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## **USE OF AAPO SOCIAL WORKSPACE IN A PROJECT-BASED WORK ENVIRONMENT**

A Case Study of an advertising agency

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A Case Study of an advertising agency

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Business  
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## ABSTRACT

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Changes in the way work is conducted nowadays have changed significantly in the last years. Digitalisation, disruptions in workflows and challenges in communication have led to an unprecedented situation that requires people to be active on multiple channels to stay up to date on information. New social technologies have emerged in response to the changing work environment and working methods.

The objective of this thesis was to study if there are any benefits or advantages in using a digital workspace service, AAPO Social Workspace, in a project-based work environment in the Commissioner organisation, Avalon Oy. This thesis aims to answer those questions in order for to gain researched data, and to further develop the service.

The theoretical framework concerns the fundamentals of Web 2.0, digital workspaces and project management in general. This information provides the reader with an understanding of what the main functionalities in Web 2.0 are, and an understanding of project management and some of the aspects that need to be taken into consideration. Research data was collected through a survey that was conducted in the Commissioner organisation.

The results suggest that using the service is of value and holds various benefits and advantages for the employees, including centralized communications, improved communality and ease of use. Moreover, key findings illustrate that the service is of value to project managers as well in managing project teams and clients.

In conclusion, this study presents the reader with an introduction to project management, an overview of Web 2.0 and its applications, and the service and its features. The results are presented in a concise way, illustrating the use of the service in the Commissioner organisation. In-depth analysis and conclusions based on the results are provided for the reader. This study may be used as a basis for further studies on the subject.

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Keywords: digital workspace, project management, communication, collaboration, AAPO Social Workspace, Web 2.0

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# 1 INTRODUCTION

Project management is an integral part in any business's day-to-day operations. Managing, organizing and planning resources and workflows in an effective and efficient manner is important in order to cut costs, increase profitability and improve the use of time (Patel 2008, 3). The need for managing projects and work is present in companies and organisations both small and large. Traditional project management methods and theories have existed for decades and with the rapid development of technology, new tools and services have been created to supplement the process of managing work. Since Web 2.0, new digital workspaces have been introduced to improve various aspects that define the outcome of projects, such as means for communication, information sharing and collaboration. In this thesis, the author examines the use and the benefits of the use of a social workspace called AAPO in Avalon Oy, an advertising agency in which the work environment is based on working with and managing of multiple on-going projects simultaneously.

## 1.1 Research background and subject

The purpose of this thesis is to examine the practical usefulness and benefits of using a social workspace, AAPO, in everyday work in a very project-intense environment. The topic itself originated from the author after developing and working with the service for nearly a year. It is crucial to identify the value and benefits of using AAPO from both employees' and project managers' point of view in order to gain knowledge whether it is useful and if it offers any benefit or advantage, and to develop the service further based on the research. To be able to receive authentic and reliable feedback, real-life work setting needs to be studied.

The company, in which the research was conducted, Avalon Oy, is a reputable advertising agency on a national, as well as on an international scope. The company manages hundreds of clients whose needs are e.g. in creating and developing marketing communications, advertisements, campaigns, strategic planning and execution, and branding, only to name a few. AAPO Social Workspace is a service that is used in everyday work to communicate, share information and collaborate within the organisation, project teams, clients and partners. AAPO Social Workspace is also sold as a productized service for various businesses and organisations.

In order to identify its functionalities and benefits in real-life project work, to develop the service further and to provide researched information, it is crucial to study the service and how it is perceived by the users in an authentic setting.

The research group to be studied includes workers and project managers of Avalon Oy. These employees use the service on a daily basis to communicate between project teams and clients, to share and approve documents, drafts and content, to share information and knowledge internally and externally and to collaborate across organisations.

## **1.2 Research problem and process**

Based on the purpose of the thesis, the main research problem is “How does AAPO Social Workspace help in working in and managing of projects?” To answer the research problem it is critical to study the framework and theoretical background behind the tools and services that enable contemporary technologies, such as virtual workspaces, and the methods and theory of project management. After a solid understanding of the underlying theories and knowledge has been gained, employees using the service must be researched. Two distinct approaches should be chosen: the use of AAPO Social Workspace in carrying out the project work, and the use of AAPO Social Workspace in managing projects and project teams. These approaches lead to two supporting research questions:

- How does AAPO Social Workspace improve the daily work of employees?
- How does AAPO Social Workspace help project managers manage the projects and project teams?

The theoretical part of the thesis is mainly focused on literature and studies of various topics of web 2.0 and its applications, as well as project management to provide the reader with an adequate knowledge base on the topics. The second chapter of this thesis will focus on the technologies and applications behind contemporary Internet and virtual workspaces, and the features and properties inherent to them. The third chapter will introduce the concepts that relate to digital workspaces and their use. The fourth chapter of this thesis will study the concept of project management and the approaches and challenges that are present within. The fifth chapter

is concerned with AAPO Social Workspace, its functions and main uses. The sixth and seventh chapter of this thesis will discuss and present the research methodology and results.

A case study is employed in the research. Case study is an intricately conducted analysis of a group, in which the researcher may either be participating or observing the study (Thomas & Brubaker 2008, 114). A case study is, variably, an ideal fit for the requirements and resources in small-scale research. The focus is enabled to be set on just one target, such as an organisation or place of employment. Furthermore, elements within these larger entities may be chosen: e.g. a team of workers or a specific group of people. (Blaxter, Hughes & Tight 2002, 71.)

Case studies may provide a more comprehensive outlook with analysed results from quantitative data (Gilham 2010, 80). To collect a sufficient amount of data, a mix of quantitative and qualitative research methods are used in this study. A web based questionnaire is conducted to provide comparable data within the research group. Questionnaires require relatively little effort in comparison to the respondent volume they provide (Thomas & Brubaker 2008, 133). Qualitative data is gathered from the group to identify and gain deeper insight in to the thesis subject. Both quantitative and qualitative findings are compared and analysed in Chapter 8 to provide the reader a more elaborate view on the research outcomes.

The author selected case study as a research method because of its nature: it suits a group-focused, small-scale research and allows the author to closely participate in the process. Given the background history of the author in the company, it was a natural choice for research. The need for research stem from the fact that no previous research has been conducted on the service, AAPO Social Workspace, or how it benefits the users or what its advantages are as seen by the actual users. Moreover, the author is closely related to the research subject in his experience and current status in the working environment of the Commissioner.

## **2 KEY CONCEPTS**

To fully comprehend the environment in which work and projects are carried out in the contemporary world, it is essential to examine the key concepts behind the current state of the Internet, its capabilities in the working life and the current services it offers. Perhaps the most significant concept is the development of the World Wide Web, or simply WWW, from a static publishing platform to an interactive, social and content-rich medium – Web 2.0. In fact, it appears that Web 2.0 is becoming a tool with which collaboration is facilitated (Chu & Kennedy 2010).

The development of Web 2.0 is the underlying basis for today's web applications and means of use in work. These means include abstracts such as digital workspaces, intranets, extranets and blogs. The main purpose of these tools, or mediums, is to connect the users of the World Wide Web (Tirronen 2008, 25), as opposed to the earlier stages of the Web, in which the purpose seems to have been to connect the computers. These means are an integral part of the contemporary Internet, with the ability for the users to share knowledge freely, emphasize communication and to decentralize decision-making power (Tirronen 2008, 21).

For the reader to understand the basic functions of a workspace, it is crucial to identify the main characteristics of Web 2.0, its applications and uses, and to acknowledge the opportunities that may arise within these concepts.

### **2.1 Web 2.0**

The term "Web 2.0" was first introduced to the larger audience by Tim O'Reilly, founder of O'Reilly Media Inc., in late 2004 in a web conference organized by the O'Reilly Media Corporation. The concept Web 2.0 seems to be highly controversial: on one hand, it is described as the "second coming" or revolution of the World Wide Web, whereas on the other hand, it is perceived as a shallow abstract with only little meaning (Tirronen 2008, 11-13).

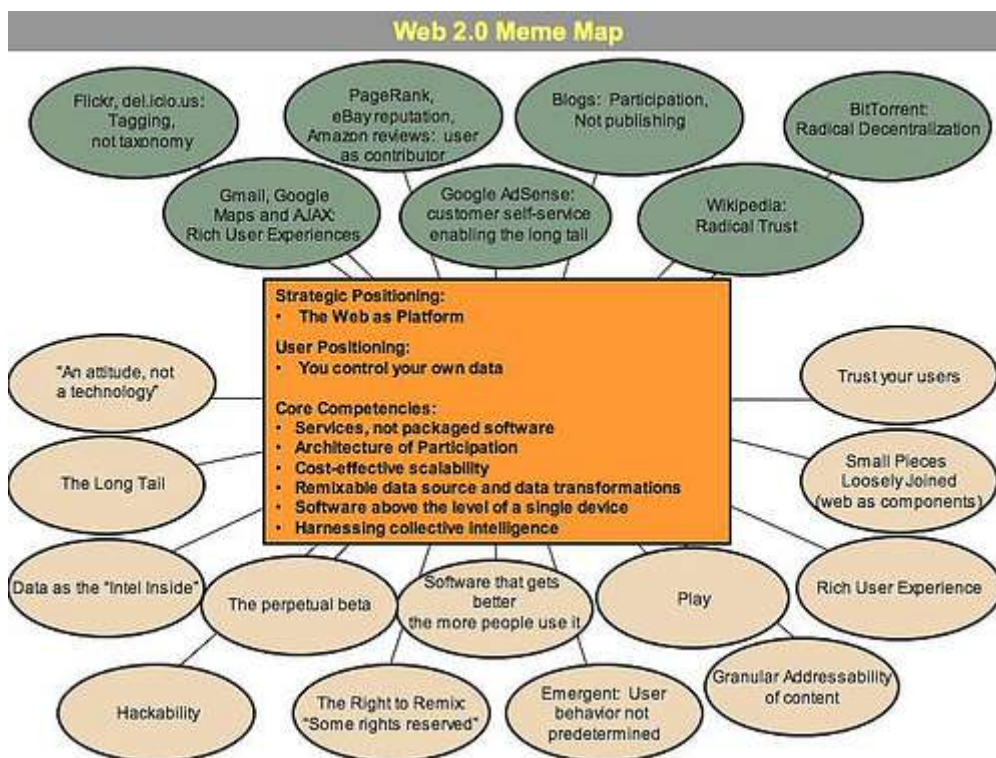
According to Hintikka (2007, 6), Web 2.0 is a concept which curates a myriad of new procedures and models of operating. Moreover, not only is it one entity offering different solutions and applications, but an assortment in which every user may select the tools and features to combine



and apply in their use. According to Hintikka (2007), Web 2.0 consists of the following pivotal concepts:

- RSS feeds
- User-generated content and communality
- Blogs
- Sharing of content and services
- Long Tail model
- Collective intelligence
- Mashups

These concepts are illustrated in the original Web 2.0 Concept Map below, in *FIGURE 1*.



*FIGURE 1. Web 2.0 Meme Map. (O'Reilly, T. 2005).*

As illustrated in *FIGURE 1*, Web 2.0 is fundamentally a platform, in which users define their own applications and services of use. Web 2.0 may be used, for instance, in creating new earning and operating models, developing applications and services, designing marketing and promotion, and strategizing. It is argued, for instance by the founder of the World Wide Web, Tim Berners-Lee, that many of the applications and features of the Web 2.0 were invented in the previous stages of

the World Wide Web, namely “Web 1.0”, during the 1990s but were only realized and taken advantage of once better internet connections and storage capacity were introduced and adopted. (Hintikka 2007, 8.)

## **2.2 Intranets and extranets**

Intranets and extranets comprise together a digital environment for an organisation and its stakeholders. In the early days of intranets, they served as an integral medium for organisations to store information employees needed most often (Ojala & Pöysti 2008, 59-60). In these early phases of the intranets, information and content was produced into intranets by only a few assigned operators, while the information was updated seldom. Intranets were a useful resource for information, although infrequent update cycles resulted in obsolete information. (Ojala & Pöysti 2012, 60.)

Extranets, on the other hand, provide a similar environment for storing content as the intranets, the only difference being that it is designed for outbound communication, i.e. for stakeholders' use. According to Juholin (2009, 268), profiling and confining the service to meet its target group and their needs is essential in creating a functioning extranet. Moreover, extranets should provide added value for its users: providing helpful and refined information and personalized services, for instance (Juholin 2009, 269).

As work methods change, work becomes mobile and more interactive, intranets and extranets have to change as well. Social intranets, consequently, provide a more comprehensive service functions than traditional intranets. These functions include interactive modules, in which several users create content and information is updated automatically. Furthermore, social intranets are more communal and have the ability to include external users in the service, thus incorporating functions and processes from both intranets and extranets. (Ojala & Pöysti 2012, 60-61.)

## **2.3 Blogs and wikis**

Blogs and wikis, as well as intranets and extranets, are digital environments for communicating, creating and sharing content and information. Both blogs and wikis may be used internally and externally to convey relevant and useful information. Furthermore, blogs may be used to generate

or facilitate discussion. Internally, blogs may be used to inform project members of a project's status, whereas externally, blogs may be used to communicate new products, services or corporate values to the public (Ojala & Pöysti 2012, 53). According to Juholin (2009, 173), blogs comprise of a series of chronological publications with one or more authors. Moreover, blogs form a larger information entity known as the blogosphere.

Wikis are dynamic web pages with content, documents and information, such as text, images or other multimedia. Public wikis are pages that are accessible and editable for all users, while enterprise wikis generally are only for the internal users of an organisation. Wikipedia, the world's largest encyclopaedia, is merely one of the various uses that wikis are capable of. "Wiki might be described as a shared file, only easier to use" (Ojala & Pöysti 2012, 48). Wikis are an efficient means to collaboratively create and share content, information and best practices that is effortlessly accessible. For organisations and companies, wikis may be used to establish information banks, publish implicit information and manage projects. In fact, corporate wikis generally have substantially more uses than public wikis. (Ojala & Pöysti 2008, 29-30.)

### 3 DIGITAL WORKSPACES

The main concept of a digital workspace is to provide the user with a functioning work environment online: for a single user, it is a virtual desktop, whereas for an organisation it is a virtual office environment. Workspaces may be used to distribute work, share and publish content, create wikis and blogs, communicate, and store or curate documents and files. Latest information and versions of files that have been created are saved in the virtual workspace, thus establishing an archive for all users. (Ojala & Pöysti 2008, 38.) Previous research suggests that among many other aspects, workspaces reduce the usage of email in general (Bimberg 2014, 46).

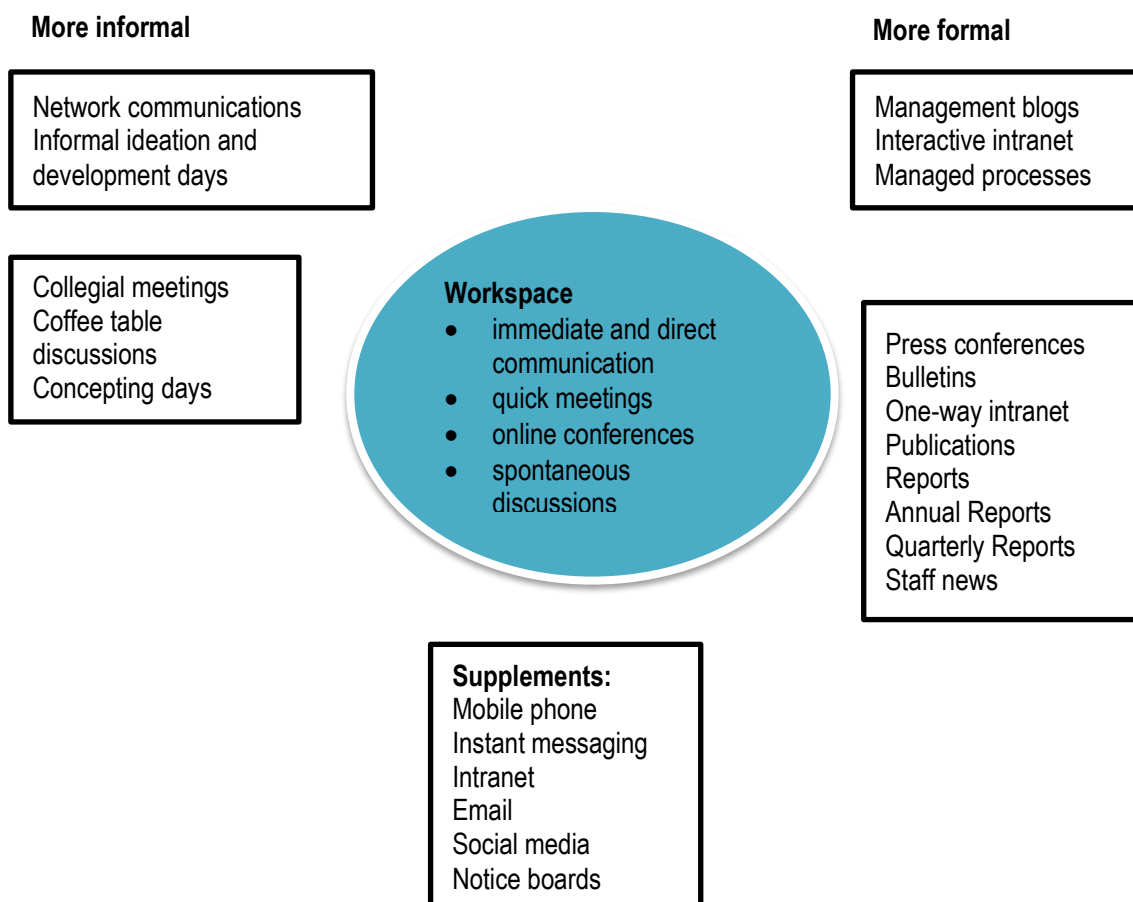
Various user rights and/or user roles are usually assigned in digital workspaces. Users have the right and access to create, edit and use information and content that is defined in their user roles. (Ojala & Pöysti 2008, 38.) Together, the users and people in the workspace create a community, interconnected through a mutual factor, such as an organisation, a department or a project. According to Ojala & Pöysti, users that work in an organisation, in which a virtual workspace is adopted as one of the tools for work, are expected to work in such virtual workspaces. Furthermore, the work conducted in the system, e.g. creating and sharing knowledge, collaborating and contributing to helping, is part of their work performance and, thus, is assessed as such.

#### 3.1 Internal communication

The word communication is derived from the Latin word *communicare*, which means to commonly divide or share. Communication, in all its forms, is constantly everywhere: at home, in work communities, between individuals, countries and even cultures (Juholin 2009, 20). It is an integral part of both personal and work life, a feature people would not be able to function without. According to Juholin, the internet and other digital networks allow for real-time communication, creating a new kind of communication: anyone has the ability to create and influence content without external control. Communication is not restricted by time, geographical location or culture anymore (2008, 20.)

The difference between internal and external communication, traditionally, is that it is possible to differentiate between the receivers of the message or the interacting parties being distinctly either internal or external. Internal parties include employees, officials and administration, whereas external parties consist of clients, partners and other target audiences. However, it is argued that for instance shareholders, potential employees and inhabitants in the environment may be viewed as equivalent to the staff in terms of communication. (Juholin 2008, 41.) Internal communication, in a simple sense, is the act of conveying messages and information within an organisation, its employees and subcultures.

Internal communication may also comprise of both formal and informal communication. Formal communication is oftentimes used in internal communication when e.g. publishing bulletins, creating content or when familiarizing employees. Informal communication, on the contrary, is used in interpersonal dialogues and online activities. The media for informal and formal communications is illustrated below in *FIGURE 2*.



*FIGURE 2. Defining forums (amended Juholin 2013, 213).*

As illustrated in *FIGURE 2*, workspaces combine both categories of communication: formal and informal. In workspaces, communication may be immediate and direct between employees as well as external stakeholders. Meetings, both collegial and informal, as well as professional, may be organised via e.g. online conferences. It could be said that workspaces may be used to offer the best of both worlds: a platform for communication, both internal and external, that evolves overtime, from more formal to more informal, as interpersonal relationships between different parties develop.

### **3.2 Collaboration and learning**

Social learning and organizational learning are concepts that companies and organisations have been attempting to utilise in a productive and efficient manner, making use of the existing knowhow and expertise in the organisation while simultaneously having the capability to renew according to the changes in the operational environment. (Ojala & Pöysti 2008, 45.) However, to effectively utilise this “agile learning”, certain tools and processes are needed to create, distribute and manage existing data. Furthermore, traditional “hierarchy-focused” and slow organisations hinder this process by not supporting the possibilities of open collaboration and communality. (Ojala & Pöysti 2008, 45.)

Digital workspaces allow for an interpersonal collaboration and learning in an organisation, regardless of the confinements of time and physical presence. Wikis and blogs, as described in Chapter 2, are used to convey useful, relevant and educational information and resources to the people within and outside of the organisation. According to Ojala & Pöysti (2008, 46), companies and organisations that utilize these methods are known as the *Learning Organisation 2.0*.

Open collaboration and further user engagement in workspaces seems to contribute to innovation as well. In a report by McKinsey & Company, results show that by utilising social technologies in the work of knowledge workers, such as managers and other professionals, productivity may be increased up to 20-25 percent (2012, 15). Sourcing the innovation process to e.g. staff, clients, consumers, suppliers or users is an efficient way to engage larger groups in development and to gain valuable feedback from different perspectives. Open innovation and collaboration are particularly useful in developing mass market products and services. Social workspaces contribute to this type of engagement in innovation and collaboration through transparent, open

communication methods, with everyone having the ability to examine or rate each other's ideas, proposals and plans. (Ojala & Pöysti 2012, 179-183.)

In a report from 2010 by Samuel Kai-Wai Chu and David M. Kennedy studying the use of Web 2.0 applications in a collective, collaborative setting between undergraduate students, the findings suggested that using collaborative tools enhanced three aspects of knowledge management, contributing to collective learning and intelligence: knowledge creation, knowledge management and knowledge sharing. The studied group included students working on co-creating a report in a collaboration workspace setting. Using the collaboration tools, MediaWiki and Google Docs, appeared to improve significantly the collaboration among group members, contribute to the satisfaction level of group work and appeared to have been seen as a suitable tool for creating group projects online. (Chu & Kennedy 2010, 588, 592.)

Allowing access to resources, best practices and tools is essential in order to fully exploit digital workspaces as a medium for learning. Moreover, allowing and encouraging employees and management to produce and share content or experiences about new learning instances contributes to communal learning and collaboration. In addition to this, implicit knowledge, i.e. experiences and learning outcomes, may be difficult to convey explicitly. (Juholin 2009, 149.) Storing and distributing this type of information and experiences in wikis in digital workspaces is valuable and contributes to the learning of the entire organisation. For instance, different "expertise profiles" may be set up by users to reflect their skills and know-how in particular matters, thus entitling them organisational experts by subject. This allows for a coherent entirety in projects, in which every user is an expert in their specific field and can be relied upon to possess and deliver the most up-to-date and relevant information and knowledge available on the subject. (Ojala & Pöysti 2012, 103-104.)

### **3.3 Document management**

Creating and editing files and documents is an increasingly integral part of work life. This processing of documents is perhaps most distinct in an office environment, although files and documents are being processed in factories, retail et cetera as well. Traditionally, documents and files have been distributed as attachments via email. In a project setting, for instance, the project team would collaborate on a file via email so that different parts of information would be gathered

from the project team, ultimately resulting in a final document containing all of the information. This method, however, is rather slow and risky, as different versions of edited files are sent to multiple persons, resulting in certain participants receiving old versions of files, or a participant not knowing which version is chronologically the latest. (Ojala & Pöysti 2012, 44.) This method essentially divides the process of editing the file and commenting it, resulting in two different, unassociated actions.

Digital workspaces, on the contrary, allow for a concurrent view for editing, commenting or reviewing in a shared file. Changes in the documents are tracked, saving progressive versions of the file while offering insight into the actions taken in the process. All content related to a project is up-to-date in one, central location. As opposed to the division between the processes of editing and commenting a document that occurs when using email as a medium for collaboration, workspaces unify the process by integrating these two actions. (Ojala & Pöysti 2012, 44.)

Document management systems are services that, in essence, are used to store vast amounts of data and files, and different versions thereof. In addition, information should be available for review and versioning. In general, document management systems or software is for the most part accessed by internal users of an organisation. Actions these users have taken when processing the documents may be tracked with the use of user rights. (Ojala & Pöysti 2012, 45.) Other alternatives for document management systems include SaaS, or Software-as-a-Service, based systems “in the cloud”, which require no physical hardware or software presence on user or company premises. Digital workspaces often work on a SaaS-basis, thus incorporating document management in a similar fashion.

### **3.4 Social functions**

Internal collaboration and networking can be used in an organisation to increase operational efficiency. Consequently, this may improve profitability as well. Social procedures and tools contribute to collaboration that is free of physical confinement, thus enabling sharing of and benefiting from the information and knowhow. (Ojala & Pöysti 2012, 79.)

Social functions in workspaces include, for instance, sharing knowledge, commenting on work, interacting with other users and participating in communal activities. Instant interaction enables



more fluent division of work tasks, management and retrieval of information. Users can share ideas, collaborate and help each other regardless of their physical location or time. Personal, real user profiles contribute to openness and credibility, while simultaneously preventing ill behaviour and improving the quality of discussion (Ojala & Pöysti 2008, 126). Furthermore, appearing under real names and identities helps employers and communities reward employees with great ideas or deep insights.

Social functions may further help in inter-organisational work, such as in managing human resources. According to an interview by Bell (2012), social collaboration systems allow connection between employees and Human Resources across the organisation. Employees are able to voice their opinion, ask questions and provide feedback on important matters in an instant. Furthermore, this allows Human Resource departments to facilitate a work culture that is open and collaborative, resulting in increased engagement and productivity.

From a project management point of view, social functions within workspaces seem to shift the focus in management from supervision and command to collaboration, interaction and communal leadership, highlighting such issues as motivation and engagement (Ojala & Pöysti 2008, 128). Social collaboration in organisations also shape external relationships through connectivity, resulting in new, engaging work methods that abridge project life cycles, for instance (Bell 2012, 48). Consequently, social functions offer vast improvements to how work is conducted, but the management and supervision of work needs to be adapted from a traditional framework to a more contemporary integrity.

### **3.5 Existing services**

Dozens of existing workspaces and services based on the features of Web 2.0 are available already. Some of the most well-known companies offering such services include for instance Google, IBM and Microsoft, all of which are contemporary software giants. However, when investigating these services, they may be classified as open source systems, i.e. free to use, and commercial systems. Open source systems started with Linus Torvalds and his development of Linux. The main principle of open source systems is that they are free to use and may be further developed or modified by anyone. (Ojala & Pöysti 2008, 39.) Some of the open source solutions

include for instance Wikipedia, developed with MediaWiki, WordPress, a free blog and website platform, and Google Blogger, a blogging service.

Commercial systems, on the other hand, are developed for business purposes. Social media started with the introduction of open source applications, and as the use of social media became more popular, companies developing and offering applications became to emerge. Companies such as YouTube or Flickr, digital image and video sharing services, are based on earning models enabled by the popularity of social media, such as on-site advertisements, but are free to use. (Ojala & Pöysti 2008, 43.) Commercial services include applications such as Microsoft SharePoint, IBM's Lotus Connections and the Lotus service group, and Atlassian's corporate wiki service, Confluence (Ojala & Pöysti 2008, 43-44).

## 4 PROJECT MANAGEMENT

In order to understand project management, the definition of a project is presented to the reader. A project is “a temporary endeavour undertaken to create a unique product or service” (Project Management Institute 2000, 4). Generally, projects involve multiple persons working on the project, performing activities that are interrelated, while the end customer is interested in how effectively the resources needed to complete the project in a timely and efficient manner are used (Schwalbe 2004, 4).

Furthermore, Schwalbe (2004, 4) suggests that in order to understand the concept of a project further certain attributes should be established. Firstly, a project *possesses a unique purpose*. Every project should have a clear goal or a target, precisely and well defined. Secondly, *a project is temporary*. It has definitive passages, i.e. a starting date and an ending date. Thirdly, *resources are required*. These resources, often needed from several different areas, include people (workforce), software, hardware and other assets. Projects often draw these resources together from different departments to meet the project objective. To be able to meet the project goal, resources must be used effectively as they are limited. (Schwalbe 2004, 4.)

One of the attributes used to help define a project is that a project is commissioned, i.e. it has a *primary customer or sponsor*. A project is in general directed and funded by the primary project customer. In addition, projects *include uncertainty*. Due to the uniqueness of each and every project, it appears, it is difficult to conduct estimations as to how long the duration will be, what are the eventual costs or even specifically define project goals. These uncertainties seem to be factors that oftentimes make managing projects challenging. (Schwalbe 2004, 5.)

For the projects to meet their objectives, persons responsible for leading the project are needed. These persons are known as project managers. They are responsible for the comprehensive management of a project and its success, including working with the project team, the project customer and other project related people (Schwalbe 2004, 5).

According to the Project Management Institute (2002, 6), *project management* is the “application of knowledge, skills, tools, and techniques to project activities in order to meet project requirements”. Moreover, Schwalbe (2004, 6) suggests that not only must project managers

aspire to meet the various goals of projects, i.e. time, quality, cost and scope goals, but to comprehensively lead the process for the people involved in or affected by project procedures to meet their expectations and requirements. People involved in and affected by various project activities are often referred to as stakeholders, and comprise of e.g. the workers in the project, the project's customer, suppliers and end consumers and users. Their expectations and needs frequently differ from each other's. (Schwalbe 2004, 8.)

#### **4.1 The triple constraint**

Limitations in projects often comprise of different aspects, as caused by the project's objectives for scope, time and cost. These limitations are known as the *triple constraint* (see *FIGURE 3*) in project management. These factors oftentimes appear to be interrelated, and compete with each other. In order for a project to be successful, considerations and compensations for these three goals must be provided by the project manager. (Schwalbe 2004, 5.) Considerations for the scope goal are concerned with the end result, be it product or service, of the project and what the project customer's expectations are. Furthermore, the time goal should be considered as how long will the completion of the project take and what the schedule is like. Consequently, the cost goal should be addressed as to what the costs for the project completion should be. (Schwalbe 2004, 5.)

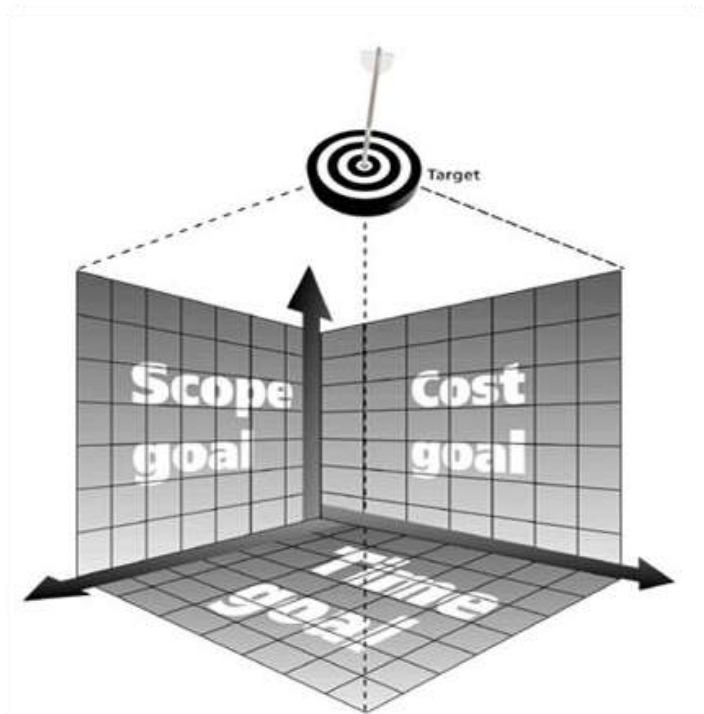


FIGURE 3. The triple constraint of project management. (Schwalbe, amended 2004, 6).

It appears that managing these three constraints involves adjustments to be made between the scope, cost and time goals linked to the project. For instance the budget for the project, i.e. the cost aspect, might have to be increased in order to meet the two other goals, time and scope. On the other hand, adjustments to the scope might have to be made in order to meet the time and cost goals. (Schwalbe 2004, 7.)

It seems that due to the uniqueness of each and every project and because of the underlying nature of uncertainty of projects and its resources, it is uncommon to meet the exact definitions for scope, time and cost goals initially planned for a project. Furthermore, it is said that as the project gains progression in time, the project sponsor, members of the project team and other stakeholders might have disparate perspectives for the project. It is said that the project manager is responsible for negotiating with these parties to be able to make decisions about the scope, time and cost goals that are qualified. (Schwalbe 2004, 7.)

In addition to the underlying and interrelating three basic aspects of a project, i.e. the triple constraint, there seems to be other elements that may be of significant role. These aspects include, for instance, customer satisfaction and project quality. It seems quality is sometimes

added to the triple constraint, thus making it a quadruple constraint matrix. It is also argued that quality aspects should be inherent when defining the cost, scope and time goals. Furthermore, the author argues that the quality goal might be failed to meet if the triple constraint goals are not sufficiently confronted. (Schwalbe 2004, 7.)

## 4.2 Knowledge areas and tools

Knowledge areas in project management are specific skills or competencies a project manager should develop and possess. In addition to the existing four core areas (scope, time, cost, quality), four facilitating areas have been established. These include the management of human resources, communications, risk and procurement. The four core areas result in specific project objectives, whereas the four facilitating areas are processes that facilitate the achievement of those objectives. (Schwalbe 2004, 10.) Both the core knowledge areas and the facilitating knowledge areas are illustrated below, in *TABLE 1* and *TABLE 2*. The tools and techniques include means for the project manager and team that may be used to meet the project objectives.

*TABLE 1. Common project management tools and techniques by knowledge area. (Schwalbe, amended 2004, 11).*

<i>Knowledge Area / Category</i>	<i>Tools and techniques</i>
Integration management	Stakeholder analysis Project plans Project management software Project review meetings Project leadership
Scope management	Project charters Work breakdown structures Statements of work
Time management	Milestone reviews Gantt charts Network diagrams Critical chain scheduling
Cost management	Cost estimates Financial software
Quality management	Quality audits Six sigma

TABLE 2. Common project management tools and techniques by knowledge area. (cont.) (Schwalbe, amended 2004, 12).

<i>Knowledge Area / Category</i>	<i>Tools and techniques</i>
Human resource management	Empathic listening Resource levelling Resource loading Responsibility assignment matrices
Communication management	Communications infrastructure Communications media selection Status reports Virtual communications Project Web sites
Procurement management	Contracts E-procurement Requests for Proposals or Quotes
Risk management	Risk management plan Risk ranking Probability/impact ranking

As may be seen in TABLE 2, human resource management includes the effective use of people in the project through various tools, such as listening, resource allocation and task matrices. Communication management is concerned with creating, gathering and distributing relevant project information. Procurement management includes the acquisition of goods or services from an external party. Risk management is involved with acknowledging, examining and tackling any risks that may arise from the project. (Schwalbe 2004, 11-12.) These knowledge area tools and techniques are merely some examples that may be used when planning and managing a project.

### 4.3 Project management in small to medium-sized organisations

Project management in small to medium-sized enterprises (SMEs) require different methods and approaches (such as those briefly presented in the previous chapter) to managing projects when compared to a large organisation. According to Turner, Ledwith and Kelly (2012, 942), SMEs need management in projects that is not complex and that is more focused on the people. It is argued that more than 40 percent of the turnover of small enterprises is attributed to projects.

This suggests that the quality of project management significantly impacts small business's performance.

Turner et al (2012, 942-943) suggest that the use of projects in small to medium-sized companies involve internal research and development projects, as well as external customer work. It seems that companies that are newer have mixed responsibilities when managing projects: project managers may not be appointed or used – instead employees, often non-professionals in project management, are responsible for organising projects, often multitasking between different assignments. Furthermore, the processes used in project management are less formal. This suggests that using specific, highly formal frameworks, such as the Project Management Institution's PMBoK (Project Management Body of Knowledge), specifically designed for larger organisations do not provide much help for SMEs. In fact, it is argued that these guidelines should be tailored to meet the requirements of SMEs.

In conclusion, SMEs seem to be more flexible and require less bureaucracy in managing projects. Moreover, SMEs are less likely to adopt acknowledged and detailed project management practices, and seem to emphasize a more people-focused approach. This suggests that SMEs need to be flexible in project management, and that smaller organisations need proper tools to support project management and project work because of the lack of predefined project management practises. (Turner et al. 2012, 949-953.)



## 5 AAPO SOCIAL WORKSPACE

AAPO Social Workspace is a cloud based service for projects, teams and organisations. It is developed by Avalon Oy, a Finnish advertising and marketing agency. The development of AAPO Social Workspace began in early 2008, and the service was initially made in-house for Avalon's use only. The primary need for this type of service, at the time, was that the work with vast amount of simultaneous, on-going projects was no longer possible to manage with the help of email only. With AAPO Social Workspace, Avalon Oy had the ability to manage small and large projects, communicate efficiently between teams and clients and have an archived history of what was going on in a specific project. (Laakso, discussion 8.10.2014.)

The commercial sales for AAPO Social Workspace launched in late 2011. The service is still under continuous development, however. Since the launch, the service has drastically changed through various improvements, based on customer feedback. Currently the service has some 20-30 customers, ranging from individual projects to small-to-medium sized enterprises to municipalities. AAPO Social Workspace is primarily a service for projects and organisations that consist of anywhere between 1 to 500 members. (Hillervo, discussion 8.10.2014)

AAPO Social Workspace is fundamentally a social intranet and a digital workspace to help facilitate collaboration and learning, act as a tool for project work and communication, and to gather all relevant information in one location where everyone is able to access it. To execute these aspects, certain functionalities are implemented in AAPO Social Workspace. These functionalities include user profiles and sociality, project communication environment, file depository, information bank and search functions. These functionalities are illustrated in *Table 3* below.

TABLE 3. Functionalities in AAPO Social Workspace.

<i>Function</i>	<i>Description</i>
User profiles and sociality	Profile pictures, descriptions, CV.
Project communication	Project communication, file sharing, work collaboration
Files	Files in the document bank or project communication.
Information bank	Organisational information, cases, best practices, guides. Publications.
Search function	Search function covers all before mentioned functions.

User profiles in AAPO may include the following information: username, first and last name, profile picture, email address, other contact information, such as social media profiles, and company information. In addition, users are able to enter detailed information about their hobbies, their expertise and competencies, their interests and their experiences. This information may then be used to search experts with specific skills or interests within the organisation.

Project communication is essentially where all project work is discussed, commented on, developed and shared. It is a project specific structure of information, files and communication. Users that have been assigned to a project may communicate with other users in that specific project, i.e. use it as a social collaboration platform. These users oftentimes include people that are from inside the organisation as well as from the outside, e.g. stakeholders or the project customer. The foundation of project communication is in two layers: the client layer (or the main project), and the project layer (or the subproject). For instance, a user that has access to the client layer may have access to one or more projects “under” that specific client. This approach is used to segregate projects within clients to avoid confusion.

Files may be added in the project communication in the discussions, or via a document bank. The document bank enables users to upload, examine, modify and download files that have been added to the system by other users. The files may be assigned different metatags and keywords that are useful when searching for those files or when searching for specific content.

Information bank is the equivalent of a wiki. It may be used to create and publish news, cases or guides. This content may be chosen to be published internally or externally, so that users for whom that information is relevant are able to access and view it.

The search function covers all before mentioned functions. Users are able to search for projects, clients, users, skills, users' CVs, files, publications et cetera.

User types in AAPO are limited to four distinct types. These include Users, Project Managers, Administrators and Contacts. Users are users that have basic access to clients, projects, files and other content that is assigned to them by a system administrator. Users are able to view, share and curate content, information and files and are able to communicate in projects that are within their access. Users are not able to create, edit or delete clients, projects, or other users. Users are mostly employees within the organisation. The user types and rights are illustrated in *TABLE 4*.

TABLE 4. User types and Rights in AAPO Social Workspace.

<i>User type</i>	<i>Rights</i>
User	View, edit and delete own content Upload and download files Write messages View other users
Project Manager	View, edit and delete own content Upload and download files Write messages View other users View, edit and delete projects and users View, edit and delete clients and users
Administrator	View, edit and delete own content Upload and download files Write messages View other users View, edit and delete projects and users View, edit and delete clients and users View, edit and delete publications View, edit and delete all information, content and files
Contact	View, edit and delete own content Upload and download files Write messages View other users

Project managers are users that, while having the same rights as Users, have the right to create and modify clients and projects, and manage the people that have access to those clients and projects. Project managers are generally used for employees that do not need full access to the system, and are only assigned to a specific client or clients.

Administrators are users that have full access to view, edit, create or delete any content in the system, including clients, projects, users, files, folders, publications and such. Administrators are usually users that have been assigned to be responsible for managing the entire workspace environment and its contents.

Contacts are users that are generally from outside the organisation, i.e. clients, subcontractors and other stakeholders. These contacts have limited access to the views that they are assigned. Contacts may have similar rights that users have; however they are not able to remove any content, information or files. Contacts may be assigned a read-only status that only enables them to view content and download files.

## **6 RESEARCH METHODOLOGY**

The research questions, based on the theoretical background provided in the earlier chapters and the knowledge and experience from working for the commissioner were designed to examine the benefits and usefulness of the digital workspace service, AAPO Social Workspace, as perceived by the subjects, i.e. the employees. Not much specific research was available prior to this thesis, resulting in a mix of quantitative and qualitative methods to be used. The information provided by the research is anticipated to be used in developing the system to improve user experience, satisfaction and overall functionality, resulting in a more valuable service.

### **6.1 Quantitative and qualitative research methods**

Quantitative research appears to be a research method in which data is gathered and analysed in a numeric form. It is said to emphasise sets of data that are of large scale, thus generally perceived as being the gathering of “facts”. (Blaxter, Hughes & Tight 2002, 64.) According to Taylor (2005, 89) the main concern of quantitative research is the production of descriptions that are true and objective. Qualitative research, on the contrary, is said to be a research method in which data is collected and examined in a more detailed manner, with emphasis on the depth of the research. (Blaxter, Hughes & Tight 2002, 64.) The qualitative research method appears to be multi-method in focus, inductive and to develop a profound comprehension of the subject.

A direct-data survey is a method of collecting data from individuals or groups by e.g. means of interviews, questionnaires or observations. The aim of direct-data surveys is to examine the status of a phenomenon within a set organisation or group of people at a specific time. Conducting surveys include steps such as defining the research problem, research focus, target group, definition of suitable research instruments and methods, selecting a sample, collecting data, analysing data and the results described (Thomas & Brubaker 2008, 127-128.)

A questionnaire was chosen as the research instrument to gather information from the subjects. Questionnaires consist of a number of people giving answers that relate to e.g. their life condition, beliefs or attitudes. They enable researchers to obtain information from a large number of subjects in a short time frame, with relatively little effort. A method known as sampling may be

used to reveal specific, dominant characteristics of the subject group that may be applied to a grander population. (Thomas & Brubaker 2008, 133,175.) Sampling can be divided into two subcategories: probability sampling and non-probability sampling. In this thesis, a non-probability sampling approach is used as the sample only consists of employees of the assigning organisation, with a division between workers and project managers. (Blaxter, Hughes & Tight 2002, 163.)

Questionnaires generally contain one or more item types, such as dual-choice, multiple-choice, short-answer or narrative response options. Multiple options can be offered to respondents as a dimension or scale. Oftentimes most accurate reports of people's opinions are perceived as positions on a dimension, in which divisions represent e.g. qualities. Choice alternatives can be described as points along a scale line. (Thomas & Brubaker 2008, 177.)

The results of the questionnaire are analysed in detail in Chapters 7 through 8. The results will most likely prove valuable in influencing and guiding the further development of the service. Narrow timeframe, similarity in research subjects, lack of prior research to some extent and limited resources in general resulted in the practical research method being a questionnaire.

## **6.2 Questionnaire**

The questionnaire questions were designed so that they are linked to the underlying theoretical background to a certain extent. The survey inherently consists of two different approaches to questions: one is concerned with how the employees perceive the value and benefit of the service, the other is concerned with how the project managers perceive those attributes. The theoretical background influenced to an extent how the questions were formed, however some of the questions are rather abstract in nature, due to the fact that the research is new and the theoretical background does not cover every aspect of the thesis. To ensure sufficient depth of the research data, a Likert scale was chosen as the foundation for the closed question structure design. In addition, open-ended questions were used to collect qualitative data and to allow the subjects to voice their opinions more freely. The survey forms were finalized together with the commissioner to ensure an unbiased approach. The author did not participate in the survey.

## 7 RESEARCH OUTCOMES

The research was conducted via a web-based surveying service, Webropol. The questionnaire used in this research can be found in the Appendices section at the end of this study (APPENDIX 1). The survey was conducted 9.-12.11.2014, with focus on the employees of the Commissioner organisation, Avalon Oy. A Likert scale rating with a level of agreement between one to five, 1 representing totally disagreeing and 5 totally agreeing, was used to gather the research data from the respondents.

The concept of reliability in research is concerned with research objectivity, so that if the research were to be conducted again, it would yield equal results. Reliability is not, however, concerned with the interpretation of the research results (Blaxter et al. 2001, 221). Thus, the results of this research may be viewed as reliable to some extent, as the sample group under research would most likely respond similarly to the questionnaire, if conducted a second time. However, not all of the workers responded to the questionnaire, perhaps skewing the results to some degree. All of the project managers, on the other hand, responded to the questionnaire, improving the reliability for that part in particular. Research validity, in addition, has to do with the methods, approaches and techniques and how well they relate to the research problems (Blaxter et al. 2001, 221-222). This research may be viewed as valid, as the research findings yield such results that answer to the research problem, and the methods in use follow fundamental theories of quantitative and qualitative research.

### 7.1 Sample background information

A total of 13 respondents responded to the questionnaire. This represents 50% of the total number of employees in the company at the time of the questionnaire. 54% of the respondents were male and 46% female. Of all the respondents, 15% were of ages between 18 and 24, while 23% were 25-34 years old. The majority of the respondents, 46%, were 35-44 years old, whereas only 16% of the respondents in total were over 45 year-olds. The age distribution of the respondents is illustrated below in *FIGURE 4*.



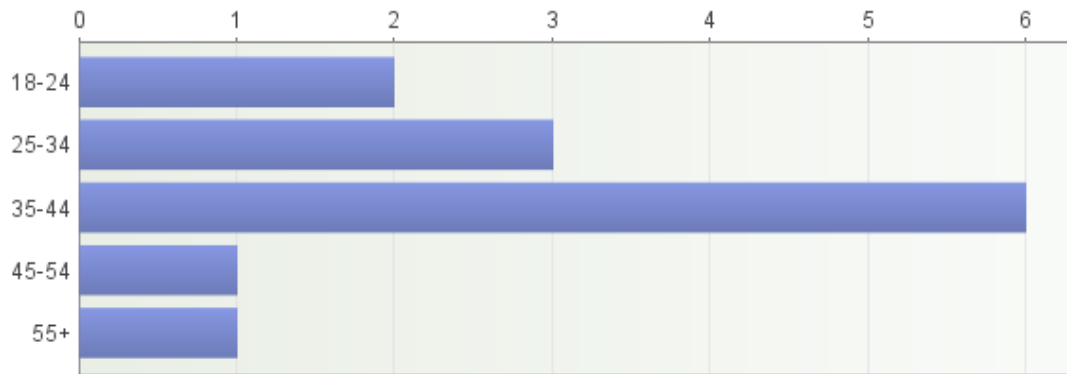


FIGURE 4. Number of respondents by age distribution (n=13).

The main difference between employees in the commissioner organisation, Avalon Oy, is the division between workers and project managers. Workers consist of employees that are part of the project teams, while project managers lead these project teams, often having multiple teams with different workers being part of them. Of all the respondents, 38% were project managers, while 62% are workers and are not concerned with the managing of projects. The figures can be examined in FIGURE 5, illustrated below.

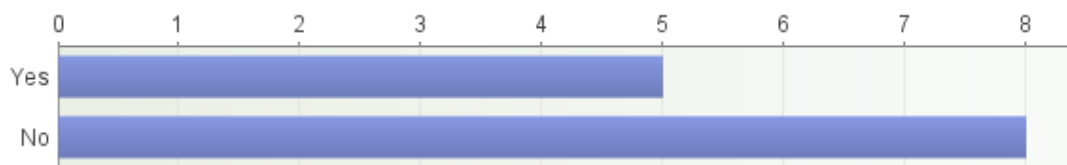


FIGURE 5. Number of project managers, of total respondents (n=13).

The usage of AAPO Social Workspace was measured by times users interact with the service. These interactions included for instance logging in, reading messages, commenting, downloading files and such. All of the respondents use AAPO in their daily work. 38% of the respondents use AAPO 1-2 times a day. A low number in usage may arise from the fact that one of the interaction points included was logging in, as one user may login to the system only once during their workday. 46% use AAPO three to five times a day, while only 16% of the respondents use AAPO more than five times a day. The usage statistics by all respondents can be seen below in FIGURE 6.

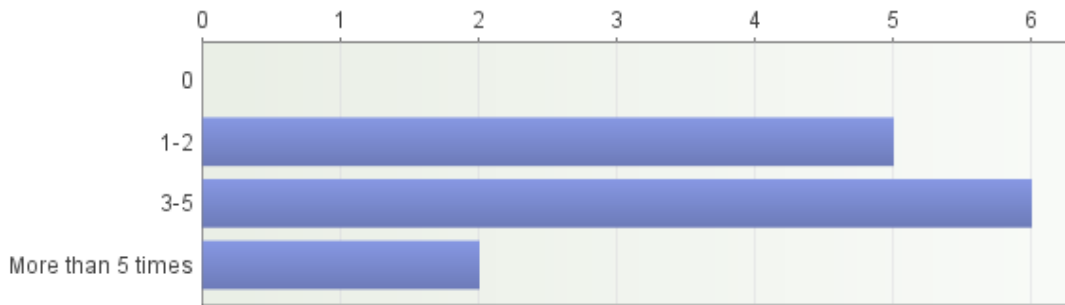


FIGURE 6. Times AAPO is used during a workday, all respondents (n=13).

Examining the project managers specifically shows that they have the most use of AAPO during a day, with 60% of project managers using AAPO 3-5 times a day, and 40% using AAPO more than five times a day, as illustrated below.

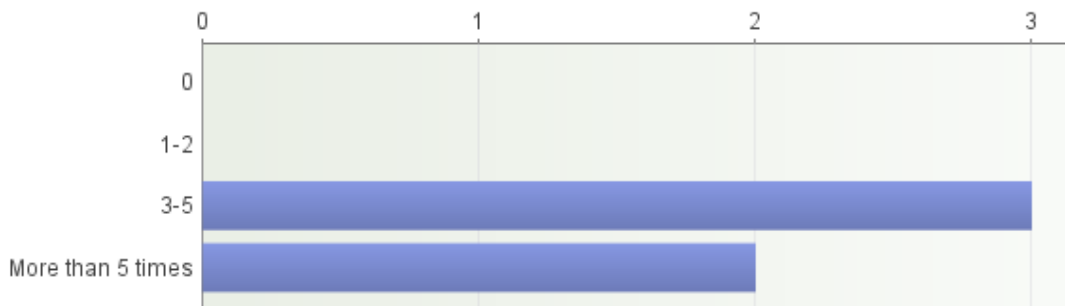


FIGURE 7. Times AAPO is used during a workday, project managers (n=5).

## 7.2 Quantitative research outcomes

The use of AAPO, its properties and experiences were examined in 15 statements in total. The first seven are illustrated in the table below. All of the respondents (n=13) responded in this set of questions.

TABLE 5. Experiences of using AAPO 1/2, all respondents (n=13).

	Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Mean	Total
1. AAPO has decreased the time using email	1	-	1	9	2	3,85	13
2. AAPO is easy to use	-	-	1	10	2	4,08	13
3. AAPO helps you stay up to date on projects	-	-	2	8	3	4,08	13
4. AAPO eases communication in projects	-	-	1	6	6	4,38	13
5. AAPO enables more free and open communication	-	2	2	5	4	3,85	13
6. AAPO helps you convey the message to the client	-	-	4	5	4	4	13
7. Project completion times have seen a decrease with AAPO	-	-	7	4	2	3,62	13

The first question examined was if AAPO has decreased the of email usage. Only one respondent totally disagreed with the statement, while 1 neither agreed nor disagreed. 9 respondents somewhat agreed, whereas 2 respondents agreed totally. The majority of respondents, nearly 85%, think that AAPO has decreased the time used for email. None of the respondents disagreed with the statement of AAPO being easy to use. In fact, only 1 person neither agreed nor disagreed with that. 10 respondents or approximately 77% agreed somewhat with the statement, while 2 respondents totally agreed with it.

The majority of the respondents, nearly 85%, agreed either totally or somewhat with the statement “AAPO helps you stay up to date on projects”. Only 2 persons responded as neither agreeing nor disagreeing. The most respondents, 46% in total, totally agreed with question 4: “AAPO eases communication in projects”. Moreover, 46% somewhat agreed with the statement. Only one respondent neither agreed nor disagreed.

Two respondents somewhat disagreed with question 5: “AAPO enables more free and open communication”, with 2 persons neither agreeing nor disagreeing. 5 respondents somewhat

agreed to it, while 4 persons, or 31%, totally agreed. Moreover, statement 6: “AAPO helps you convey the message to the client” were not disagreed by any of the respondents; 4 respondents neither agreed nor disagreed, while 38% somewhat agreed and 31%, or 4 respondents, totally agreed. Lastly, “Project completion times have seen a decrease with AAPO” had 7 respondents neither agreeing nor disagreeing. 31% somewhat agreed, while 15% totally agreed with it.

The responses to the second set of questions, 8 in total, are presented in *TABLE 6*. When asked whether working with AAPO is faster than without it, none of the respondents (n=13) disagreed. 46% of the respondents neither agreed nor disagreed. While 31% agreed to some extent, slightly over 23% of the respondents totally agreed. In statement 9, “AAPO is a valuable asset in your work”, 1 respondent somewhat disagreed in their response, whereas 2 respondents neither agreed nor disagreed. 5 respondents somewhat agreed and 5 totally agreed with the statement.

When asked to assess if with AAPO client relations in projects have improved, one person somewhat disagreed. The majority neither agreed nor disagreed, with nearly 54% of the respondents. 31% of the respondents somewhat agreed with the statement, while only one person totally agreed. Statement eleven, “AAPO has contributed positively on your personal work”, only one respondent somewhat disagreed. 6 respondents, or 46%, neither agreed nor disagreed, whereas 5 persons somewhat agreed and 1 person totally agreed. In comparison, in statement 12, “AAPO has contributed positively on teamwork and collaboration”, only 4 respondents neither agreed nor disagreed. The majority of the respondents, 7 persons, or 54%, somewhat agreed, while 2 respondents totally agreed.

When asked if AAPO contributes to communality, none of the respondents disagreed. Only one respondent neither agreed nor disagreed, while the majority of the respondents, nearly 77%, somewhat agreed. Two of the respondents totally agreed to this statement. In statement 14, “AAPO connects the team and the client, only one respondent somewhat disagreed, in addition to one person neither disagreeing nor agreeing. Whereas 4 respondents somewhat agreed to this statement, the majority of respondents, 7 in total, totally agreed. In the last statement, “Working would be more difficult without AAPO”, none of the respondents disagreed. Three persons neither agreed nor disagreed. 7 respondents somewhat agreed, being the majority, while 3 persons totally agreed. All of the general statements about AAPO, 15 in total, were responded to by all of the respondents, 13 in total. The results are illustrated in the table below:

TABLE 6. Experiences of using AAPO 2/2, all respondents (n=13).

	Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Mean	Total
8. Working with AAPO is faster than without it	-	-	6	4	3	3,77	13
9. AAPO is a valuable asset in your work	-	1	2	5	5	4,08	13
10. With AAPO, client relations in projects have improved	-	1	7	4	1	3,38	13
11. AAPO has contributed positively on your personal work	-	1	6	5	1	3,46	13
12. AAPO has contributed positively on teamwork and collaboration	-	-	4	7	2	3,85	13
13. AAPO contributes to communality	-	-	1	10	2	4,08	13
14. AAPO connects the team and the client	-	1	1	4	7	4,31	13
15. Working would be more difficult without AAPO	-	-	3	7	3	4	13

In addition to the 15 general statements, project managers were presented with 4 more questions directed only to their experiences with AAPO Social Workspace. The first statement, “AAPO helps in project management work”, had no respondents disagreeing with it. One respondent neither agreed nor disagreed, while 3 respondents, or 60%, somewhat agreed and 1 person totally agreed. One respondent neither agreed nor disagreed with the second statement, “AAPO helps in managing project teams, while more than half of the respondents somewhat agreed and 20% totally agreed.

Two respondents neither agreed nor disagreed with the statement “The use of AAPO has increased the cost efficiency of projects”, while the rest, 3 respondents, somewhat agreed to that. 20% of the respondents responded to “AAPO helps create a connection to the clients” with neither agreeing nor disagreeing, while the majority, 80%, somewhat agreed. The results are illustrated below:

TABLE 7. AAPO as a project management tool, (n=5).

	Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree	Total
1. AAPO helps in project management work	-	-	1	3	1	5
2. AAPO helps in managing project teams	-	-	1	3	1	5
3. The use of AAPO has increased the cost efficiency of projects.	-	-	2	3	0	5
4. AAPO helps create a connection to the clients	-	-	1	4	0	5

In comparison to the overall responses, a more specific examination between the responses of workers and project managers was conducted for clarification. As can be seen from the table illustrated below, workers in general tend to be less agreeing on the statements than project managers; however the differences are marginal in some cases.

TABLE 9. Comparison of the levels of agreement by means between workers and project managers.

	Workers (n=8)	Project Managers (n=5)
1. AAPO has decreased the time using email	3,63	4,2
2. AAPO is easy to use	4	4,2
3. AAPO helps you stay up to date on projects	4,13	4
4. AAPO eases communication in projects	4,25	4,6
5. AAPO enables more free and open communication	3,5	4,4
6. AAPO helps you convey the message to the client	3,88	4,2
7. Project completion times have seen a decrease with AAPO	3,75	3,4
8. Working with AAPO is faster than without it	3,88	3,6
9. AAPO is a valuable asset in your work	3,88	4,4
10. With AAPO, client relations in projects have improved	3,38	3,4
11. AAPO has contributed positively on your personal work	3,63	3,2
12. AAPO has contributed positively on teamwork and collaboration	3,88	3,8
13. AAPO contributes to communality	4,13	4
14. AAPO connects the team and the client	4,38	4,2
15. Working would be more difficult without AAPO	4	4
Total	3,88	3,97

Project managers tend to agree more on the first statement, “AAPO has decreased the time using email”, with a mean of 4,2 in the level of agreement, as opposed to workers’ 3,63 mean. Consequently, project managers tend to find AAPO easier to use, with a 4,2 mean, in comparison

to workers' mean of 4. Workers, however, tend to think that AAPO helps them stay up to date on projects slightly stronger than project managers, with means of 4,13 and 4, respectively. Project managers had the highest mean score of all the statements in statement 4, "AAPO eases communications in projects", with a mean of 4,6, in contrary to worker's 4,25. Moreover, project managers tend to think that AAPO enables more open and free communication in projects, with a level of agreement mean of 4,4, whereas worker's mean is only 3,5.

Project managers also agreed more to AAPO helping them convey the message to the client (4,2 mean), in opposition to worker's 3,88 mean. Workers, however, agreed stronger that project completion times have seen a decrease, mean 3,75, while project managers were slightly less agreeing, mean 3,4. Furthermore, workers thought more strongly that working with AAPO is faster than without it (mean 3,88), as opposed to project managers' marginally lower mean of 3,6. Project managers, however, agreed substantially stronger to statement 9, "AAPO is a valuable asset in your work", with a mean of 4,4, in contrast to worker's relatively lower mean of 3,88. In statement 10, nevertheless, both project managers and worker's seemed to agree equally, with means of 3,4 and 3,38, correspondingly.

In statement 11, "AAPO has contributed positively to your personal work", workers seemed to agree somewhat more (3,63 mean), contrary to project managers' mean of 3,2. Both project managers and workers, however, agreed similarly strong to AAPO having contributed positively to teamwork and collaboration, with means of 3,8 and 3,88, respectively. Moreover, the level of agreement was nearly equally high in statement 13, "AAPO contributes to communality", with workers' mean being 4,13 and project manager's mean being 4. Workers agreed slightly more that AAPO connects the team and the client (mean 4,38), while project managers mean was 4,2. Lastly, both project managers and workers agreed equally about working being more difficult without AAPO, with means of 4. In total, the overall means for workers and project managers for the entire 15 statements were 3,88 and 3,97, correspondingly, indicating only slight difference altogether.

### **7.3 Qualitative research outcomes**

In addition to the quantitative research statements, presented earlier in this chapter, a small set of open, qualitative feedback was gathered from the respondents. All of the respondents, 13 in total,



responded to the qualitative open questions, with no specific differentiation in the questions between project managers or workers.

1. What are the most important benefits and advantages of AAPO?

- *“Clarity, streamlined communications, ease of use.”*
- *“Calendar, connects to ValueFrame, logging hours is easy.”*
- *“It’s fast, easy, all information in one location.”*
- *“Project communication centralized in one location. Connects teams, clients and possibly even a partner, AAPO works across organizational borders.”*
- *“Centralized communications reaches all of the team at once.”*
- *“Reduces email traffic. Imagewise, an important service to the client from Avalon.”*
- *“Easier to keep everyone up to date in the project. Easier way to engage the team and the client in the discussions than email. Easy to check how the project has progressed, what files the client has received, what has been discussed.”*
- *“Managing the masses of messages in large projects. Calendar / time management.”*
- *“Equal information to everyone. Information is available everywhere. Message history.”*
- *“Everyone involved sees the same information and can access the same files.”*
- *“Everyone in the project sees the communication in one central location. Project discussions are archived automatically.”*
- *“Centralized discussions and materials. If someone is absent, project materials are still available and no information is lost in emails.”*
- *“-“*

Most of the respondents mentioned centralized discussions and materials as the key benefits and advantages of AAPO. Furthermore, respondents mentioned as one benefit or advantage that the same information is accessible by everyone, and that it’s easy to keep everyone up to date on the project. Only one mentioned the reduction of email as a benefit or advantage. One respondent did not give any feedback in this question.

2. What is most unsatisfactory in AAPO, its features or its use?

- *“Difficulty in creating communications teams (Avalon’s own version’s feature?), cannot format messages when commenting (bolding, italics etc.), the only problem in use is that every team member does not use it the same way (communications in many other channels instead of centralizing it).”*
- *“Sometimes ValueFrame does not work directly from AAPO. Oftentimes I haven’t been able to see the calendar or log hours.”*
- *“Nothing really.”*
- *“Occasionally slow. Search function is confusing.”*
- *“Clumsy document bank”*
- *“Getting the client to use AAPO so that they don’t regress to using email.”*
- *“Logging hours is slow and clumsy. Updating and synchronizing calendar is cumbersome. It’s hard to find information from the document bank unless you know the exact keyword. In small projects it’s unnecessary, hard to engage the client.”*
- *“Vallu-AAPO synchronization”*
- *“Internal communications at work still have to be managed through other means. Problems with placing large packages of materials in AAPO. “*
- *“Sometimes it’s hard to engage every party to using AAPO. Someone is always too caught up with using email.”*
- *“Slow! Sometimes difficult to find the right discussions or materials.”*
- *“-“*

Most of the unsatisfactory aspects in AAPO, its use and its features that were mentioned were the difficulties in engaging all the parties involved, the slowness of the system (ValueFrame-AAPO synchronization) and the logging of hours. Some other difficulties respondents mentioned relate to locating and storing files and materials. One respondent does not see any unsatisfactory aspects. One respondent did not give any feedback in this question. The results should be taken under review and included in further development of the system.

3. What would you like to change in or add to AAPO?

- *“See prior question, first two sections.”*
- *“Desktop and calendar tabs could be connected.”*

- *“Can’t think of anything now because I haven’t used AAPO that much.”*
- *“Inability to request a comment when replying to messages: that I would definitely want to have. If only AAPO allowed simultaneous document use (Google Drive), that would be awesome.”*
- *“More flexible document bank”*
- *“The name. AAPO doesn’t create the right image of a great product.”*
- *“Easier logging of hours. Add comment requests and file attachments to replies.”*
- *“Vallu-AAPO synchronization off, glad it’s on the way.”*
- *“Internal (only visible to Avalonians) communication section to projects.”*
- *“User interface could be improved. Sometimes finding project discussions (other than through “show history” -shortcut) is troublesome. The problem is somehow in the structuring of the project discussions. It requires a sharp course of conduct from the user to stay on topic. In practice, this never happens.”*
- *“More speed. Search could be improved. More logic in file structuring.”*
- *“-“*

Some of the improvements and changes the respondents mentioned relate to the user interface, project communication and file structuring and the ability to add comment requests and files to replies. Some mentioned that the service could be faster. One respondent would change the name of the service to more match its current state. One respondent did not give any feedback in this question.

#### 4. What is AAPO’s core function? What does AAPO do best?

- *“Centralizes both internal and client communications”*
- *“Great way to inform about matters”*
- *“Information search”*
- *“Project communications, document management.”*
- *“Centralized communications – message reaches all team members at once.”*
- *“With AAPO, we get all project parties to comment so that everyone knows where we’re at.”*

- *“Project communications with clients. Management of messages and files. Calendar”*
- *“Equal information to everyone.”*
- *“Keeps the project team intact, informed and reminds of comment needs.”*
- *“Can’t say”*
- *“Discussions and materials of course.*
- *“-“*

By far the most often aspect mentioned about what AAPO does best or what its core function is was project communications and informing of everyone involved in the projects, with 8 respondents out of 13, or 62%, mentioning it. Other responses included document management and the fact that equal information is available to everyone. One respondent couldn't point out anything specific. One person did not respond at all.

## 8 CONCLUSION

Hundreds of users from various positions in the work environment use AAPO Social Workspace daily; workers, project management, managers in general, and so on and so forth. Thus, it is crucial to understand what are the key benefits and advantages of the service in order to better develop the service along those definitions, to better match the user needs and, ultimately, to create a better service. Moreover, project work in organisations, mainly SME's and micro-companies, is becoming increasingly rapid and agile, and does not require heavy frameworks or guidelines to be followed, as discussed in Chapter 3. The way organisations, teams and individuals work is changing; the use of new technologies, tools and devices emerge with great frequency. Thus, it is crucial to develop these applications and services, and to research their use.

The research problem, presented in the introduction of this thesis, was as follows: "How does AAPO Social Workspace help in working in and managing of projects?". In addition to the research problem, two supporting research questions were employed:

- How does AAPO Social Workspace improve the daily work of employees?
- How does AAPO Social Workspace help project managers manage the projects and project teams?

Furthermore, two distinct approaches were chosen: the use of AAPO Social Workspace in carrying out the project work, and the use of AAPO Social Workspace in managing projects and project teams. A questionnaire was conducted to gather research data and to answer the research problem and the research questions. The

The theoretical framework supports the findings and the results of the research to some extent; the research questions were set up to reflect the theory, mainly from the virtual workspace and web 2.0 viewpoint, but also to reflect the knowledge areas in project management, discussed in Chapter 3. The theories and knowledge about project management offered slightly less support for this thesis, as no specific frameworks (see Chapter 4) in the researched company are in use, the project management methods used are very specific to that organisation and the nature of the work demands high levels of flexibility.

According to the results, the overall level of agreement for the research statements presented in the questionnaire was relatively high; the mean for the entire set of 15 statements was 3,92, suggesting that the respondents were substantially more agreeing to the statements than disagreeing. However, while this leads to no specific or direct conclusion as it measures the level of agreement and not the satisfaction, for instance, it may be used, to some extent, to reflect the employees' view on the service as to what the benefits and advantages of using it are. Moreover, the statements in the questionnaire were differentiated between the workers and the project managers, due to the vast differences in the nature of work in general. While the level of agreement means had some substantial variability in certain parts, overall the means were relatively equal, with 3,88 for the workers and 3,97 for the project managers. This suggests that overall, there is very little disagreement regarding the use of AAPO Social Workspace between these two.

Project managers were more agreeable on the statement that AAPO has reduced the time using email, compared to workers. This may be due to the nature of the work: project managers often have multiple projects active simultaneously, resulting in a great number of emails exchanged, thus leading to more time using email. With AAPO, they are able to reduce that time by centralizing the discussions in the workspace. Workers, on the contrary, have significantly less email traffic regarding projects, suggesting that using AAPO does not affect their email traffic as significantly as it does for project managers.

Both project managers and workers thought that AAPO is easy to use, with project managers agreeing moderately stronger than the workers. This may be due to the fact that project managers use an ERP system in addition to AAPO that requires relatively more skill, while workers only use AAPO. However, the overall mean of 4,08 suggests that AAPO is in fact easy to use.

When asked whether it is easy to stay up to date on projects with AAPO, both workers and project managers strongly agreed, with hardly any difference: means being 4,13 and 4, respectively, and resulting in an overall mean of 4,08. This implies that the respondents think it is easy to stay up to date on projects using AAPO.

The highest overall mean in the level of agreement was reached in statement 4, "AAPO eases communications in projects", being as high as 4,38. This result shows that AAPO is strongly seen

as a project communication tool, which in fact is the service's core function. The deviation of 0,35 in project managers' and workers' means (4,6 and 4,25) may be due to the nature of project managers receiving more email, i.e. communications, than workers, as discussed earlier in this chapter. Surprisingly, workers' level of agreement mean to AAPO enabling a more open and free communication was only 3,5, whereas project manager's mean was 4,4. This suggests that workers may not feel as if they are able to communicate openly in projects. This may be because not everything that is discussed internally may be presented to the client in public discussions. This statement had the most significant deviation between the means, 0,9. The result implies further research on the matter should be conducted.

Consequently, in statement 6, "AAPO helps you convey the message to the client", worker's mean was 3,88, while project manager's mean was 4,2. This result may stem from the nature of communications, discussed above. Nevertheless, the overall mean of 4 suggests that respondents in general somewhat agree to this statement.

Some of the lower overall means, 3,62 in this case, emerged from respondents not agreeing that much to AAPO having improved the completion times in projects. This may be due to the fact that AAPO does not improve all of the project processes; it is merely a workspace for communications, with aspects such as billing, drafting, negotiations and cost estimates taking time outside the service as well. However, workers tend to think that working with AAPO is actually faster than without it, with the majority somewhat agreeing to this statement.

When asked if AAPO was a valuable asset in the respondent's work, project managers were significantly more agreeing than workers, with means of 4,4 and 3,88, respectively. This finding suggests that AAPO may be a rather valuable tool in managing projects, too. The relatively low mean of workers, when compared to project managers, may be due to the fact that for workers, AAPO is most likely a communication platform and a location where work is sent and discussed. However, in total, the mean of 4,08 suggest that the respondents agree to this statement relatively strongly.

Respondents agreed to some extent to AAPO having improved the client relations in projects, with hardly any deviation between workers and project managers. The overall mean of 3,38 suggests that this is an aspect that should be improved to increase the interaction between the

project team and the client, preferably resulting in improved relations. However, respondents weren't disagreeing on this statement in general.

Workers seemed to agree more on statement 11, "AAPO has contributed positively to your personal work", in contrast to project managers. Yet both project managers and workers agreed almost equally to AAPO having contributed positively to collaboration and teamwork, suggesting that fundamentally, using AAPO has more impact on group work and collaboration than on individual work.

In consequence, both project managers and workers agreed to some extent on AAPO having a positive effect on communality, resulting in a general mean of 4,08. This may be due to the fact that AAPO gathers and centralizes the project team, clients and other stakeholders in a social environment, contributing to communality in general. Moreover, both project managers and workers agreed strongly that AAPO connects the team and the client. This finding suggests that connecting the different parties involved in a project is one of the key benefits or advantages in AAPO.

Finally, both workers and project managers had equal means for the level of agreement on "Working would be more difficult without AAPO", resulting in all the respondents somewhat agreeing to the statement. This implies that AAPO is, to some extent, and irreplaceable and a valuable tool in the work that is conducted in Avalon Oy.

Some of the key findings in the general questions may be derived from the highest mean scores. Firstly, the overall highest mean was reached in statement 4, "AAPO eases communications in projects", suggesting that this is one of the key benefits or advantages that the service offers, even more so for the project managers, as can be viewed from the results above. Communication, in addition, is one of the project management knowledge areas discussed in Chapter 3, suggesting that the service contributes to that part when regarding project management. Secondly, respondents agreed strongly on the statement that AAPO connects the client and the project team, suggesting that the service is valuable in both internal and external communications, improving and centralizing those discussions and interactions. Thirdly, four statements tied when comparing their means:



- “AAPO is easy to use”;
- “AAPO helps you stay up to date on projects”;
- “AAPO is a valuable asset in your work”; and
- “AAPO contributes to communality”

The third main finding, resulting from these four statements is that the key benefits or advantages, in addition to the two presented earlier in this paragraph, are the ease of use of the service, the fact that with AAPO it is easy to stay up to date on projects, that AAPO is a valuable asset in a project-intense work environment, and that AAPO contributes to communality. In a case study for the Finnish Ministry of Treasury, Vesterinen (2011, 52-54) describes some of the advantages that virtual workspaces offer, including reduced email traffic, better document management, and better, centralized group work environment. These findings support that general advantages of workspaces relate to topics regarding project communications and reduction in email traffic.

In addition to the 15 general statements presented to all 13 of the respondents, further 4 were presented only for the project managers to describe the project managing aspects of AAPO Social Workspace in more detail. Firstly, the respondents (n=5) somewhat agreed to the statement that AAPO helps in project management work, suggesting that while not specifically created for project management purposes, the service is beneficial and of value to project managers in their work. Secondly, the respondents somewhat agreed to AAPO helping in managing project team, with a mean score of 4. This finding suggests that when the project team is brought to the workspace, it is to some extent possible to manage the team and their work via AAPO, perhaps through internal communications and scheduling. As presented in Chapter 3, project management includes such knowledge areas as communications and human resources, thus granting the service credibility in that sense.

Moreover, respondents somewhat agreed to AAPO having improved the cost efficiency of projects. This result may be due to the fact that, as discussed earlier, projects oftentimes include a myriad of other activities that cannot be entirely handled through AAPO, e.g. creating cost estimates, negotiating, drafting and other incurring costs, such as traveling expenses. This result implies that there may be a need for these types of activities to be introduced in AAPO. As mentioned earlier, the triple constraint of project management consists of time, scope and cost attributes. These attributes should be closely analysed before developing or incorporating them in

the service. Lastly, respondents were somewhat agreeing to the final statement, “AAPO helps in creating a connection to the client”, with the mean being 3,8. This result suggests, however, that there is room for improvement, and that this should be addressed in the development of the service.

The open feedback analysis suggests that the key benefits and advantages from the respondents’ viewpoint are the ability to centralize all project communications, discussions and information so that it is accessible to everyone, and the ease of use of the service. This feedback supports the findings from the quantitative research results. Moreover, according to Virta in his thesis (2013, 8-16), some of the key advantages of cloud based services include for instance cost advantages, ease of use and operation and other business related advantages, such as better resource allocation. These findings are similar to the findings from this research.

Some of the most often mentioned feedback about what is least satisfactory in AAPO, its use or its features were slowness of the system, difficulty in logging hours and difficulty in locating files and discussions. The slowness of the system as well as the difficulty in locating files and discussions and the logging of hours are inherent to Avalon’s own installation version of AAPO, as all the data regarding projects, users and folder structure is synchronised from an ERP system known as ValueFrame. These problems are present due to the fact that the synchronization imports all data from the ERP, resulting in thousands of projects, users and folders, thus rendering it quite difficult to navigate in AAPO and to find the correct projects or subprojects.

Consequently, when asked about what the respondents would want to change in or add to AAPO Social Workspace, the feedback included those matters mentioned being the least satisfactory about AAPO: the slowness of the system in general, difficulties in locating files and discussions, and difficulties in logging hours. Moreover, improvements in user interface were mentioned. As a result, these findings should be addressed in the development of the system to improve the satisfaction of the users and to improve the service in general.

The majority of the respondents, 62% in total, thought that one of AAPO’s core functions is centralized project communications and information. Other responses included the fact that information is available equally to everyone and document management. In general, the open feedback about the core functions of AAPO support the findings from the 15 general statements.

In conclusion, AAPO Social Workspace helps in working in and managing of projects by centralizing the communications, files, the project team and the client in one location. In general, these findings suggest that using AAPO Social Workspace improves project work in Avalon Oy by eliminating distractions, such as email, and increasing productivity, thus leading to profitability increases. In addition, this increases the savings on the triple constraint of project management to some extent, with emphasis on the time factor. However, the centralisation of data, communications and people improves the monitoring of the scope as well as the cost attributes in projects, all three being crucial in meeting the project objectives. Furthermore, these findings support that using AAPO contributes positively by creating cost advantages and easing the work of resource allocation. Daily work for employees may improve, for instance, in that there's more time for actual work, less time used for searching information or files, and overall improving satisfaction to work through social functions and communality.

Specifically, the service improves project communication and interaction by connecting the clients and the project teams, contributes to communality in general and most of all, helps everyone involved stay up to date in projects. For project managers especially, the service also helps in the project management work and in managing the project teams, seemingly due to equivalent reasons mentioned above: centralized project communications, files and project members. For workers specifically, the most important factors were that AAPO connects the project team and the client, it eases the communications in projects, and that it contributes to communality.

## 9 DISCUSSION

The aim of this thesis was to study the use of AAPO Social Workspace in Avalon Oy and what are its benefits and advantages in the daily work of employees, including both workers and project managers, whose tasks in projects in general vary significantly. The study was conducted after the author had gained a sufficient knowledge base for concepts such as the web 2.0 and its applications, and project management and its theories. Research data was gathered via a web-based questionnaire.

The research sample, while low in numbers, yielded satisfactory results for the company to be used in further development of the service, AAPO Social Workspace. Research results suggest that the preliminary assumptions that the service does improve the work for the employees through a multitude of functions and uses, most of which were agreed to great extent by the respondents as well, hold true. Key findings from the research included that the service is easy to use, it helps employees in their work by centralizing all relevant information and discussions and that it is also a viable tool in project management. Findings resulted in various development ideas regarding the service and user experience, but were not discussed in this thesis in detail. The service is currently undergoing a major overhaul in terms of features and user interface, thus the improvement feedback will most likely prove valuable as the improvements can be discussed and implemented with virtually no delay.

Overall, this study and the results that stem from it were satisfactory from the author's viewpoint. The results were obtained through quantitative and qualitative research methods. Quantitative research methods are often deployed in order to draw vastly inclusive generalisations from the results (Thomas & Brubaker 2008, 14), whereas qualitative methods are used to gain knowledge that is more focused on depth rather than breadth (Blaxter et al 2001, 64). A mix of these methods were deployed in this study due to the fact that the author's objective was to mainly find general knowledge whether or not the service is of use and benefit, as seen by the employees of the Commissioner organisation. However, detailed and more "deep" data was still sensible to be researched in order to find the qualities and features the end users might find important, whether it related to the positive or the negative aspects of the service. This more rich data will most likely prove valuable in the further development of the service. The response rates for the study could have been somewhat higher, especially on the workers' part, but should

produce no significant variation in the results. Moreover, the data produced the results addressed in the research questions. Thus, the study may be considered reliable and valid. The validity and reliability are discussed more in detail in Chapter 8.

From the author's viewpoint, these results should be analysed, discussed and used in further development of the service. The questionnaire structure will probably provide a firm background for a more elaborate survey that could be used to research existing customers and obtain results that are of different nature, based on the industry or business environment the customers operate in. That being said, a customer satisfaction survey would perhaps accompany this type of questionnaire successfully, as the questionnaire used in this study is more focused on the service and its features rather than how satisfied the users are in using it. Overall, the results obtained from this study should provide valuable information for the Commissioner and the author will take this into account in the work in developing the service.

Finally, the study and the process of coordinating and finalising it was rather challenging in addition to a full-time job related to the service being researched. However, having the experience and background knowledge that was gathered during the author's time with working in the Commissioner organisation was significantly helpful, as it allowed the author to fully focus on the theoretical background and the research itself. The process of following through the initial plan was rather painless, however finding time and motivation after work proved difficult at times. However, overall the research process provided the author and the Commissioner with valuable knowledge and experiences. The author would like to thank the Commissioner and its employees for taking part in the process and helping in developing a better service. Moreover, the author would like to thank Teemu Hillervo and Jari Laakso for the support and experiences gained during the research. Special thanks to Senior Lecturer Helena Ahola for remarkable help with the thesis, and special thanks to opponent, fellow student Henri Karsikko.

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# APPENDICES

## QUESTIONNAIRE QUESTIONS 1/5

## APPENDIX 1

### AAPO Social Workspace

AAPO user survey for Avalon Oy employees. Survey time 9.-12.11.2014.  
The answers are handled anonymously.

**1. Gender \***

- Male
- Female

**2. Age \***

- 18-24
- 25-34
- 35-44
- 45-54
- 55+

**3. How many times a day do you use AAPO? (Log in, check for messages, comment, download files etc.) \***

- 0
- 1-2
- 3-5
- More than 5 times

**4. Are you a client manager / client director? \***

- Yes
- No

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**AAPO Social Workspace**

**5. General statements about AAPO. \***

	Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree
1. AAPO has reduced the time using email	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. AAPO is easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. AAPO helps you stay up to date on projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. AAPO eases communication in projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. AAPO enables more free and open communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. AAPO helps you convey the message to the client	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Project completion times have seen a decrease with AAPO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Working with AAPO is faster than without it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. AAPO is a valuable asset in your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. With AAPO, client relations in projects have improved	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. AAPO has contributed positively on your personal work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. AAPO has contributed positively on teamwork and collaboration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. AAPO contributes to communality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. AAPO connects the team and the client	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Working would be more difficult without AAPO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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**AAPO Social Workspace**

**6. NOTE! Only for client managers and directors:** AAPO as a project management tool

	Totally disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Totally agree
1. AAPO helps in project management work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. AAPO helps in managing project teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. The use of AAPO has increased the cost efficiency of projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. AAPO helps create a connection to the clients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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### AAPO Social Workspace

7. What are AAPO's key benefits & advantages? Mention 1-3. \*

8. What is the least satisfactory in AAPO, its features or its use? Mention 1-3. \*

9. What would you like to change in or add to AAPO? Mainitse 1-3. \*

10. What is AAPO's core function? What does AAPO do best? \*

11. Open feedback:

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[Lähetä](#)

**Kiitos kyselyyn osallistumisesta! :)**

Survey powered by:  
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