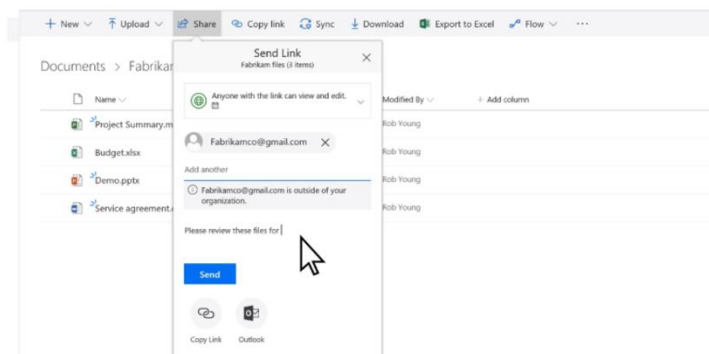


## Appendix 8: Permission management workflow part 5

Here are few options of how you can share a document:

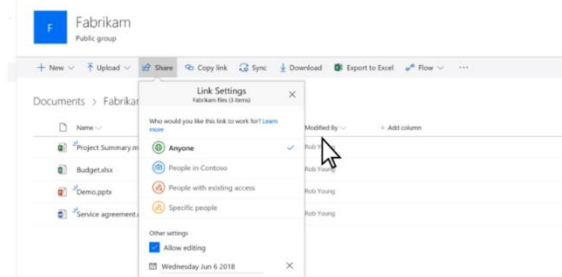
type in the email address of external (1) or Internal (2) recipient. Notice, that when you are about to share a document with recipient outside of the Company, you will have hint (3) indicating this.

Sharing a document this way, will grant edit privileges:

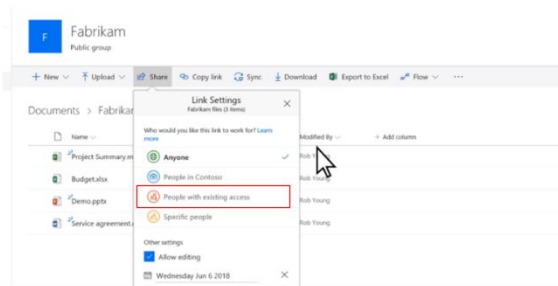


## Appendix 9: Permission management workflow part 6

If you want, you can tweak your sharing options by selecting a drop-down list:

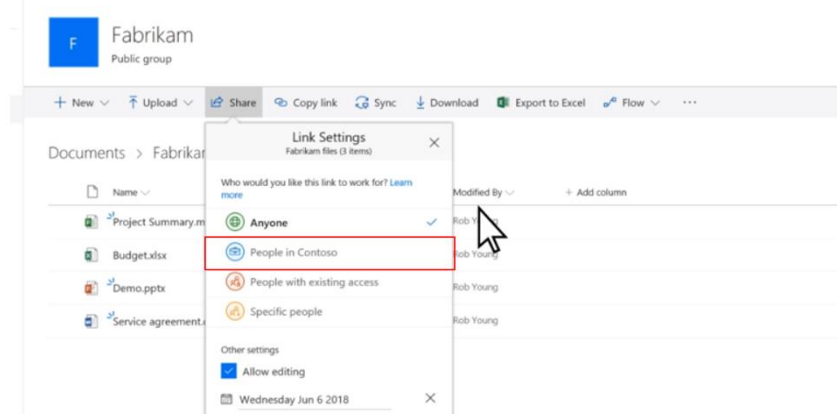


This option can be used to send a reminder with the link to a document for people who previously had access to it:



## Appendix 10: Permission management workflow part 7

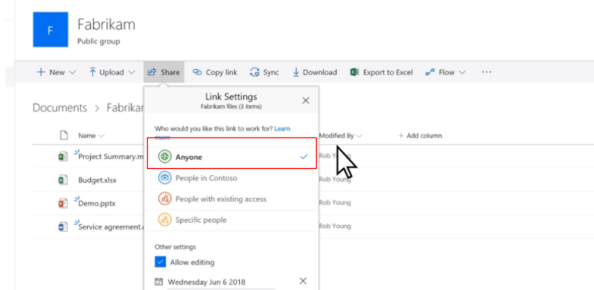
This option can be used to share a document with everyone in the company  
**Notel** You can unselect "Allow editing" to share in read-only mode



## Appendix 11: Permission management workflow part 8

This option can be used to share a document with anyone. This means that recipient can forward the invitation to others and they will also have access to the document. Use this option with extreme caution only when absolutely necessary. Adjust the expiration date for the invitation according to your needs.

Note! You can unselect "Allow editing" to share in read-only mode



Click "Share" when you are ready to send the invitation

**Note!** Sharing of documents with stakeholders outside of Company X is only available using sites in External category

You can find more information on site permission handling here:  
<https://intranet.com/SharePoint>

## Appendix 12: First question of the prototype

Sharepoint Site creation app

Do you have access to a sharepoint site that exist & fits your needs ?

Yes

No

Need help? Click here




## Appendix 13: Prototype naming phase

## Sharepoint Site creation app

Please give the name of the team/function that will be using this site.

**Next**

Need help? [Click here](#) 


## Appendix 14: Choosing the classification

## Sharepoint Site creation app

What is the classification of the data that will be stored/handled?

Public  
 Internal use  
 Restricted  
 Top Secret

**Next**

Need help? [Click here](#) 


## Appendix 15: Chosen classification

## Sharepoint Site creation app

**You chose Internal use classification**

Would you need to share information to someone outside of your organization ?

**Yes** **No**

Need help? Click here 

## Appendix 16: Results screen of the prototype

## Sharepoint Site creation app

Congratulations! You can now go and create your SharePoint site based on your answers, here is the recap of what you chose and suggestion for the site name:

Name: B2BMarketing-Restricted  
Classification: Restricted  
Site Collection: Internal sites  
<https://sharepoint.online.com>

**Beginning** **Exit**

Need help? Click here 