Chen Chen Lee

Using A Social Collaboration Application to Support Team Collaborations – A Package of Recommendations for a Case Company

Helsinki Metropolia University of Applied Sciences

Master's Degree in Business Administration

Business Informatics

Thesis

12.10.2014



Author(s) Title	Chen Chen Lee Using A Social Collaboration Application to Support Team Collaborations – A Package of Recommendations for a Case Company	
Number of Pages Date	42 pages + 24 appendices 12 October 2014	
Degree	Master's Degree in Business Administration	
Degree Programme	Business Informatics	
Instructor(s)	Pia Hellman, Senior Lecturer James Collins, Lecturer	

In a technology-driven world today, companies constantly seek ways to advance themselves to stay ahead of competition. The emergence of social technologies has shifted working practices by enabling collaborative work. Recognising the impact of effective collaboration within the organisation is closely associated to productivity improvements, more and more companies see the potential of using social collaboration application internally.

This research aimed to find ways to renew working practices to improve productivity. It investigated various possibilities of using the features and functionalities available from Microsoft SharePoint 2010, to propose practical solutions to the challenges raised by case teams. This included issues that hinder team collaboration and working process which team members wished to be improved or changed by using the application. The research employed action research approach where problem solving and collaboration with participants under study are emphasised.

The outcome of the research is a model that could be widely replicate internally. It consists of a package of recommendations that can be replicated into the existing support framework, and contributes to the case company's overarching objective of improving employee collaboration and productivity.

Social Technologies, Social Collaboration Application, Social collaboration, Team productivity, Microsoft SharePoint 2010



Contents

1	Introduction		1
	1.1 1.2	Background of the study Case company and the business problem	1
	1.3	Scope of the study	7
2	The	pretical Framework	8
	2.1	Consumer readiness theory	8
	2.2	Use case	17
3	Research Methodology		18
	3.1	Participatory Action Research	18
	3.2	Research design	19
	3.3	Pilot teams' background	22
	3.4	Data collection and analysis	22
4 Find		ing from the analysis	23
	4.1	Conclusion from Current State Analysis	23
	4.2	Conclusion from the final interviews	25
5	Prop	26	
	5.1	Preparation check list	26
	5.2	Tips on how to get people onboard	28
	5.3	Use cases examples	31
6	Conclusion and discussion		39
	6.1	Implication of the pilot case study	40
	6.2	Managerial implications	40
Re	feren	ces	1
Ар	pendi	ces	
•	•	x 1. Current state Analysis Interview/ Online survey questions	
-	-	x 2. Final Interview/ Online survey questions	
Ар	pendi	x 3. Preparation Checklist in full	
Ap	pendi	x 4. Use case examples	





1 Introduction

1.1 Background of the study

In a technology-driven world today, companies are leveraging the advancement of information and communications technology to boost their competitiveness to be at the forefront of their business. Apart from innovating products and services to face rigorous competition outside, companies also emphasis on internal organisational effectiveness specially their employee's productivity.

Working practices are also changing rapidly. The popularity and effective use of social networking services embraced by business world has prompt companies and individual employees the possibility of using similar technologies to bring its benefits into work-place privately. This has also contributed to rapid emergence of 'social collaboration application' or 'collaboration application with social capabilities' in the marketplace. Social collaboration, application, tool, software, services or platform, appears in various names, but all refer to the same theme.

In business context, collaboration is a practice where individuals, groups, or companies work together to a defined common objective to achieve business benefits. Effective collaboration across an organisation is crucial for business growth. The driving forces are: the declining costs in communications, globalization, increasing specialization of knowledge-based work, and intensified business competitions. Considering a company need to produce an innovative product can bring people of different expertises, from different functions or locations to share ideas and work together, the outcome will be more successful than individual effort. The company gained economic benefits, leveraged the diverse expertises internally and raised productivity at the same time. (AIIM, n.d., Cross et al., 2006, Frost & Sullivan, 2006, Borg, 2013)

Technology interventions have increasingly support collaboration, in combination of communication, coordination or knowledge sharing. (Accenture technology labs and Workplace Enablement Services, 2011) In the past, technology used in collaboration constrained to rather general-purpose communication channels, such as phone and email. Now, social collaboration application offers more possibilities as there are in-



creasing numbers of application developer, continuously launching new features in response to the growing trend of "social" potential. (Accenture technology labs and Workplace Enablement Services, 2011, Redwood Capital, 2013)

Social technology is defined as "Product and services that enable social interactions in the digital realm and provide distributed rights to communicate and add, modify, or consume content." Figure 1 below shows that Social technologies entail a broad range of applications commonly use by consumers and companies, and what kinds of interactions are involved. (McKinsey Global Institute, 2012)

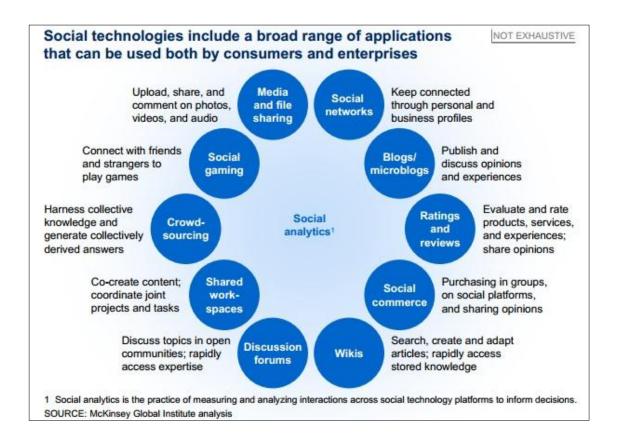


Figure 1. McKinsey defines Social technologies as a broad range of applications.

Many companies have started using social technologies internally, particularly for team collaboration. (Cross et al., 2006, Corkery, 2012) Gartner (2013) predicted that 50 percents of large organizations will be using social technologies internally by 2016.

Some companies see the social capabilities in social collaboration application as a solution to inefficient working practices, particularly in communication and agility. (Jones,



2012, Gartner, 2013) It will help to enhance employee collaboration by facilitating teamwork, making information flow and knowledge sharing easier and faster. This is important for many organisations today where employees are mobile and distributed in different geographical areas. Virtual team and remote work are very common.

Several market studies have reported positive result on the impact of using social collaboration application in organisation. McKinsey Global Institute released a report in July 2012 stated

...we find that social technologies, when used within and across enterprises, have the potential to raise the productivity of the high-skill knowledge workers that are critical to performance and growth in the 21st century by 20 to 25 percent.

Microsoft's global survey across 32 countries reported out of 9,908 information workers in the survey, close to 50 percent finds that using social tools at work help to increase their productivity. (Microsoft, 2013)

Social collaboration application offer built-in functionalities to create, organise, access control, use, store, sharing, discuss and interact with multiple users on different types of content and activities in a virtual shared work space in real time. Employees can also use features that connect and build networks around work activities which have similar experience to that of using popular public social networks. Microsoft SharePoint is one of these applications in the marketplace currently.

Microsoft SharePoint is a web-based application first launched in 2001. This research was carried out using Microsoft SharePoint 2010 (SharePoint 2010) version. Microsoft described SharePoint 2010 as a web content management and document management system capable to be configured into broad solution areas including social collaboration. It provides social features such as wiki page, blog, comment and rating, calendar, event scheduling, task progress tracking, activity feed, discussion board, user profile, poll, survey, picture and video content gallery, and search functionality. Company can use SharePoint 2010 to create websites of different usage, with or without customisation, such as information portal like Intranet, team-oriented shared work space, known as Team site, extranet, as well as public facing internet sites. (Microsoft 2012, 2014, AIIM, n.d.)



Even though companies realised the potential of social collaboration applications towards employee's productivity, some still face challenges to capture the full value it can offer. This is because unlike the conventional implementation, it requires a lot more than just rolling out the technology to end users. (Gartner, 2013)

1.2 Case company and the business problem

The case company is a multinational business to business corporation employing approximately 21,000 people globally.

In 2011, the case company introduced SharePoint 2010 company-wide. It included intranet, a personal profile site known as Mysite, and team-oriented shared work space known as Team site which can be configured based on work activity and security needs. The use of social collaboration application is closely aligned with the company's objective to promote effective collaboration among the employees across organisation boundaries. A change program was carried out to promote new ways of working, and offering training sessions, instruction materials and support forum to end users throughout the organisation. The program has helped many employees to adopt the application quickly and to learn all the social features which could support their daily work.

The Intranet serves as internal news channel and a centralised information portal for all employees. Mysite is available for every user, contains the user's work detail such as organisation background, skills and interest. It also allow user to keep documents online. Whereas for Team site, a virtual space for collaboration, allows team members to keep documents, keep track of work activities, or project time line, discuss and sharing knowledge. It is set up when a team order it, and come with basic functionalities by default. Team can add more features as needed. Social features are available across these different sites. This research mainly focuses on Team site.

According to McKinsey's 2012 report, two-thirds of the value creation opportunity enable by social technologies derives from improvement of communications and collaboration within and across organisations. In addition, as illustrated in Figure 2, it is estimated that the productivity of knowledge workers could be increased by 20 to 25 per-



cent. Using social technologies can save a substantial amount of time, such as from reading and answering email, searching and gathering information, communicating and collaboration. The time saved can then be 'repurposed' for more valuable activities.

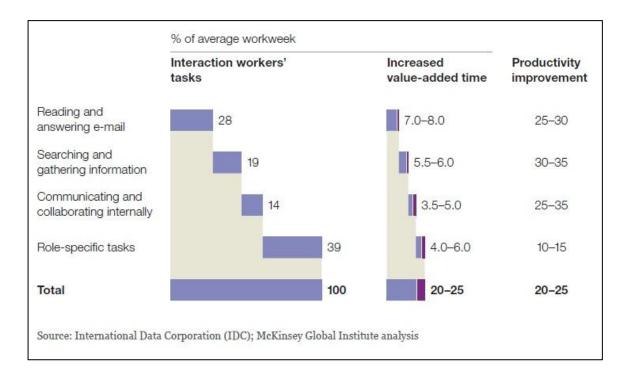


Figure 2. McKinsey Global Institute (2012) reported that improved communications and collaboration through social technologies could raise the productivity of interaction worker by 20 to 25 percent.

How could the potential value mentioned above be achieved in the context of the case company? As in, how would a team improve their collaboration with the new way of working, making use of the new application leading to improved productivity? What is the model that could be widely replicate internally?

This research aims to find ways to renew working practices to improve productivity. It investigates various possibilities of using the features available for both Intranet and Team sites, to propose practical solutions to the challenges bring up by case teams. This includes issues that hinder team collaboration and working process which team members wish to improved or changed by using the application. Combine use of other office applications such as video, online meeting and instant messaging (Microsoft Lync 2010) will be explored. In fact, it may help in reducing unnecessary emails to a certain extent, and solving the problem where information and knowledge being trapped or



hidden in email. (Bughin, et al., 2012) Information and knowledge access and distribution can be achieved with alternatives.

The proposed solutions for case teams are developed into use cases. They are compiled in a testing Team site specially set up for this research, which is named as Research Team site. It is also intended to show that Team site can be a highly functional virtual work space for team.

Although the functionalities in SharePoint 2010 do not required user to have technical background knowledge, like all new technology implemented, some people pick it up very quickly, while others took longer time to get use to it. There may also be other reasons that cause slow adoption, for example if user does not know what is possible. Therefore use cases will be useful for teams to know the possibilities, and also to test and learn about it directly in the Research team site.

As social functionalities enable various ways of creating, enhancing, exchanging and consuming useful content, it can also make the collaboration process more interesting and engaging. (McKinsey Global Institute, 2012) Ultimately, the impact of having every team to effectively utilise the social collaboration application in their daily work is productivity boost. Productive organisation with highly collaborated, aligned and modern way of working will help business to stay competitive.

The outcome of the research is a package of recommendations for case company consists of the following:

- A preparation checklist
- A document containing practical tips for team site owners to promote active participations of their members
- Use cases as examples of how certain functionalities work to support team collaboration



1.3 Scope of the study

This research use the out-of-the-box and customised functionalities available in the case company's Microsoft SharePoint 2010, an online meeting and instant messenger Microsoft Lync 2010 and Microsoft office applications such as Excel and PowerPoints to construct use cases. (Figure 3) These components are connected by hyperlinks or embedded in the user interface, enable users to navigate from one to another. It is worth noting that the intranet and team site are use for different purposes but share similar features and functionalities. Certain use cases created in team site can also be created in similar way in the Intranet environment based on user's need.

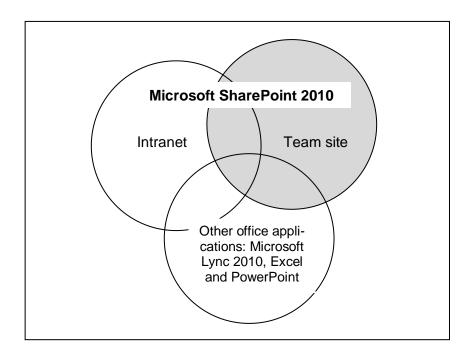


Figure 3. The components included in the scope of the research. They are connected by hyperlinks or embedded in the user interface, enable users to navigate from one entity to another.

This research report started with the background of the topic, the research problem and the scope in Chapter 1. Next, the theoretical framework is covered in Chapter 2. The research methodology, design and data collection are elaborated in Chapter 3. The findings from current state analysis and final feedbacks from pilot teams are reported in Chapter 4. The proposed model is explained in chapter 5. Finally, the research ends with conclusion, pilot test implications and managerial implications in Chapter 6.



2 Theoretical Framework

2.1 Consumer readiness theory

Traditionally, a service offer by a company is directly deliver, or serve by its employee in person, to its customers. With information technology advances such as internet, combining with other factors such as potential cost savings, customer satisfaction and efficiencies, has transformed businesses and service delivery to a different manner. Increasing business competitions are also forcing company to find new innovative service delivery channel to cater to different target customers or to expand its market. (Lee and Allaway, 2002) Hence, the Self-service technologies (SSTs) have evolved. Self-service Technologies are described as services with technological interfaces which customers undertaking the producer role to satisfy their own need without direct interactions with the employees of the service provider along the process. Some of the most common SSTs today are internet banking, automated teller machines (ATMSs), self scanning retail stores, and all forms of services via the internet, for example information search, online shopping and distance education. (Wilson et al., 2008)

According to Bitner et al. (2002) and Hsieh (2005), companies which offer SSTs typically aims to achieve at least one of the three business goals namely, to provide effective customer service with potential cost saving (eg. Internet banking), enabling direct transactions that include reserve, purchase and exchange of product without the need to contact any employee (eg. Online shopping), and to provide education which enable customer self-learning on a particular topic (eg. Information and learning- based websites).

As from the customers' perspective, according to a Bitner et al. (2002) satisfaction survey, there are several reasons why they choose to use a SST. Firstly, when it can provide a solution particularly in a difficult situation, for example, in situation where a parent with a sleeping child in the car before going to work in the morning would prefer to use a pay-at the pump gas machine. This is because it helps the parent to avoid the need to leave the child alone in order to pay for the gas, and allows the child to continue sleeping during the transaction. Secondly, when using the SST is a better alternative than liaising with the employee of the company, for example internet banking and online shopping services. Customers find conveniences, save more time and money



when using these services. Another reason that some customers are attracted to use a SST because the technology employed has impressed them.

The growing trend of SSTs means that customers are more and more accustomed to produce their own services. However in reality, the result of a SSTs success varies. Some services quickly becoming popular once it is introduced, while others are less receptive or take longer time to be widely adopted by costumers. (Bitner et al., 2002) Human service replaced by a machine and technology commonly requires the customers to learn new knowledge and behaviour pertaining to the service and a greater participation and responsibility in the service production. (Lee and Allaway, 2002)

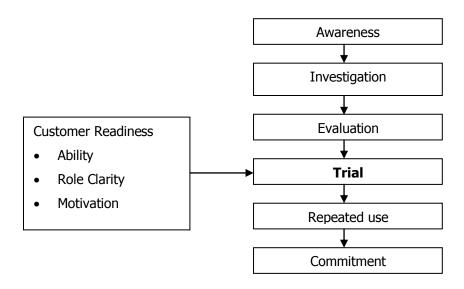
SSTs failure that is caused by customer dissatisfaction will divert them back to the conventional service option, making them to switch to other service providers or to avoid using the service altogether in future. This could happen when customer encounter 'technology failure' whereby the service breakdown, failed to perform as expected, or 'process failure' whereby problem occur during the delivery or follow-up process. Additionally, a poorly designed SST user interface or unclear service process confuses customers and causing bad experience as well. Sometime a SST failure may also caused by customers' own fault along the service process. Although they may be aware of their mistake, very few blamed themselves for the outcome. (Meuter et al., 2000)

Various studies have been conducted to investigate what are the underlying factors that make some SSTs more favourable and used extensively by customers compare to others. Understanding the key factors that could influence customer adoption and the significant problems that can cause a SSTs failure are important for company to implement and manage SSTs effectively.

Before any SST can become a success, it is actually more critical for the company to get their customers to try the SST at the first place. One adoption model developed by Bitner et al. (2002) looks into the likelihood of a customer to try a new SST for the first time. Figure 4 shows the SST adoption model that illustrated as a 6-step process of the customer trial. This model was partially adapted from the process of innovation adoption and commitment by Roger E. M. (1995). It has contributed useful understanding



to marketing practitioners to find ways to influence their customers on the adoption of SSTs.



Source: Bitner, M., Ostrom, A. L., & Meuter, M. L. (2002). Implementing successful self-service technologies. *Academy Of Management Executive*, *16*(4), 96-108.

Figure 4. Model of SST adoption developed by Bitner et al. (2002)

In the beginning, the customer must be aware that the SST exists, and gathered some information about it in order to make an evaluation. If the customer decided that the SST is appealing, he or she is likely to give it a try. Depending on the experience from the initial trial, it may lead the customer to continue using the service and finally forming a commitment. In this model, it is suggested that "Customer Readiness" affects a customer's trial. Customer Readiness stem from three mediating variables (Bitner et al., 2002, Meuter et al., 2005):

- Ability (Do I have this ability to use this STT?)
- Role clarity (Do I understand what I am supposed to do?)
- Motivation (What is in it for me?)

Customer Readiness explains that when a customer is aware of a new SST, and appeal towards it, must also feel they are 'ready', in order to try it. The likelihood of a customer to try a new SST increases if there is positive inclination relates to the 3 vari-



ables. 'Ability' indicates that a customer must have positive inclination that he or she has the ability to use this new SST. Ability can be in two ways, firstly the infrastructure or equipment that is required for customer's participation must be available, and secondly the customer must feel physically and mentally capable, willing and confident (want to do) to perform tasks required, or have the necessary skills to use it. (Bitner et al. 2002, Ellen, Bearden and Sharma 1991; Jayanti and Burns 1998; Jones 1986 cited in Meuter et al., 2005)

In is stated in self-efficacy studies that "competent behaviour in a situation requires both specific skills and belief of self-efficacy". Self-efficacy is described as perceived ability to successfully perform a given task or behaviour. (Ellen et al. 1991 cited in Hellman, 2014) Self-efficacy is also considered as key predictor of behaviour. (Maddux, Norton, and Stoltenbert, 1986 cited in Meuter et al., 2005) Customers who believe they have the necessary skills are more likely to engage to the SSTs than those who think they are incapable, even if they know it is a better alternative. (Seltzer 1983, cited in Meuter et al., 2005)

Role clarity means that the customer need to understand what is expected from him or her in order to perform the service. Service is usually a process that involves sequence of actions and activities. Service performance regardless whether it is a self-service or not, can be easily influenced by the behaviours of the customers and service employees. (Grove et al., 1992 cited in Wilson et al., 2008) Service employees should perform their roles to meet the expectation of the customers else they may upset or disappoint them. On the other hand, when the customers are informed and educated of their roles clearly and also co-operate with the service provider, the higher the chances of success in the service performance.

The level of a customer's participations across different services can be low, medium or high and so as the roles they play are different throughout the service delivery process. Usually, low participation means that less input from customers are required, while the service production work usually carry out by the service provider. This can be seen in the example of a concert performance, whereby the customers only need to be physically present to received the entertainment service. Considering another example in customer's tax return service, more inputs from customers are required (fill in per-



sonal information into a form properly as instructed, and provide receipts of the products and so on) to assist the service provider to carry out the refund process effectively. As for high level of customer participation situation can be seen where customers are the co-produce or co-creator of the service, which typically involved production, delivery and consumption stages. The examples in of this kind are consulting services (involve customers to identify issues, share problem solving, continuous communication and implementation of solutions), self-service (do-it-yourself furniture installation), and SSTs (online shopping). (Wilson et al., 2008) Customers have higher likelihood to engage a SST when they have higher level of role clarity. (Bitner et al., 2002) Moreover, a clearer customer's role expectations also lead to a higher probability of an improved service outcome. (Mills et al., 1983 cited in Hellman, 2014) Lack of understanding often impedes participation and the likelihood of a trial. (Larson and Bowen 1989 cited in Meuter et al., 2005) Company can carry out customer education through written material, such as handbook, or training program to guide customer to understand their role and the expected level of participation.

Finally, customer is ready to use a SST provided that there is sufficient motivation factor especially when they are aware that there are other service delivery choices. Customer must see that there is a benefit gained by performing the 'new behaviour' requires when using a SST. The perceived benefits such as cost and time saving, conveniences, easy access, sense of control and even fun are motivating customer to try the service. Motivation is defined as "drives, urges, wishes or desire". (Bayton 1958 cited in Hellman, 2014) Many studies found that motivation is a key predictor for usage of technology-based product and services. (Barczak, Ellen and Pilling 1997 cited in Meuter et al., 2005)

In the study of Information System adoption for example, one of the most widely known models: Technology Acceptance Model (TAM) (Davis, 1989) explains what causes user to accept or reject to use a specific technology. It is stated that "perceived usefulness" and "perceived ease of use" are two fundamental variables that affects a user's intention. "Perceive usefulness" is described as "the degree which a person believes that using a particular system would enhance his or her job performance." In a workplace context in general, employees are empowered for good performance with rewards such as raises, promotions and bonuses. (Pfeffer, 1982; Schein, 1980; Vroom,



1964 cited in Davis, 1989) Hence, the sense of usefulness is seen to be a benefit that motivates user. As for "perceived ease of use", is described as "the degree to which a person believes that using a particular system would be free of effort." "Ease of use" gives user a sense of "freedom from difficulty" is considered as a benefit that motivates user to use a system. The possibility of a user to adopt a system is higher when it is perceived to be easier to use than others under equal situations. Additionally, role clarity as explained earlier can be associated closely with ease of use for e-services trial as well. Users should be communicated on what to do otherwise they will not try at all. (Hellman, 2014) In short, both beliefs alter user's motivation and lead to actual usage of a system.

Following that, "perceived usefulness" is also highlighted in system user interface research. A good design navigation menu, icons and other features are said to be able to enhance usability (Bewley et al., 1983 cited in Davis et al., 1989) which in turn supports continual system usage. (Davis et al., 1989) A study in e-consumer behaviour suggested that "an electronic retail website become more attractive and efficient with increased use as learning leads to a greater intention to purchase." (Bhatnagar and Ghose, 2004: Johnson et al., 2007 cited in Dennis et al., 2009) "Efficient" here refers to that customer is able to get to the website to find the product and information they want, and check out with minimal effort. (Wilson et al., 2008) Moreover, in the topic of user experience, it does not only focusing on enhancing user experience but also aim to invoke emotional connection such as satisfaction, enjoyment, excitement and motivation. (Rogers, Sharp and Preece, 2011 cited in Hellman, 2014)

Customer co-production and participation are important aspects of SSTs. Co-production requires customer to engage and participate actively in the company's work, which means customers become 'partial employees' by contributing their effort, time or other resources. Customers who take the responsibility and company (service providers) which promote customers to be their partners in pinpointing and satisfying their own needs will generate higher level of service quality. Due to their participation, customers are able to control and contribute to their own satisfaction along the service experience. When customer developed positive impression towards the company (service provider), the likelihood to purchase from the company is also higher. (Dennis et al., 2009) Customers willing to be involved in co-production when they see clear benefits



(lower prices, quicker access, better quality outcome) and that their needs are fulfilled. (Wilson et al., 2008) Recognising this impact, company has been placing a lot of effort to reinforce the partnerships with their customers so that they will be better coproducers. (Vargo and Lusch 2004 cited in Meuter et al., 2005)

Another research area on customer adoption in e-services looks into customer perception towards the value in e-services. This research area also focuses on predicting customer purchase intention. Value means the trade off for the customers between the components of the 'give' and the 'get'. It can even be further defined as "a customer's perception of the net benefits gained in exchange for the cost incurred in obtaining the desired benefits." Nevertheless, customers' perceptions of value are different among each other due to many factors such as personal taste, knowledge about the service, and buying power. "Perceived customer value" can also influence customer purchase intention (Chen & Dubinsky, 2003) and this again connecting the 'benefit' to drive customer intentions to perform a particular behaviour. Since customers have to coproduce the work to fulfill their own need, they are also considered as co-creator in the value-creating process (consume or use a service or product) with the company. When a company is able to continue deliver better value than their competitors to customers, customers will remain loyal to it. These benefits can be relational benefits that develop over long-term service relationship such as confidence benefits (feeling of trust towards the company), social benefits (sense of familiarity due to personal relationship) and special treatment benefits (getting the benefit of the doubt, special deal or price). (Gwinner et al., 1998 cited in Wilson et al, 2008)

Further studies in understanding user's motivation to use a technological system pointed out that motivation can be in two forms, extrinsic and intrinsic. Extrinsic motivation involved external reasons, is defined as "the performance of an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself, such as improved job performance, pay or promotions" Perceived usefulness explained in earlier paragraph is considered an example of extrinsic motivation. However, intrinsic motivation is associated with personal emotional feeling, it is refers to as "the performance of an activity for no apparent reinforcement other than the process of performing an activity per se". Sense of enjoyment and fun are examples of intrinsic motivation for user. (Davis et al., 1992 cited in Malhotra et al., 2008).



For customer adoption in SSTs, some customers are more active than the others as they are attracted to the intrinsic motivation factors that will bring them a sense of accomplishment, prestige, personal growth and mere pleasure. Other customers may be more influenced by extrinsic motivations, usually driven by self-interest. This can be seen particularly in extrinsic benefits such as money, bonuses, price discount, time saving and even threat of punishment. (Bateson 1985; Dabholkar 1996; Schneider and Bowen 1995 cited in Meuter et al., 2005)

Ability, Role clarity, and Motivation examples can be seen in the success of the online shopping retailer Amazon: customers understand that they can get clear benefits of using Amazon's services such as cheaper price products compare to other alternatives, are clear about their role and also have the ability to use the website because it is user friendly and reliable.

The Consumer Readiness model is adapted as the theoretical framework for this research. The three variables explained earlier: Ability, Role clarity and Motivation are the foundation of understanding to construct the use cases in the Research Team site and the final model. The adaptation is outlined in Table 1.

Table 1. The key concept from Consumer readiness model is adapted into the research to build the case company model.

Consumer readiness in e- environment SSTs	Adaptation in this research
Ability	
Having necessary skills and confident required to perform a task. 'Can do' attitude, 'wants to do' or 'knows how to do'.	Team members can test the functionality in the Research Team site to get a feel on how it works. Step by step instructions on how to set up the particular functionality is provided in each use case. Team members can follow the instructions to re-create the same set up in their own team site. Along the learning process, they will also gain more and more confident in using the new features which may in turn lead them to explore more possibilities and use extensively in the long run.



Role clarity

Customers have higher likelihood to engage a SST when they have higher level of role clarity. Participation can be constrained by insufficient clarity of consumers' understanding of their role in the service process.

Team members participation may be constrained by insufficient clarity of the following:

- purpose of the team site,
- their roles, ie. Site owner, deputy site owner, editor, visitor etc
- actions or inputs required from the members when a particular features is added by the site editor when using the Team site.

Motivation

Intrinsic & extrinsic rewards influence the likelihood of a SST trial. Some customers prefer active role because they found it intrinsically attractive, others might be more motivated by extrinsic rewards like price discount, time savings etc.

Each use case will highlight the benefits of using the particular features. The document on how to get people onboard help site owner to motivates team members to be active participants for their team site.

This adaptation can be explained as follow. Before a team decided to order a team site, all team members involved should have a clear understanding on team's objective of using the site, what they want to achieve, for example improve collaboration and promote self-service. Next, they should agree and clarify their roles and responsibilities (who are the site owners, deputy, section owners, editors etc.) as well as the ground rules of the new working practices incorporating team site (no circulation of emails with huge attachment, place the attachment to the team site folder instead. When the site is in use, it is also important that all team members 'stick to the rules' agreed and participate actively in all the activities carry out in the team site (or intranet). The assigned site owners are provided with the preparation check list, and the tips to get people onboard document that are designed to help them to get started and motivate their team member's participation.

Apart from existing training materials, the use cases constructed in the Research team site provide some examples and additional instructions on to use certain functionalities also aim to help team members to learn more about the application. Each use case highlights the benefits of using the particular features as the motivation for user to try the functionality. The more they use application, the more they will learn, gradually increasing their confidence to explore new features further. Essentially all team mem-



bers are also encouraged to join team site and intranet training program available when they started using team site to learn the necessary the basic skills.

2.2 Use case

'Use case' is a term typically use in software development for system testing. It describes how a user uses a system to achieve a specific goal, and the system's behaviour in response to the user's request from the user's perspective. (U.S. Dept. of Health and Human Services, 2014)

In this research, each solution proposed is constructed as a use case: how the solution can be perform, with the purpose to help the team members to solve a specific challenge in a specific context. It does not necessarily describe the system behaviour the way use case is commonly depicted in software engineering. The objective of use case here in is to show the useful ways to use a particular feature or functionality or a combination of several features, and to draw upon the benefits it provides to users.

Kuhlthau (1999) asserted information workers focus on value added information derived from seeking, gathering and interpreting information, which is crucial in decision making to the function of a company. Hence, it implies that a good structured digital work space such as team site could support this purpose.

The interface of a team site (and also the Intranet) provides users the flexibility to compose their 'work area' by adding different type of functionalities into the designated place-holder available on the page. An example is show in Figure 5. In general, users can add as many functionalities as they want, considering what they want to accomplish in that page. However, a functionality can also be configured or use in different ways for different purpose, this is not necessary obvious to everyone. Some time, a small tweak could make things work easier than it usually is, for example it is possible to configure an excel worksheet and embedding it directly on the page to make editing faster rather than circulating the file among editors via email attachment. Thus, use cases help teams to learn new ways to organise and optimise their work practices.



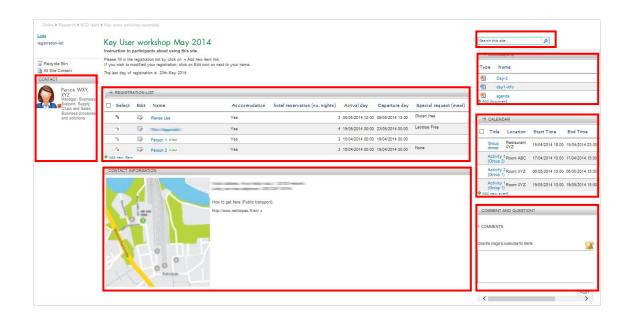


Figure 5. Example of a team site user interface which contains several functionalities (outlined in red) added into the page to serve a specific purpose.

3 Research Methodology

3.1 Participatory Action Research

Action research (AR) has been promoted in organisation as a way to develop personal and professional growth. People can improve the quality of their work with others by understanding their own work practice. (McNiff and Whitehead, 2000)

Action research model was first developed by Kurt Lewin during 1940s. It was aimed to produce informed, better behaviour and boost social change by combining theory and action, in respond the social system situation at that time. (Oja and Smulyan, 1989 cited in Dickens and Watkins, 1999)

Lewin's original AR (Sanford, 1970, Lewin, 1946 cited in Dickens and Watkins, 1999) was described as

consisted in analysis, fact-finding, conceptualisation, planning, execution, more fact-finding or evaluation; and then a repetition of this whole circle of activities; indeed a spiral of such circles

After Lewin's dead in 1947, many other similar minded researchers continued to elaborate and expanding action research theories further. Cunningham (1993) said that AR is "a continuous process of research and learning in the researcher's long-term rela-



tionship with a problem." He also suggested that AR method can be a variety of activities and not a particular format. (Dickens and Watkins, 1999)

Participatory Action Research (PAR) is one of the strategies in Action Research. It is the approach used in this research because of the nature of the research problem, where the principle of "participatory" and "collaborative" are emphasised. (Eden and Huxham, 1996) PAR can be defined as people in the organisation under investigation "participate actively throughout the research process from initial design or diagnosis, to the adoption of action strategies". (Whyte, 1991; Harrison & Leitch, 2000 cited in Cassell & Johnson, 2006) PAR shows a two way relationship formed between the researcher and the participants under investigation. The researcher engages and contributes to the participant's practices, at the same time the participants contribute directly to the outcome of the study. (Eden and Huxham, 1996)

The characteristics in Action Research such as collaboration, problem solving, and change in practice are the highly regarded in the process of this research. The success of the final model relies upon the collaborative relationship between the researcher and the case teams. The case teams are also the pilot teams for the research. They are involved right from the beginning for investigation, and initial drafting of the solutions which are then developed as use cases in the end. The research design is explained in detail in the following section.

3.2 Research design

The research design is outlined in 10-steps show in Figure 6 below. The idea is to get existing working teams in the organisation which consists of members located from different working locations (office or home-based) to participate voluntarily as the pilot. The case teams carry on their work duties as usual during the whole course of research which was planned for approximately 16 weeks. Before the research began, I discussed with my colleagues and supervisor at work to get some ideas for whom and which team to approach to get them involved in the research. After identified potential teams, I proceeded to write an introduction email to the team leaders and contact persons explaining about the research background, purpose and invited them to participate in the research. In the email I also explained the potential benefits for the team



members would get from joining the research, such as learning new features, discover new methods to improve team collaboration, and personalised attention on issues regarding the application. In the end two teams had agreed to join the research and I began the process with the current state analysis. After the agreement, an online meeting was reserved to present to the whole team the research background and the objectives. Team members were also informed about current state analysis process.

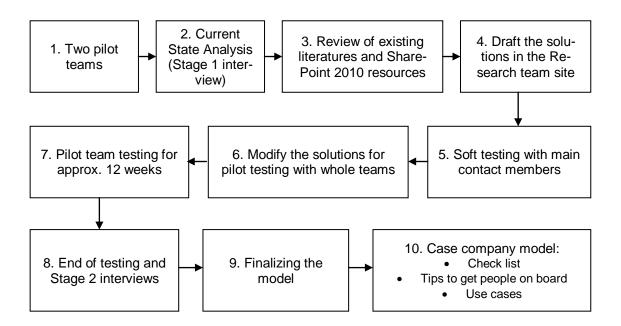


Figure 6. Outline of the research design in 10 steps.

The current state analysis was carried out through interviews and online survey with the same questions. Emails were sent to all team members to schedule face-to-face interview, or online interview. Meanwhile the email also contained the hyperlinks to the online survey. This was to provide members different options for their preference, and in case they do not have time due to other commitments. The investigation and analysis for both teams took approximately 1 to 3 weeks to collect all necessarily information and emerging questions related to team site and intranet functionalities.

Next, based on the issues and questions raised in current state analysis, existing literature and resources on SharePoint 2010 were reviewed and examined in order to compose different solutions in the Research Team site. All the SharePoint resources were found from the internet, such as online forum (Microsoft forum; Share Point User group on linkedin.com), videos (youtube) and learning websites (nothingbutshare-



point.com; endusersharepoint.com). In many cases, several websites were consulted to ensure the proposed solution was genuinely correct method for a particular solution to a particular issue. And then the solutions were built in the Research team site with instructions and benefits added. In order to minimise the interruptions that might affect their normal duties, only the key members who were the main contact of each team were contacted for further discussions and clarification.

Once the solutions were ready, key members of the respected team were invited to perform a soft testing in the Research Team site. In this stage, direct observations were carried out to find improvement areas. The functionalities set up with step by step instructions (text and images) were presented via face-to-face meeting and online screen-sharing. The solutions were then modified accordingly based on their inputs during testing. After the changes were completed, the key members were requested to use the method learned from testing to recreate the same set up in their own team site. This was important as their own team site contained navigation site structure where team members were familiar and actual files or content that were representing real scenario of using the solution (for example setting up a discussion forum functionality for a team discussion with actual topics instead of a mock up topics used in the Research team site) This process was repeated until all issues addressed were covered.

The pilot testing stage took approximately 12 weeks. It began when each proposed solution was recreated in actual context, where all the team members can try them in their own team site interface with the real content. The 'testing' allowed members to actually use the functionalities, for example creating multi-topics discussion board synchronised with email application, embedding PowerPoint file directly on Team site page and creating SharePoint list. In this stage, further questions and feedbacks emerged from the members were collected to modify the use cases in the Research team site until they were satisfied. Their inputs were also applied to produce the preparation checklist and the document of practical tips to get people on board in the final model.

At the end of the pilot testing, team members were invited for the second part of the interview and online survey to get their final feedbacks. Emails were sent to all team members to invite them for online survey or meeting. Finally, the case team model was developed. The details of the final proposed model will be discussed in Chapter 5.



3.3 Pilot teams' background

Before the actual research process begins, several teams were approached to participate in this study. However due to their work commitment only two teams are able to participate as pilot teams. The first team, known as team A consists of 15 members while the second team, team B consists of 12 members. Both are organisational team with several members located in different offices in the Finland. Some of the team members are fairly familiar and motivated to try various features in the application while several others has yet attended team site training course. Besides, due to their differences in responsibilities at work, some team members use the applications more frequently than the rest of the team.

Table 2 summarised the team background and their targets of using social collaboration applications such as Team site. Both teams identified their need to find alternatives method of communication and collaboration other than using email.

Table 2. Pilot team's background and their team target on using social collaboration applications.

Team	Team target on using social collaboration applications
Team A	Promote self-service, increase team site usage for improve collaboration: conveniences and save time, apart from using email, or circulating attachment via email.
Team B 12 members 1 main contact for building use cases	Improve information sharing and organisation. Store information centrally apart from using email.

3.4 Data collection and analysis

Qualitative data is collected in this research. The collection is carried out in two stages. The first stage is the current state analysis and the second stage is at the end of the pilot testing. As the pilot teams continue their duties during the course of the research, several ways of data collection are used for their convenience. All the members



are invited for either face-to-face interview, online interview with screen sharing or online survey created using the built-in functionality in the Research team site.

The current state interview takes approximately 30 minutes while the online survey takes about 15 minutes. The current state interview contain questions on working practices such as how team members usually discuss and make a joint decision together meeting practice and email usage. Additionally, several open questions are included to capture the pain-points and working process they wish to improve by using the functionalities, for example 'how-to' configure a particular functionality, or combine use of office applications with a functionality.

Team members are encouraged to elaborate their concerns by giving examples on what they dislike, and the problems that occur along their work process. They are also asked to rate on how they find the usage of applications in the scope in supporting their work with their team members productively.

The second stage is also the final interviews and online surveys are conducted at the end of the pilot testing. The objective is to find out the overall satisfaction towards the solutions and whether team collaborations have further improved. The results are discussed in the next chapter.

4 Finding from the analysis

4.1 Conclusion from Current State Analysis

The responses and questions raised in current state analysis are collectively use for developing the use cases and the supporting documents: preparation check list and practical tips to get people onboard.

Both pilot team members expressed the challenges in regards to team collaboration and team site usage are summarised as follow:

 Team site features are difficult to use due to the lack of knowledge on how some of the functionalities work. Some members still struggle with the basic features.



- There is a need to dedicate more time to learn tricks that are not specified in the training materials provided because different team has different needs.
- It is difficult to get some team members to use the same application and there is no common way of working. Many are using email only.
- Too many emails generated over simple issues.
- When people are busy at work they are not free to learn by themselves.
- Information scattered around (in intranet, team sites, and email) and the search feature is not working properly.
- Long email chain generated due to discussion and exchanging questions, for example organisation a joint event.

40 percent of the team members interviewed mentioned having difficulties in using team site and the functionalities. 50 percent of them indicated that huge numbers and long email chain is impediment to effective collaboration. An average point of 3.86 was scored when they were asked to rate on how well does the usage of the current applications in supporting their work with the other members productively from the scale of 1 (weak) to 5 (excellent). 40 percent emphasised that they give a higher rate because of Microsoft Lync 2010 online meeting and instant messenger is efficient and easier to use compare to team site.

The use cases developed based on the other questions collected concerning the functionalities are grouped into five focus areas, namely: Communications, Information Sharing, Basic repository service, collaboration and self-service as shown in Figure 7. They are also representing the principle of the functionalities can be 'overlapped' with one and another. As an example, a particular use case shows that how communication and information sharing can be improved by using the discussion board functionality and create a synchronisation with email. Another use case shows the possibility of converting an excel sheet to a Share Point list in team site allowing multiple users to edit the content at the same time, enabling collaboration and indicate the basic repository capability. Examples of use cases are covered in chapter 5.



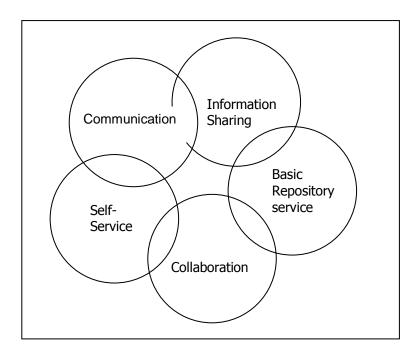


Figure 7. The use cases created in this research are categorised into five focus areas.

4.2 Conclusion from the final interviews

The final interviews gathered feedbacks from pilot team members on their satisfaction towards the overall solutions proposed. The results are summarised as followed:

- Less than 50 percent of the interviewed members find that team collaboration improved as compare to before pilot testing.
- Less than 50 percent of the interviewed members agree that the solutions had help to reduce the number of emails they received.
- An average of 3.28 was scored when members were requested to rate whether
 the solutions tested has support them to work with their team members productively from the scale of 1 (poor) to 5 (excellent).

It is worth noting that the rating given on whether the solutions tested improve team productivity is different from one member to another. Some team members give higher rate than the others, due to the fact that the differences on individual's perception and emphasis on using team site. One member quoted that 'those who already did use it, use it more, but those who were not eager to use it before, still do not use it actively.' While another member said that it is obvious that now more things go into team site and they have received many good ideas from pilot testing.



5 Proposed model

The final model consists of three items serve as recommendations to teams: preparation checklist, practical tips to get people onboard, and 12 use cases created in the Research Team site.

5.1 Preparation check list

The preparation checklist is a document covering 4 important aspects associated with team site usage, namely: Site Type, Access right management, Search Optimisation, and Smart meeting. It works as a starting point for new site owners to better understand their role and needs in order to make the right decisions before proceeding to order a new team site. The document provides suggestions, examples, and highlights the benefits of each objective. The 'benefit' is emphasised so that team members understand the value and, are motivated to follow the recommendations.

Two examples extracted from the checklist are shown in the next pages. The full checklist is available in Appendix 3. Figure 8 shows that the first point for new site owner is to determine what kind of site they should order based on the main usage requirement. They are suggested to plan the site content structure according to the need of their target groups by making a draft first. By following these recommendations, they will be able to optimise their site usage and user experience as well as avoiding unnecessary editing work in the future.



Four Tips to help you to make better decision before ordering Team site

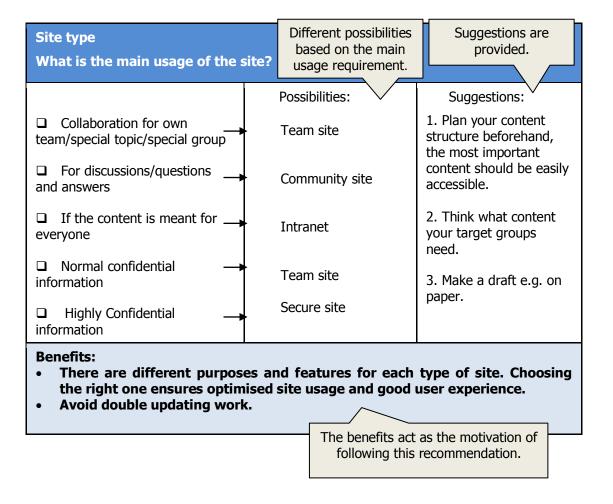


Figure 8. The possibilities, suggestions and benefits are provided in the document to help site owner to make better decision regarding the type of team site they should order.

Another important consideration is the access right management shown in Figure 9. Permission to access to team site content, records, structure and functionalities is controlled by site owner, deputy site owner, and those with owner's right. They are advised to seek agreement and clarified their role and responsibilities with their team members on this matter beforehand. The benefits they get by following this recommendation is better content security and easier sharing among members.



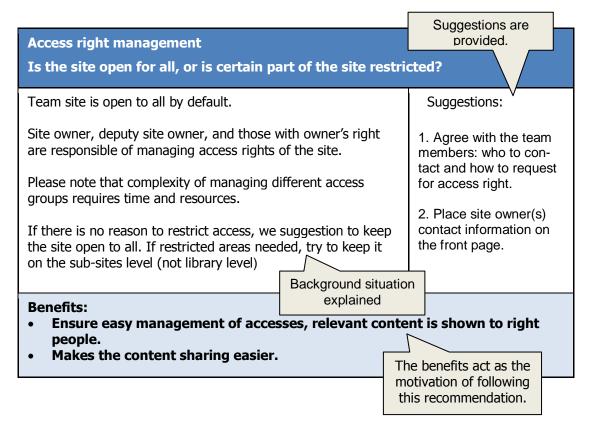


Figure 9. The background situation, suggestions and benefits are provided in the document to help site owner to make better decision regarding access right control.

5.2 Tips on how to get people onboard

Once a team site is in use, it is important for team to get the most value by using it actively. Therefore, a document called 'Tips on how to get people onboard' is created to help site owners to get their members to be more involved and motivated to use the application. It consists of three practical tips described in a short and easy-to-followed format. Examples, suggestions, and the benefit of each tip are provided the similar to the preparation checklist. The tips are shown in Figure 10, 11 and 12.

The first tip addressed the need for teams to define their target on using the team site shown in Figure 10. A clear understanding on what they want to accomplish through team site usage, helps them to plan the site structure, content and functionalities properly. The result they will get out of it is a well structured team site that will motivates users' participation.



Tips to get people onboard

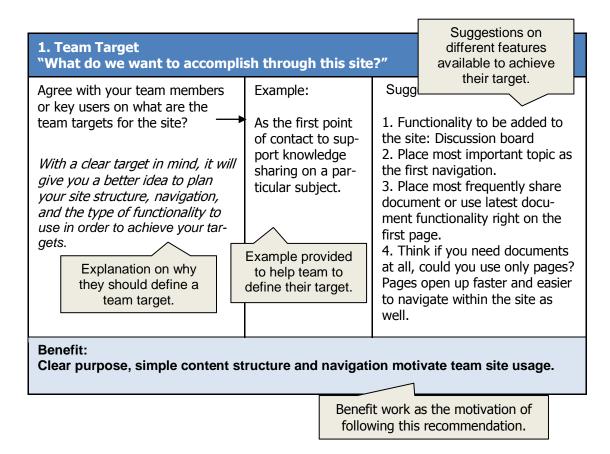


Figure 10. The objective, suggestions and benefit are provided in the document to help site owner to promote active participation starting by defining a clear team target.

Leadership involvement to accelerate adoption is one crucial factor to help team members to recognize and be empowered to use team site as part of their daily work. In this respect, the leaders in the organisation and team site owners, as well as the advanced users could extol the benefits of using the application, for example to invoke the sense of 'exclusivity' by using the new features. Also, it should be pointed out that it is a team effort to make the site and new practices successfully and not out of self-interest of the site owner. Tip on 'Promote involvement' is shown in Figure 11.



2. Promote involvement Highlight that everyone's participation and contribution matters.

Suggestions for site owner on how to promote involvement.

Site owner and the organisation leaders need to involve actively to encourage and

motivate to all members.

"What is it for our team on using this particular feature, how is this help to solve a problem FOR the whole team?"

Suggestions:

- 1. Promoting the site feed, Instead of
- 2. The owner should show example and start using the new tools, for example, instead of using e-mail, you can write the answer to newsfeed.

Benefit:

Persuade, promote and show 'exclusivity' of using the tool. Team member would not like to feel being left out if everyone is involved.

> Benefit work as the motivation of following this recommendation.

Figure 11. The objective, suggestions and benefit are provided in the document to help site owner to promote active participation by leadership involvement.

The last tip shown in Figure 12 provides suggestions to team owner and members to start with basic features first if they are not familiar with the application. When a new functionality is added to the site, clear instruction should be added so that others are clear on what they need to do.

Examples:

You want users to

give comment to a

topic posted on

discussion board.

3. Start with baby steps Basic feature first; provide brief guidance.

If you are new team site, start using basic features, or most relevant functionalities first, and continue to use more features when everyone gets familiar with the site.

When you have a topic which require user participations, give additional information on what do you want users to do?

Benefit work as the motivation of following this recommendation.

Suggestions on how to get the others to use the functionalities added to the site.

Suggestion:

- 1. Give quick demonstration on how to reply to the topic on the discussion board, for example during team meeting.
- 2. Provide short instructions on the page.
- 3. Send calendar reminder to users regarding your request, and deadline.
- 4. Use intranet community if you any questions. Refers to Intranet quideline.

Benefit:

A Clear understanding on what is needed from users will encourage participation.

Figure 12. The objective, suggestions and benefit are provided in the document to help site owner to promote active participation by starting with basic features and providing guidance.



5.3 Use cases examples

Use cases are created initially based on the issues and questions raised by pilot teams during current state analysis. All the inputs during the pilot testing are also taken into account before they are finalised. Each use case reflects a common scenario on how team member can make use of one or more functionalities as a solution for one issue or several issues at once. It answers to questions like: what are the alternatives of email for team members to have ongoing multi-topics discussion while archiving all the information online in a centralised location? What are the alternatives to encourage self-service for a specific task among team members?

The wireframe layout of the use case is illustrated in Figure 13a and the print screen example is show in Figure 13b. The page starts with the use case title heading, the scenario which describes the specific team's need or problem, and followed by a brief introduction to the solution proposed. The functionality or features of the solution is placed in the middle, followed by instructions on how to create it beneath it. The navigation links to each use case are located on the left. On the top right is a section called 'Productivity tips' serves as the motivation factors explaining why this method is useful and how it can helps them to improve productivity? Below it, is a section called 'Remember' highlighting points to pay attention when using the functionality. Lastly, a comment section locates underneath the page invites users to give feedback or ask any question related to this use case.



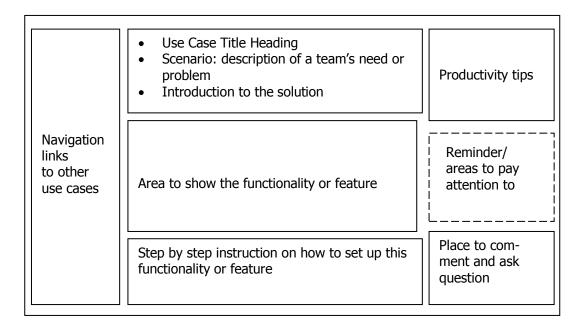


Figure 13a. The wireframe layout of a use case interface in the Research Team site.

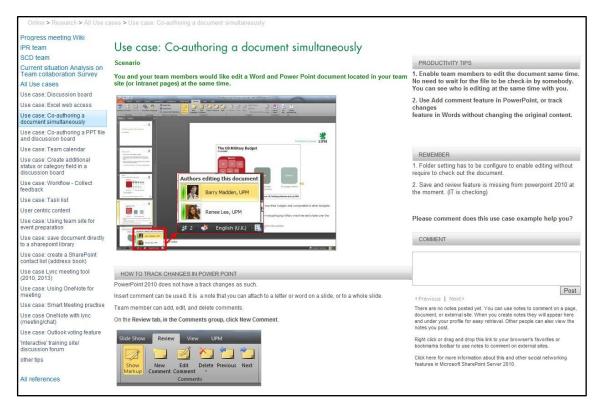


Figure 13b. An example of a use case interface in the Research team site.



The following are 5 use cases extracted from the Research team site. They are print screen images overlay with commentary. Note that the navigation links located on the left of the page is left out. All the use cases in are available in Appendix 4.

Figure 14 shows the print screen of the Team calendar use case.

Scenario: You and your team member would like to place all team activities into a centralised location.

Team site calendar provide easy access to team schedules information at one glance. It can also be configured to display as Event list based on different category set by the

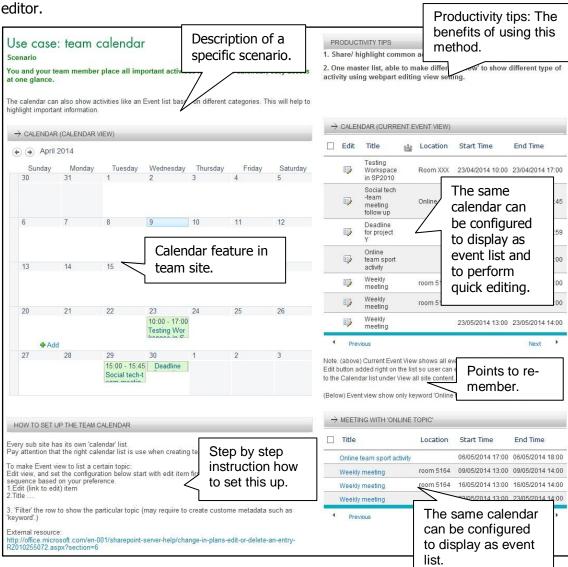


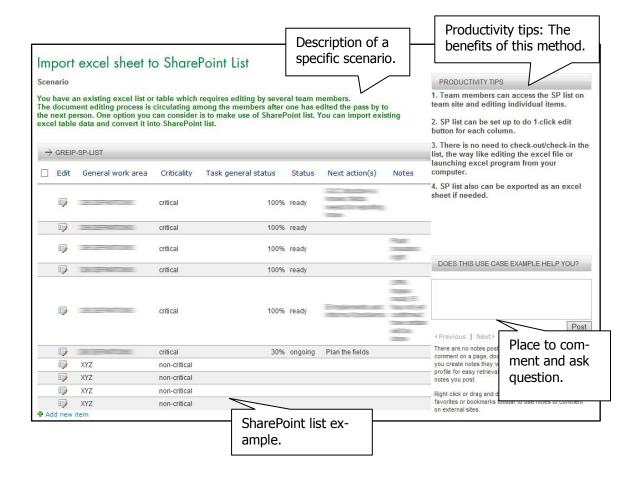
Figure 14. Use case on Team calendar shows different possibilities to use the features to improve team collaboration.



Figure 15 (splitted into 2 pictures as the screen page is long) shows the print screen use case on how to convert an excel sheet to SharePoint List.

Scenario: You have an existing Excel sheet which requires editing by several team members. The document editing process is circulating the file via email among the members one after another.

One possible option you can consider is to covert the existing data to a SharePoint list. The benefit of using this method is that it save time and team members can access and edit the list in team site easily. The list can also be converted back to an excel sheet after it is edited when needed.





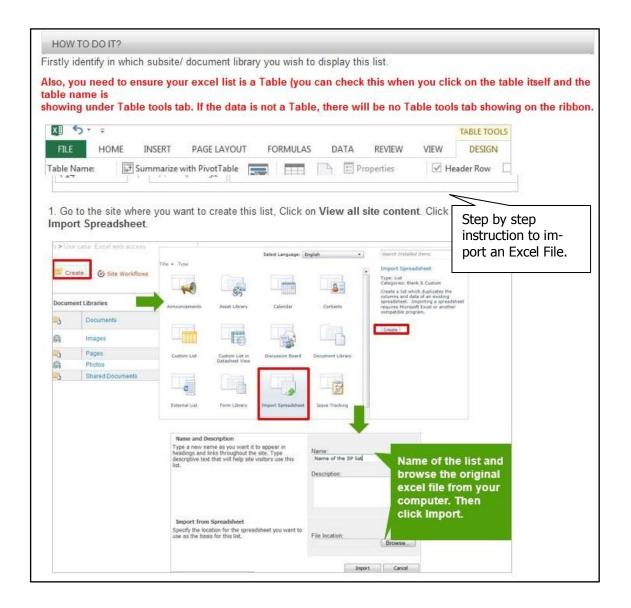


Figure 15. Use case on how team can save time and the convenience of using SharePoint list.

Figure 16 shows the use case on how to enable a document to be edited by multiple users simultaneously.

Scenario: You and team members would like to edit a Word document or PowerPoint document simultaneously.

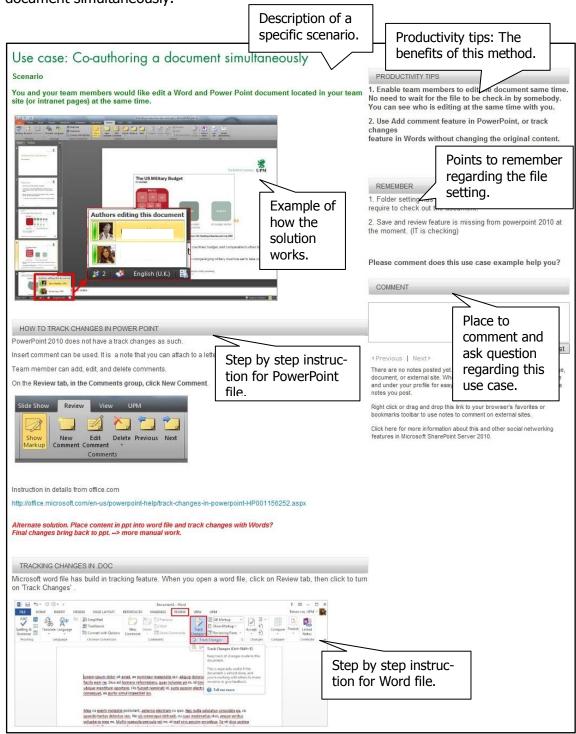


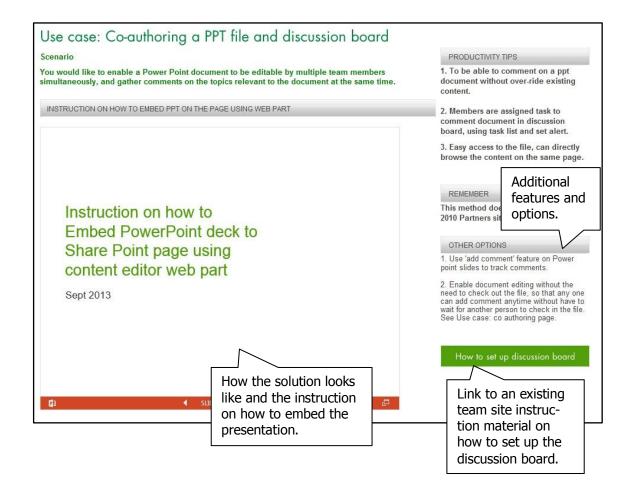
Figure 16. Use case shows team can save time and the convenience of enabling Word and PowerPoint document to be edited simultaneously by keeping the files in team site.



Figure 17 (splitted into 2 pictures as the screen page is long) shows the use case on how to co-authoring a PowerPoint presentation with multiple users simultaneously and organise a discussion forum.

Scenario: You would like to have your presentation file to be edited by team members simultaneously at the same time gather their comments on the topic relevant to the document.

This is an example of integrating 3 features: Creating a quick broadcast by embedding the presentation file (PowerPoint) directly on the page, enables the multiple editors co-authoring setting, combining with discussion board functionality. The benefit of using this method is that it provides alternative communication channels, promote self-service and speeding up working process by allowing several team members to edit the content of the file together. At the same time, their comments are archived systematically in the discussion board reduce the need of using email.





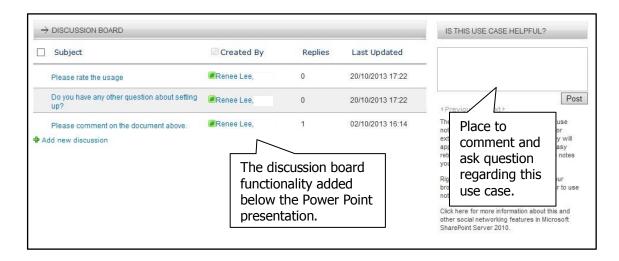


Figure 17. Use case on how to enable multiple users to edit a presentation simultaneously and to gather comments using discussion board functionality.

Figure 18 shows the example of how to make use of team site to organise a joint event.

Scenario: Your team is going to organise an internal event involving people from different office locations. You need to collect participants' details such as itineraries, accommodation and diet request. At the same time you are also require to share relevant documents such as presentation files, meeting minutes to everyone.

The solution to this situation is by integrating several functionalities in team site:

- The registration list can be created by using SharePoint list feature;
- Storing all documents centrally in team site folder and display them onto the user interface;
- Show event schedules using team calendar functionality;
- Use the comment with alert functionality for participants to post questions.
- Add search functionality to the page to ease file searching.

This solution provides many benefits for example it reduce email communications during the preparation period, promote user self-service and makes collaboration easier.



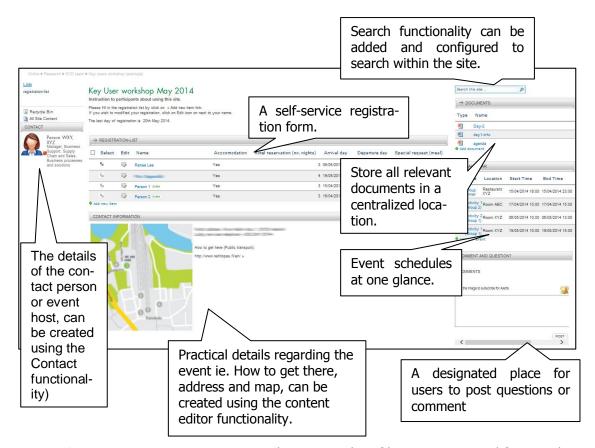


Figure 18. Use case on event preparation shows examples of how to use several functionalities together to organise and event effectively.

6 Conclusion and discussion

This research produced a package of recommendations to supports the case company's overarching objective of improving employee collaboration and productivity. Company gets the real value out of its investments, such as money, time and human resources, only when employees actually use the application extensively binding with collaborative work practices. A highly collaborated organisation improves productivity and will contribute to business performance improvement.

The research began with an investigation on how two organisational teams, as the pilot, consisted of members working from different locations collaborate with each other in their daily work and finding out what were the issues they faced when using the Share Point 2010 team site (and intranet) functionalities. Based on the issues raised, proposed solutions were constructed as use cases built in a Research Team site designed for this research. The key contacts from each team were presented with the



solutions and then re-create the same set up in their own team site for the rest of the team members to try out and use the features in actual context. The use cases were refined several times based on the teams' feedback and concerns. All these feedbacks and concerns were collectively summarised and applied in building the final model.

6.1 Implication of the pilot case study

Yin (2014) explains that a pilot case study refines the data collection plan with respected to both the content of the data and the procedures to be followed. It can also represent a complicated case that is very close to real situation. In this research, a small participant pool involved actually represented the overall situations in the case company. The findings drew from these participants from the current state analysis and final feedbacks, has showed some of the actual problems many other users were facing when using the application.

One of the objectives of rolling out the social collaboration application in the company is to enable seamless employees' collaboration particularly across geographical boundaries. The teams in this research were consisting of members working in different locations in Finland, who were also the first groups of people to be studied in this topic area and contributed some general understand to what extent the application has supports this objective so far. Nevertheless, for future research, it might be an ideal choice if there were teams consisting of international participants across continent to be studied.

As the level of 'Share Point knowledge' or 'skills' from the team members varies, it has provided a good ground to start investigating different type of problems faced by different level of users knowledge with the application. It has helped in constructing the final model which can be used by all level of users.

6.2 Managerial implications

The recommendations produced from this research can be incorporated into the existing supporting framework and integrate with other office applications available as illustrated in Figure 19.



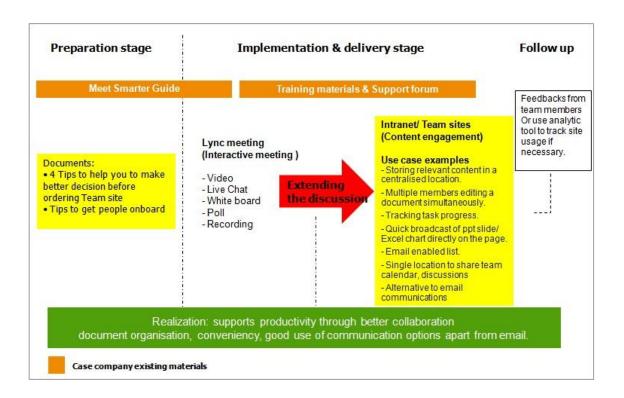


Figure 19. The final model incorporated into existing supporting materials.

Before any team decided to order a new team site, they are provided with the preparation checklist to going through the important points of consideration and refer to the tips to get buy-in from their team members for the new work practices. Regular work activities such as meeting and discussion can be extended and recorded beyond the meeting application into their respective Intranet pages or team site. The use cases work as additional references for team apart from existing training materials and support forum.

This package supports the application concept owners and managers in two ways. First, when the preparation checklist and practical tips to get people onboard are distributed to all who requested a new team site, they will help users to be better prepared and educate themselves on some background information of the application. In the long run it may contribute in reducing unnecessary support resources. Secondly, the recommendations also contribute to the promotional effort on the application usage and user adoption by highlighting the benefits of each action.



Finally, this research opens a path to studying the possibilities to translate some of the features and functionalities available in SharePoint 2010 team sites into team productivity. The research findings discussed in chapter 4.2 has suggested that motivation is a crucial factor and the benefits of using the application need to be emphasised in order to expedite users' adoption. Individual perceptions and emphasis towards a particular approach of working practices could be different. This provides opportunities for further research to investigate what are the other possibilities to motivate user?

With the new versions of social collaboration application launched with more advanced features, it also gives opportunities to study how these new features such as mobility and "Gamification" features in particular, could further support team collaboration and improve productivity.



References

Argyris, C. and Schon, D. (1991) Participatory Action Research and Action Science Compared, in *W. F. Whyte Participatory Action Research*. Newbury Park: Sage.

Association for Information and Image Management (AIIM). (n.d.) What is SharePoint? Retrieve from http://www.aiim.org/What-is-Microsoft-Sharepoint

Bateson, J. (1985). Self-Service Consumer: An Exploratory Study. *Journal of Retailing*, 61 (Fall), 49-76

Bewley, W. L., Roberts, T. L., Schoit, D., & Verplank, W. L. (1983). Human Factors Testing in the Design of Xerox's 8010 "Star" Office Workstation. *CHI 83 Human Factors in Computing Systems*, Boston, December 12-15, 1983, ACM, New York, 72-77

Bhatnagar, A. and Ghose, S. (2004). Online information search termination patterns across product categories and consumer demographics. *Journal of Retailing*, 80 (3), 221-8

Bitner, M., Ostrom, A. L., & Meuter, M. L. (2002). Implementing successful self-service technologies. *Academy Of Management Executive*, *16*(4), 96-108. doi:10.5465/AME.2002.8951333

Borg, A. (2013). *Why Enterprise Social Collaboration means business*. Retrieve from http://www.informationweek.com/it-leadership/why-enterprise-social-collaboration-means-business/d/d-id/1112149

Brynley-Jones, L. (2012). *75% of businesses to use social collaboration tools in 2013*. Retrieved from https://econsultancy.com/blog/10986-75-of-businesses-to-use-social-collaboration-tools-in-2013-infographic#i.1f6ngwih00d5du

Bughin, J., Chui, M., Manyika, J. (2012). *Capturing Business Value with Social Technologies*. Retrieved from

http://www.mckinsey.com/insights/high_tech_telecoms_internet/capturing_business_v alue_with_social_technologies

Case company Annual report 2011

Chen, Z., & Dubinsky, A. J. (2003). A Conceptual Model of Perceived Customer Value in E-Commerce: A Preliminary Investigation. *Psychology & Marketing*, *20*(4), 323-347. doi:10.1002/mar.10076



Corkery, M. (2012). *Getting employees to actually use Social Collaboration tools*. Retrieved from http://www.forbes.com/sites/ericsavitz/2012/12/16/getting-employees-to-actually-use-social-collaboration-tools/

Cross, R.L., Martin, R.D., and Weiss, L.M (2006). *The McKinsey Quarterly Number 3: Mapping the value of employee collaboration*. Retrieved from http://www.mckinsey.com/insights/organization/mapping_the_value_of_employee_coll aboration

Cassell, C., & Johnson, P. (2006). Action research: Explaining the diversity. *Human Relations*, *59*(6), 783-814. Retrieved from http://search.proquest.com/docview/231488092?accountid=11363

Dabholkar, P.A. (1996). Consumer Evaluations of New Technology-Based Self-Service Options: An Investigation of Alternative Models of Service Quality. *International Journal of Research in Marketing*, 13 (1), 29-51

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319-340

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two. *Management Science*, *35*(8), 982. Retrieved from http://search.proquest.com/docview/213229133?accountid=11363

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, *22* (14), 1111-1132

Dennis, C.; Merrilees, B.; Jayawardhena, C.; Wright, L. T. (2009) E-consumer behaviour. *European Journal of Marketing, 43* (9/10), 1121-1139

Dickens, L., & Watkins, K. (1999). Action research: Rethinking Lewin. *Management Learning*, *30*(2), 127-140. Retrieved from http://search.proquest.com/docview/209890586?accountid=11363

Eden, C., & Huxham, C. (1996). Action Research for Management Research. *British Journal Of Management*, 7(1)

Ellen, P. S., Bearden, W.O., and Sharma, S. (1991). Resistance Technological Innovations: Examination of the Role of Self-Efficacy and Performance Satisfaction. *Journal of the Academy of Marketing Science*, 19 (4), 297-307

Frost & Sullivan. (2006). Meetings around the World: The Impact of Collaboration on Business Performance. A Frost & Sullivan White Paper Sponsored by Verizon Business and Microsoft. [White paper]. Retrieved from https://e-meetings.verizonbusiness.com/maw/pdf/MAW_white_paper.pdf

Gartner. (2013). Gartner Says 80 Percent of Social Business Effort Will Not Achieve Intended Benefits Through 2015. [Press release]. Retrieved from http://www.gartner.com/newsroom/id/2319215



Grove, S.J., Fisk, R.P. and Bitner, M.J. (1992). Dramatizing the service experience: A managerial approach. In T.A. Swartz, D.E. Bowen and S.W. Brown (Eds), *Advances in Service Marketing and Management*. (91-122). Greenwich, CT: JAI Press

Gwinner, K.P., Gremler D.D., Bitner, M.J. (1998). Relational benefits in service industries: the customer's perspective. *Journal of the Academy of Marketing Science*, *26* (spring) 101-14

Harrison, R.T. and Leitch, C.M. (2000).Learning and organization in the knowledge-based information economy: Initial findings from a participatory action research case study. *British Journal of Management*, 11, 103-19

Hellman, P. (2014). *The Effect of Communicating E-Service Benefits on Consumer E-Service Adoption*. Retrieved from https://helda.helsinki.fi/handle/10138/135162

Jayanti, R.K. and Burns, A.C. (1998). The Antecedents of Preventative Health Care Behavior: An Empirical Study. *Journal of the Academy of Marketing Science*, 26 (winter), 6-15

Johnson, E.J., Moe, W.W., Fader, P.S., Bellman, S. and Lohse, G.L. (2007). On the depth and dynamics of online search behaviour. *Management Science*, 50 (3), 299-309.

Jones, G.R. (1986). Socialization Tactics, Self-Efficacy, and Newcomers' Adjustments to Organizations. *Academy of Management Journal*, *29* (2), 262-79

Kurhlthau, C. C. (1999). The Role of Experience in the Information Search Process of an Early Career Information Worker: Perceptions of Uncertainty, Complexity, Construction, and Sources. *Journal of the American society for Information Science*, 399.

Larsson, R. and Bowen, D.E. (1989). Organization and Customer: Managing Design and Coordination of Services. *Academy of Management Review*, *14* (2), 213-33

J. Lee, A. Allaway. (2002). Effects of personal control on adoption of self-service technology innovations. *Journal of Services Marketing*, *16* (6), 553 - 572

Lewin, K. (1946). Action Research and Minority Problems. *Journal of Social*, 2(4), 34-46

Maddux, J.E., Norton, L. W. and Stoltenbert, C.D. (1986). Self-Efficacy Expectancy, Outcome Expectancy and Outcome value: Relative Effects on Behavioral Intentions. *Journal of Personality and Social Psychology*, *51* (October), 783-89

Malhotra, Y., Galletta, D. F., & Kirsch, L. J. (2008). How Endogenous Motivations Influence User Intentions: Beyond the Dichotomy of Extrinsic and Intrinsic User Motivations. *Journal of Management Information Systems*, *25* (1), 267-299



McKinsey Global Institute. (2012). *The social economy: Unlocking value and productivity through social technologies*. Retrieve from http://www.mckinsey.com/insights/high_tech_telecoms_internet/the_social_economy

Microsoft. (2012). *SharePoint 2010 Products*. Retrieve from http://technet.microsoft.com/en-us/library/ee428287(v=office.14).aspx

Microsoft. (2014). *What is SharePoint*. Retrieve from http://office.microsoft.com/en-001/sharepoint-foundation-help/what-is-sharepoint-HA010378184.aspx

Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. (2000). Self-Service Technologies: Understanding Customer Satisfaction with Technology-Based Service Encounters. *Journal of Marketing*, *64*(3), 50-64

Meuter, M.L., Bitner, M.J., Ostrom, A.L., Brown, S.W. (2005). Choosing Among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies. *Journal of Marketing*, 69, 61-83

McNiff, J., Whitehead, J. (2000). *Action Research in Organisations*. Florence, KY: Routledge

Mills, P.K., Chase, R.B. and Margulies, N. (1983). Motivating the Client/Employee System as a Service Production Strategy. *Academy of Management Review*, 8 (April), 301-310

Oja, S.N., Smulyan, L. (1989). *Collaborative Action Research: A Development Approach*. Philadelphia: Falmer Press

Rogers, Y., Sharp, H., and Preece, J. (2010) *Interaction Design: Beyond human-computer interaction*, 3rd ed. UK: Wiley

Sanford, N. (1970). Whatever Happened to Action Research? *Journal of Social*, 26, 3-23

U.S. Dept. of Health and Human Services. (2014). *Use Cases*. Retrieved from http://www.usability.gov/how-to-and-tools/methods/use-cases.html

Whyte, W.F. (Ed). (1991). Participatory Action Research. Beverly Hills, CA: Sage

Wilson, A., Zeithaml, V.A., Bitner, M.J. & Gremler D.D. (2008) *Services Marketing: Integrating Customer Focus across the Firm*. (First European Edition). Berkshire: McGraw-Hill Education

Vargo, S.L and Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68 (January), 1-17



Yin, R. K. (2014). *Case study research: design and methods*. (Fifth Edition). United State of America: Sage



Current state Analysis Interview/ Online survey questions

Structure of the survey

The first section are questions about how you and your team work and collaborate today, this includes how you make use of intranet and your team site.

The second section is about Email usage, Meeting practices and Lync online meeting. Lastly, you are required to rate your team collaboration.

* (For interview)

This interview may take about 30 minutes. However do not worry about the time, feel free to elaborate your points, and tell me how you feel about it in current situation.

- 1. Which is the most common tool that you use to discuss a topic with your team members? Please tick one.
- Email
- Your team section under Intranet
- Team site
- Lync meeting and chat
- Other (please specify):
- 2. Which is the most common tool you use to share a document with your team member? Please tick one.
- Email
- Your team section under Intranet
- Team site
- Lync meeting and chat
- Other (please specify):
- 3. Which is the most common tool that you and your team members make a joint decision? Please tick one.



- Email
- Your team section under Intranet
- Team site
- Lync meeting and chat
- Other (please specify):
- 4. How do you communicate with your team members in between meetings? (You may select more than one option, whichever applicable)
- Email
- Your team section under Intranet
- Team site
- Lync meeting and chat
- Other (please specify):
- 5. How do you search and gather information that you need for your work? (You may select more than one option, whichever applicable)
- Search via external internet sites
- Search via UPM Intranet
- Search via Share drive (for example G drive)
- Team site
- Email colleagues
- Ask colleague via chat
- By phone call
- Other (please specify):

Intranet and Team site

- 6. How often do you use intranet for your work?
- Every day
- A few times a week
- A few times a month
- A few times a year



_	Other	(please	specify	v):
	00101	DICUSC	SPCCII	, ,.

- 7. Please tell briefly what would motivate you to use intranet more frequently?
- 8. How often do you use your team site?
- Every day
- A few times a week
- A few times a month
- A few times a year
- Other (please specify):
- 9. Please tell briefly what would motivate you to use your team site more frequently?
- 10. Do you encounter any problems while using team site that interrupt or prevent your work to collaborate with your team member effectively? Please give me some examples.

Email usage

- 11. How many emails do you receive in a week?
- 0- 100 emails
- 101-500 emails
- More than 500 emails
- Other (please specify):
- 12. Do you agree that some of the content sent using email could be communicated using the collaboration tools (UPM Intranet, Team sites, my sites, Lync online meeting and chat) available?
- Yes
- No

Meeting practice



- 13. Do you have enough time to work outside of meetings?
- Yes
- No
- 14. Please choose the features in Lync online meeting tools you have been using to communicate and collaborate with your team members and also other colleagues? (You may select more than one option, whichever applicable)
- Lync audio call
- Screen sharing
- Instant messaging chatting
- White board
- Poll
- Real time video
- Recording
- 15. Do you agree that some of the issue discuss in a meeting (face to face or online meeting) could be discussed using other methods available in intranet (a specific section) or team site?
- Yes
- No

<u>Current team collaboration</u>

- 16. What is it that you dislike about current way of team collaboration? Can you give me some examples?
- 17. How well does the usage of UPM collaboration tools support you to work with your team members productively? Please rate with the scale of 1 (weak) to 5 (excellent).
- 18. (Optional) Do you have any comment about the rating given in the previous question?



Final Interview/ Online survey questions

4 questions is about 'Yes', 'No', 'Not sure', and 5th question is rating from the scale of 1(poor) to 5 (Excellent).

The background information first: I have helped to development some solution for your team (in team site or intranet). So the question is based on your perception of how you feel about these solutions.

Q1. Overall, the 'use cases' tested has increases your usage of team site and or intranet compare to before pilot test.

'Yes', 'No', 'Not sure'

Q2. Overall, the 'use cases' tested has increase team member collaboration with each other using team site and or intranet compare to before pilot test.

'Yes', 'No', 'Not sure'

Q3. Overall, the 'use cases' tested, has reduced the number of weekly emails - to discuss a topic, make a joint decision, sharing files, as compare to before pilot test. 'Yes', 'No', 'Not sure'

Q4. Overall, the 'use cases' tested, has shorten the time to solve an issue? Which was previously discuss or communicate solely using email among your members, as compare to before pilot test.

'Yes', 'No', 'Not sure'

Q5. Overall, the 'use cases' tested, has support you to work with your team members productively? From the scale of 1(poor) to 5 (Excellent).



Preparation Checklist in full

Site type						
What is the main usage of the site?						
	Possibilities:	Suggestion:				
☐ Collaboration for own team/special topic/special group	Team site	Plan your content structure beforehand, the most important content				
☐ For discussions/questions ☐ and answers	Community site	should be easily accessible.				
☐ If the content is meant for everyone	Intranet	2. Think what content your target groups need.				
☐ Normal confidential information	Team site	3. Make a draft e.g. on paper.				
☐ Highly Confidential information	Secure site					
Benefits:						

There are different purposes and features for each type of site. Choosing

the right one ensures optimised site usage and good user experience.

Access right management

Is the site open for all, or is certain part of the site restricted?

Team site is open to all by default.

Avoid double updating work.

Site owner, deputy site owner, and those with owner's right are responsible of managing access rights of the site.

Please note that complexity of managing different access groups requires time and resources.

If there is no reason to restrict access, we suggestion to keep the site open to all. If restricted areas needed, try to keep it on the sub-sites level (not library level)

Suggestions:

- 1. Agree with the team members: who to contact and how to request for access right.
- 2. Place site owner(s) contact information on the front page.

Benefits:

- Ensure easy management of accesses, relevant content is shown to right people.
- Makes the content sharing easier.



Search Optimization

Would you like to make your pages and documents easily findable by users in whole organization?

Fill in metadata fields ie. Keywords and location information when creating sub site or pages or when you upload a document.

Use descriptive or keyword for your document or image file name.

Benefits:

- Your content can be found easily with Search.
- The more accurate metadata, the more accurate search results will show to user.

Smart Meeting

Do you conduct meeting with the group very often? Share files and store documents?

Meeting sub site available by default in every team site.

Default functionalities include wiki pages, document library, and action point and task list.

Suggestion

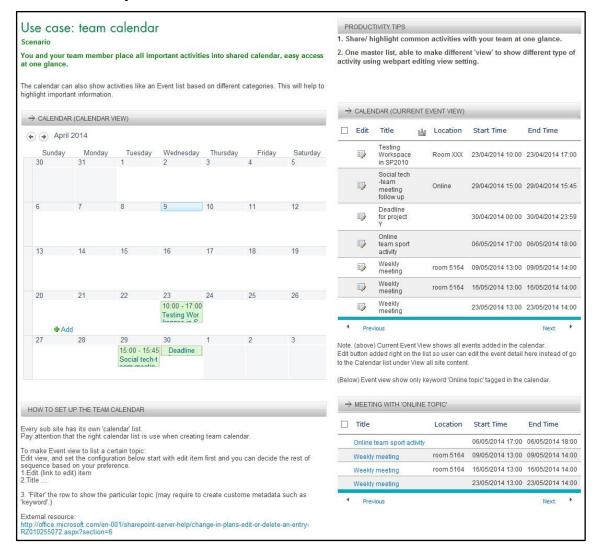
- 1. Use Team calendar to record common schedules. Calendar can also be show as event list.
- 2. Use Wiki pages to write minutes for easy access.
- 3. Task list can show as timeline or Gantt chart.
- 4. Add a link to the meeting material site already in the meeting invitation.

Benefits:

- Good meeting practice.
- Reduce emails.
- Store centralised meeting materials in one location.

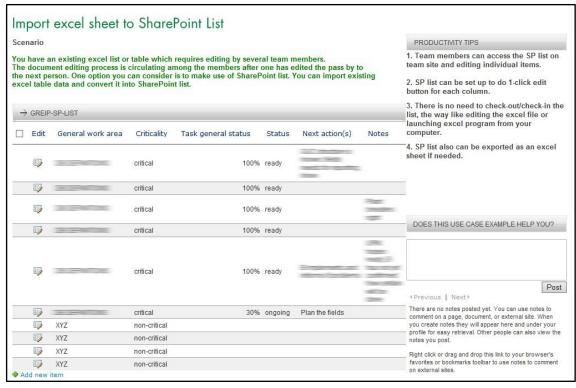


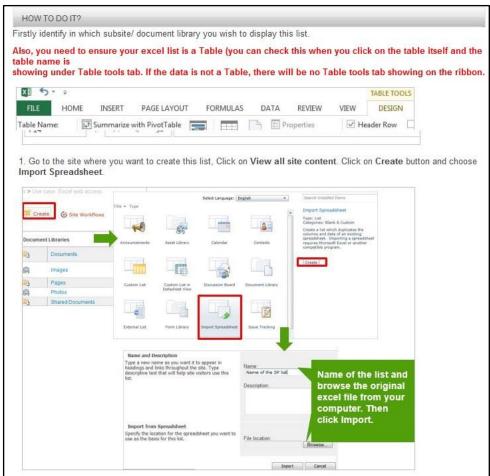
Use case example: Team calendar





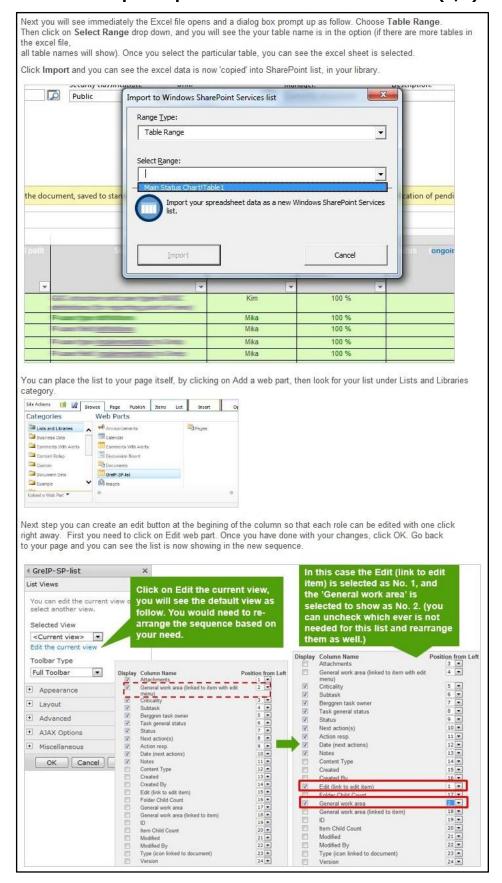
Use case example: Import Excel sheet to Share Point List (1/2)





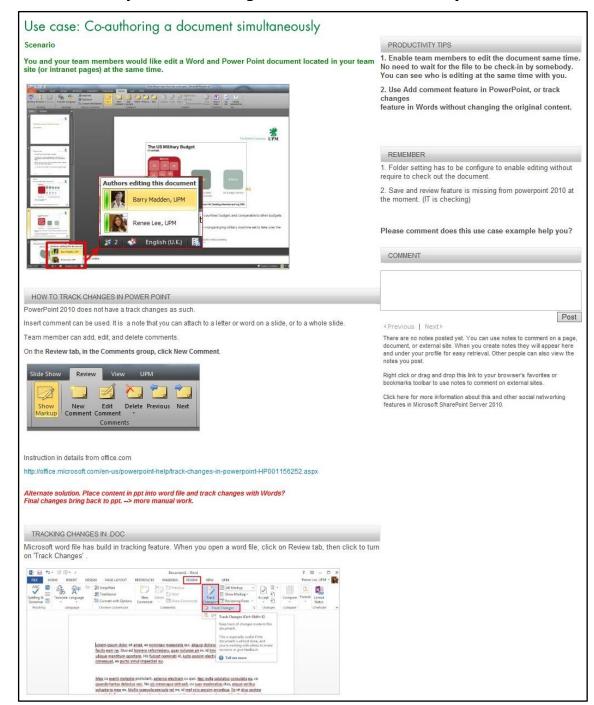


Use case example: Import Excel sheet to Share Point List (2/2)



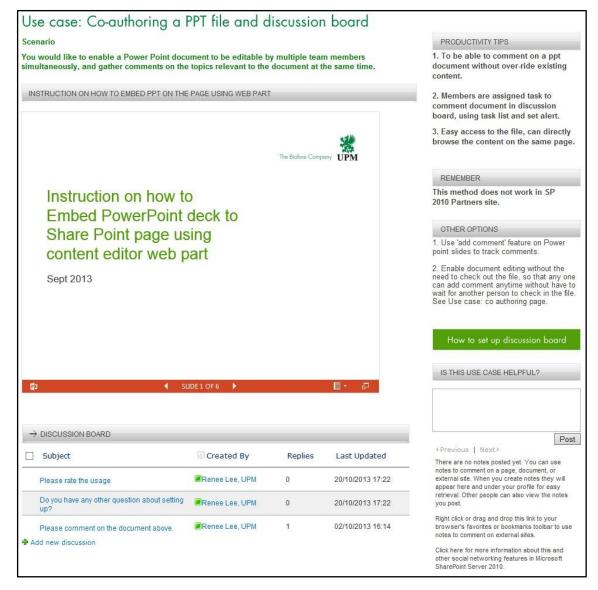


Use case example: Co-authoring a document simultaneously



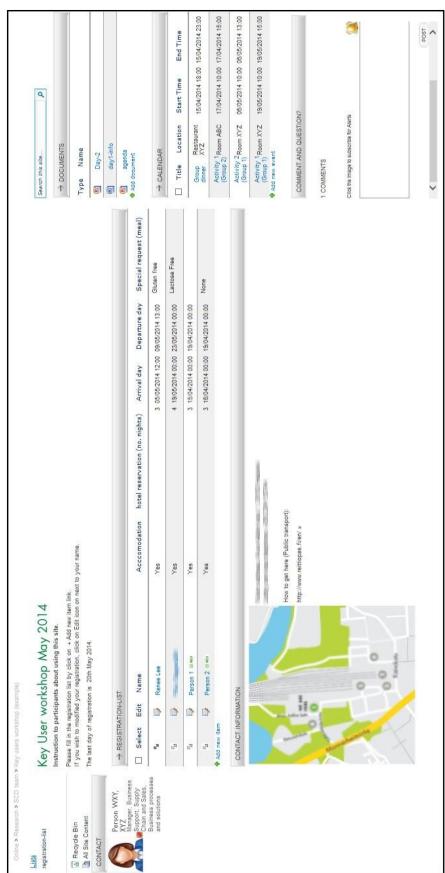


Use case example: Co-authoring a PowerPoint file and discussion board



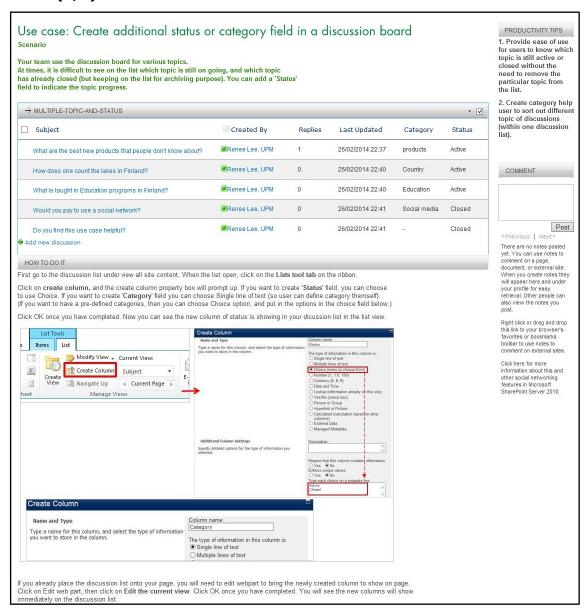


Use case example: Co-authoring a PowerPoint file and discussion board



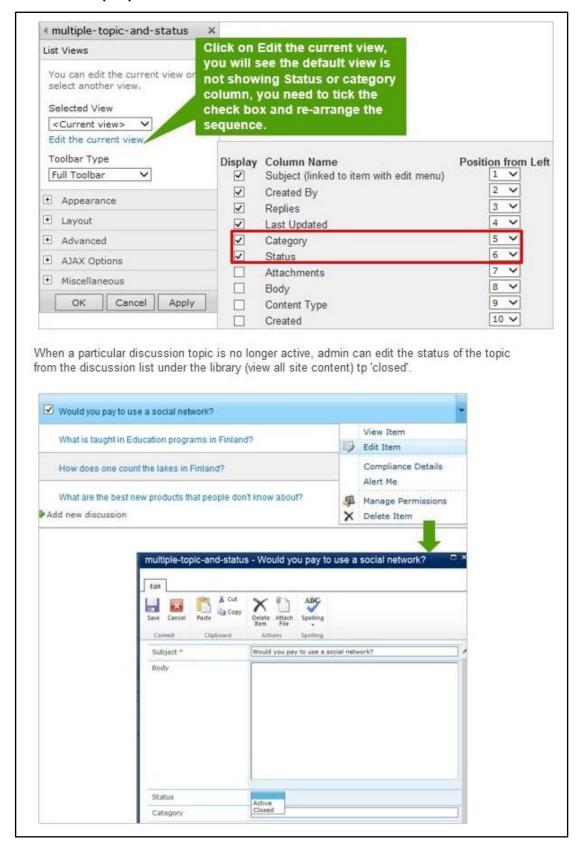


Use case example: Create additional status or category field in a discussion board (1/2)



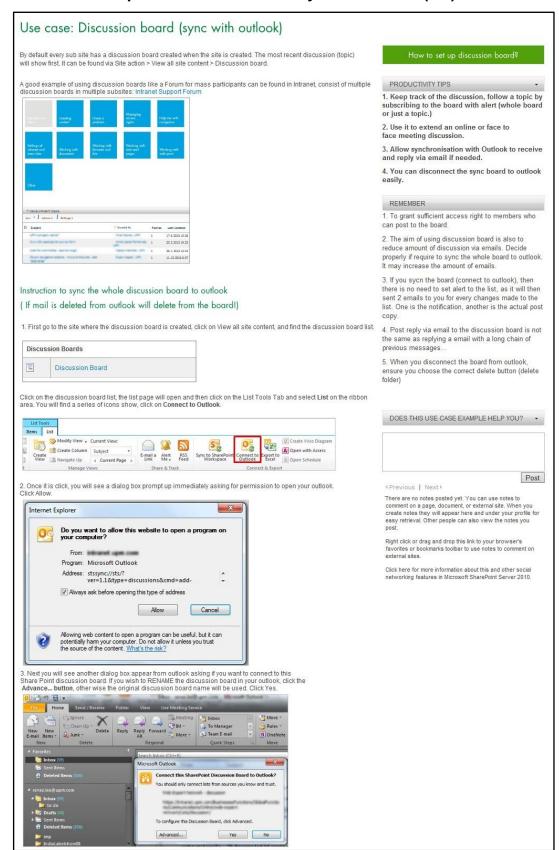


Use case example: Create additional status or category field in a discussion board (2/2)



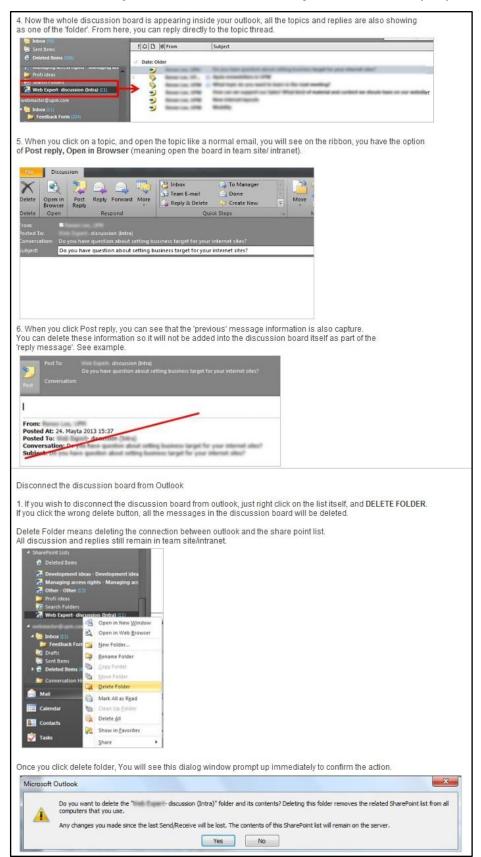


Use case example: Discussion board sync with Email (1/2)



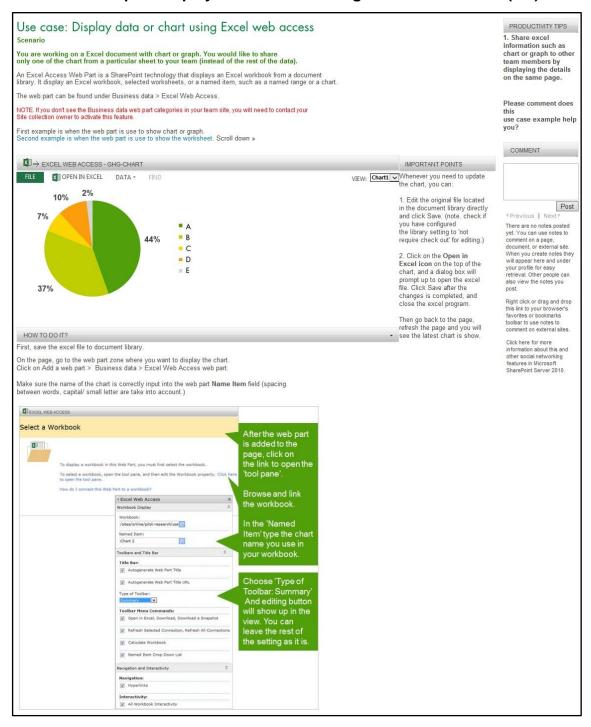


Use case example: Discussion board sync with Email (2/2)



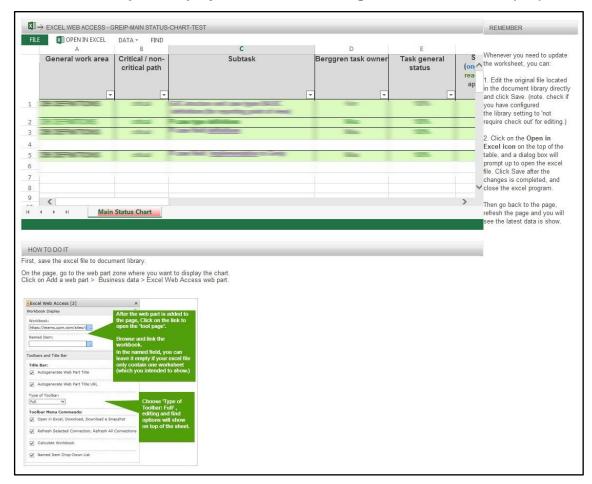


Use case example: Display data or chart using Excel web access (1/2)



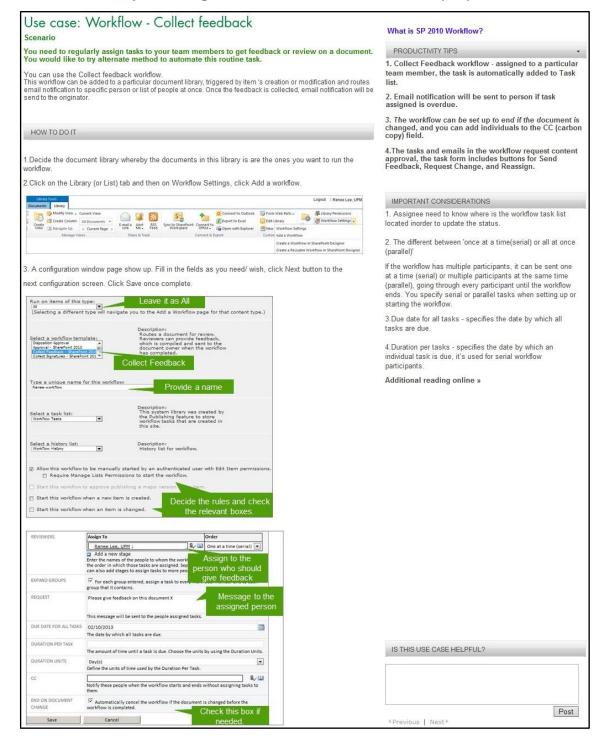


Use case example: Display data or chart using Excel web access (2/2)



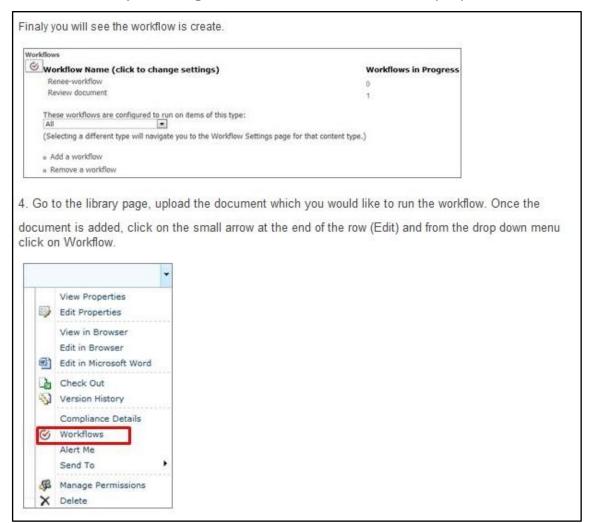


Use case example: Using Workflow to collect feedback (1/3)



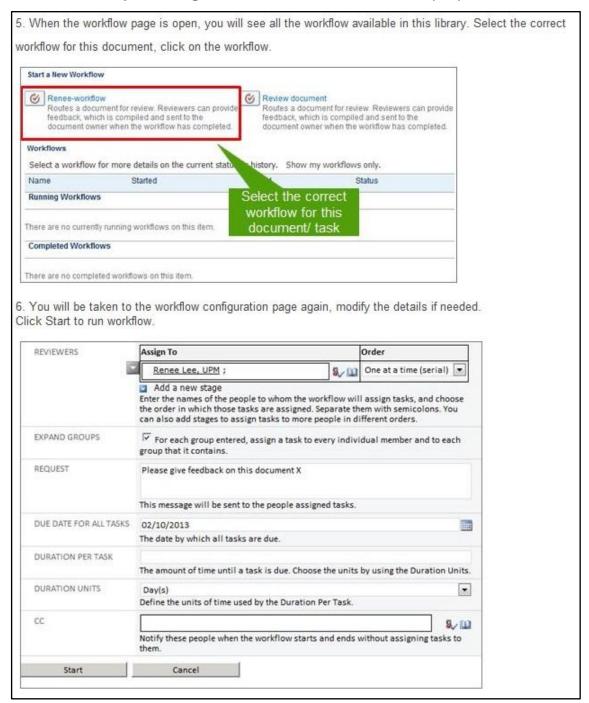


Use case example: Using Workflow to collect feedback (2/3)



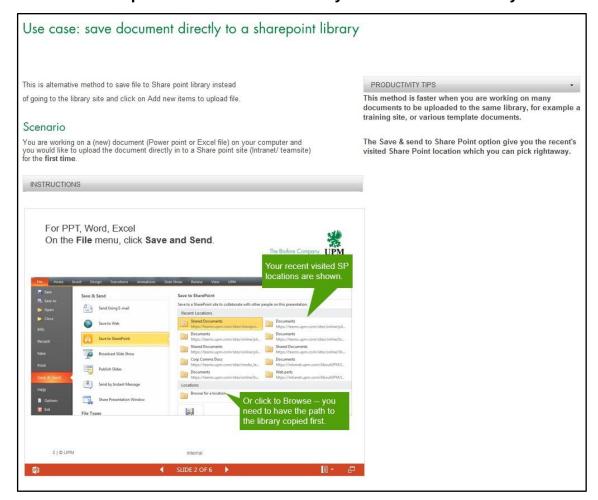


Use case example: Using Workflow to collect feedback (3/3)





Use case example: Save document directly to a SharePoint library





Use case example: Task list

