

Saimaa University of Applied Sciences
Business Administration, Lappeenranta
Degree Programme in International Business Management

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**Enhancing Information Management of a Non-Profit-Organization using Google Applications
Case: Imelty, a Parents Association**

Master's Thesis 2014

Abstract

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The target organization, Imelty, is a parents' association operating in Imatra, Finland. It aims to support studies of schoolchildren from seven to seventeen years old in international classes with emphasis on the English language at Linnala primary and Mansikkala lower secondary schools. The objective of this study was to plan a cost effective and easily deployable method to enhance information management of the association.

This qualitative research was delimited to theory, empiricism and research outcome. It was based on abductive reasoning, following schema of constructional research. Utilization of electronic sources was emphasized. The empiricism consisted of two research units: the case organization's current and target states. The current state analysis was carried out through the chosen methods, document analysis and observation. The research result, a plan to enhance information management with related recommendations, was delivered to Imelty.

Imelty possesses a Google account. This study strongly suggests that with the help of Google's free of charge products and service offerings Imelty could easily and cost effectively enhance its information management. Due to the increased accessibility of the information, it would be able to move closer, but eventually also reach the target state of information management.

Keywords: Information management, Google applications, Non-profit organizations.

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1 Introduction

The initiative for this research originates from the winter 2012-2013. The idea has matured while the writer has acted as a treasurer and a member of the board in a parents' association called Imelty "Imatran englanninkielisten luokkien tuki ry". With the help of the Imelty, the parents aim to support studies taking place in an English language emphasising education in Imatra, Finland. Due to the vantage point in the board of the target organization, the writer has had an opportunity to see the association as whole, and also to identify individual development needs. The writer is willing to give this contribution to Imelty in the form of this investigation to enable more efficient use of its resources. In the end, the writer's motivation for this work stems from a desire to create the most ideal solution for the people involved.

1.1 Background of the study

While commercial and non-profit-sectors significantly differ from each other, shortage of available resources is common to the both parties. Pursuit of profits has prompted the companies to determine a value to all their activities. Value on the other hand, not only gives a reason, but also a way, to develop and improve e.g. operational efficiency. The non-profit-sector is more or less based on free of charge, but truly crucial, voluntary work. Maybe, because of this non-profit nature, amount of time and effort related to it may often be vague, and tasks are loosely described or measured not at all. Systematic development work might also be incomplete, or in the worst case, non-existent, even though volunteering involves many professionals familiar with these issues. This is a paradox, since e.g. organizational effectiveness is important even for the smallest of the non-profit-organizations, since they are, too, obligated to accomplish their goals effectively due to donations they receive (Sarngadharan & Minimol 2010, p. 33).

Consequently, organizational effectiveness can be boosted with knowledge management which refers to knowledge as a similar target of management as for example human resources, funding, and production. According to Bontis & Choo (2002), information management forms a basis for knowledge management because it handles processing and adding value to information

including among other things access, control, coordination, timeliness, accuracy, and usability.

The case organization, Imelty, is a parents' association. It operates in Imatra, Finland. The town of Imatra has some 30 000 inhabitants and it is located next to the Finnish-Russian border in the South-Eastern part of Finland. Internationalization, in the form of continuously increasing tourism but also large, traditional industrial complexes, plays a major role in the everyday life in the area. Value of the knowledge of foreign languages and culture is also increasing in the future. In addition to basic education in Finnish, there are international classes at the Linnala primary and Mansikkala lower secondary schools, in which teaching is given in English. Russian language can be studied at the Finnish-Russian School of Eastern Finland, starting from preschool. At the Linnala and Mansikkala schools, students can specialize also in music. (Imatra 2013.)

With the help of the Imelty, the parents aim to support studies taking place in the English language emphasising education both at Linnala primary and Mansikkala lower secondary schools in Imatra. Beyond financial and ideological support, Imelty also enhances co-operation of the schools, the families and other interest groups. Consequently, members of this non-profit-organization consist of some 140 families in the area. Received donations, human resources, knowledge and information form the main resource of the association. (Imelty 2013.)

All though Imelty is a rather small non-profit-organization, it possesses and produces a surprisingly wide variety of different kinds of information. Imelty should be able to manage information related to such areas as the membership, financial issues, communications, and project management including customer relations and sales. (Imelty 2013.)

Concurrently, within Imelty, an unmeasured amount of time is wasted in search and share of information, and lack of systematic method to manage knowledge and information clearly dilutes organizational effectiveness. It is a strategic decision that in this thesis work, the writer investigates possibilities to enhance

information management of Imelty, for the delimitation to the grass root level is the most appropriate solution from the organization's point of view, too. (Imelty 2013.) To provide a reader with more detailed information, an individual chapter is dedicated to an adequate presentation of Imelty.

1.2 Objective and delimitations of the study

Objective of this study is to plan a cost effective and easily deployable method to enhance information management within the target organization, Imelty. The study is delimited to consist of three entities: theory, empiricism and a research outcome. The theory concentrates in opening and clarifying the most critical and meaningful terms of the conceptual framework:

- Information needs of a non-profit-organization
- Information systems
- Management information systems
- Cloud computing
- Google and Google applications

Empiricism stems from two research units: current state and target state of information management. As a result of this study, the writer composes a written, cost-effective, and easily deployable plan to enhance information system for Imelty. Any content production like composing an operational manual is delimited outside the research area. The aim is just to create means and readiness for such further research and development work. Any recommendations will be attached to the research outcome.

1.3 Research questions

The objective of the study is reached by answering the primary research question: "Could Imelty utilize the free Google applications in an easily deployable way to enhance its information management?"

"Could the free Google applications be utilized to enhance information management of Imelty?"

Secondary research questions ease and clarify the research process itself. In this research they are composed as follows:

- What kind of information does Imelty possess?
- How they could be managed with the help of Google?
- What are the risks?

Because of their clear significance as research promoters, the secondary research questions could also be called project milestones.

1.4 Research methods

The research is delimited to three entities: theory, empiricism and a research outcome. It is based on abductive reasoning. According to Anttila (2007) the abductive reasoning starts from the concreteness, proceed to structuring the concreteness with the help of theory, and ends as it returns back to the concreteness. The research process follows a schema of a constructional research, because it aims to create a new solution for the purposes of information management. With constructive approach the solution model is sought through a model, pattern or plan. The constructive approach is divided into six phases as follows:

- Identification of a current and interesting research problem
- search of pre-understanding
- composing and innovating the solution model
- practical test
- connection to the earlier research
- scope of feasibility. (Kasanen, Lukka & Siitonen 1991, pp. 301-327.)

Due to the fact that this is almost solely based on written research material, it is also a desk study. Approach is descriptive but also objective and practical. Aim of the objectiveness is to increase reliability and validity of the research, and in that sense, it also levels the research path to the correct answers for the research questions (Anttila 2006, Alasuutari 1999, Hirsjärvi, Remes & Sajavaara 1997). Philosophically, the research borders on context of a development project.

The role of the theory is to guide, to explain and to give framework for the empiricism (Puusa 2008). In other words, the theory follows ideas of formal concept analysis: the practical outcome of the research is produced according to the existing theory. Separate chapters open up the most essential terms of the conceptual framework. Google applications are a special area of interest. An individual chapter is dedicated to adequate presentation of Imelty.

The empiricism stems from two research units: current state and target state of information management within the example organization. The study utilizes qualitative research methods. According to Woods (2006), main methods employed in qualitative research are observation, interviews, and document analysis. The writer utilizes the document analysis and personal observations as means to compose an appropriate and detailed-enough, written description of current level of information management within Imelty. These methods assist the writer in the categorization of the existing data, information, and procedures. Consequently, results of these analyses serve as basis for development and design of the final plan. Any content production is delimited outside the research area, and the study concentrates in creating means and readiness for further research and development work in the future.

1.5 Structure of the study

General structure including referring to source literature of this study follows common guidelines of Saimaa University of Applied Sciences (Saimaa University of Applied Sciences 2013).

The structure of the research follows the general structure of a constructional study. Aim of the first chapter is to introduce and justify the research work itself. Chapters 2 – 5 open up and consolidate the most essential topics of the theoretical framework: associations, information, information management, information management systems, cloud computing, and Google. Utilization possibilities of cloud computing, especially benefits, requirements, and risks of Google applications, as means to enhance information management are examined. Plenty of national as well as international literature is available

offering the needed information over the key topics. Also much applicable and concurrent information is scattered around social media.

The sixth chapter actually commences the operational framework of the study. It consists of an appropriate presentation and current state analysis of the target organization, Imelty. The in depth analysis concerning the current state problems, target state, and solutions are presented in appendices 1 - 3. In the seventh chapter the writer innovates and composes the solution model based on the conclusions derived from the analysis executed in chapter six.

The eighth chapter summarizes and concludes the research work. It discusses topics typical to the constructional study, research outcome and research related experiences, giving recommendations for possible further studies.

2 Associations

The aim of this chapter is to open up the essence of non-profit-organizations, in this case associations. It summarizes information provided by the North Karelia Social Security, the KSL Civic Association for Adult Learning, Student Association of Tampere University (TAMY), The Office of the Data Protection Ombudsman, and Avoine Oy. The North Karelia Social Security Association has established a web site called "Jelli", an information service for associations, which covers a variety of information and tools targeted to different kind of associations and other non-profit organizations operating in Finland. The KSL is a private non-governmental organization, established in 1964 assisting operations of, for example, associations in Finland. Student Association of Tampere University also provides valuable information for associations. The Office of the Data Protection Ombudsman is an independent authority operating in connection with the Ministry of Justice. Avoine Oy is a privately owned company producing services and net-based tools for non-profit organizations. (The North Karelia Social Security Association 2013: Rosenberg & Törrönen 2013: Student Association of Tampere University 2013: Avoine Oy 2013.)

2.1 Associations in general

According to the North Karelia Social Security Association (2013) an association is an organization that has been established for a certain purpose. The association is formed when at least three members are engaged in some permanent, ideological purpose oriented action. The association may become registered or unregistered. Hence operations of the associations are based on volunteering, and the members are motivated by the common interest, and the sector is controlled by a variety of laws and regulations such as Association Act, Accounting Act, Auditing Act and Personal Data Act. Idealism of the non-profit-associations is a broad concept covering large range of activities. Idealism means persistent actions, for example, to enhance the idea, to take care of trusteeship, to enhance charity, to produce membership based services, or promote occasions of being together. Idealism does not include entrepreneurship or pursuit of profits, but the association may, however, aim to generate economic benefits to its members indirectly. (Avoine Oy 2013: Rosengren & Törrönen 2010: The North Karelia Social Security Association 2013: TAMY 2013.)

Transparency creates trust. Consequently, it is good to take care of that the members are provided with information sufficiently enough. Bulletins are effective when informing the members about concurrent events and activities. When, at the same time, contact information of the persons responsible is easy to find, for example, at the association's website, the groundwork for the open atmosphere is already under way. Often, particularly financial issues interest the members. Especially they should be informed about the noticeable purchases. (Avoine Oy 2013: The North Karelia Social Security Association 2013: TAMY 2013.)

Member surveys are an excellent way to maintain the association's good practices. Level of general activity effects on how often surveys are recommendable to execute. In order to succeed, they should be done on a regular basis, handling wide range of topics. Arranging member and monthly meetings is also a great way to expand the members' opportunities to participate and influence. In addition, forming either permanent or temporary

commissions, separate from the board, or completed with the board external members, increase democracy within the association. The members should also be repeatedly reminded about how they can get their own initiatives through. (Avoine Oy 2013: The North Karelia Social Security Association 2013: TAMY 2013.)

The association's shared values cover the general principles that guide all its operations. When defining the values, if possible, it is a good idea to take the members along to the process. The values should be checked from time to time, and see if they match with the present. The up-to-date values make it easier to solve potential conflict situations, and find solutions for problems. (The North Karelia Social Security Association 2013: TAMY 2013.)

2.2 Membership related issues and acquirement of new members

No association would exist without its members. The members can be private persons, even foreigners, companies, other associations, or foundations. They have a common right to form, to seek membership, not to belong to, or to resign from associations. The chairperson must, however, have a residence in Finland. The best way to acquire new and maintain existing members is to upkeep good quality of well-informed operations. The operations should appear appealing outwards. Also good partners enhance the wanted image. It may become hard to stay attractive, if the members feel the operations take place behind closed doors, concerning only the board. (Avoine Oy 2013: Rosengren & Törrönen 2010: The North Karelia Social Security Association 2013.)

A membership can be sought by filling in an application. Some associations apply a process, where new members can be accepted only when a current member recommends the applicant to the board. To ensure continuity of newly established membership, extra attention should be paid to welcoming routines: collection of a membership fee is not enough. It is recommended to provide the new members with a special welcoming letter to outline the activities. Also a welcoming event and opportunities for networking could be arranged for the newcomers. (Rosengren & Törrönen 2010: The North Karelia Social Security Association 2013: TAMY 2013.)

The members have a right, at any time, to resign just by notifying the board of the resignation in writing. A member can also be expelled from the association. A reason for the dismissal must be stated in the resolution. The new and resigned members are discussed in the board meeting. A register administrator provides the board with the needed information. (The North Karelia Social Security Association 2013: TAMY 2013.)

Membership benefits are perks associations and unions grant to their members. Membership benefits can be long-term, permanent, annual, or, for example, season based. In small associations the most important membership benefit may as well be the carefully handled association itself. Also, the either free or very low cost website marketplaces have the potential to become benefits for the members. (Avoine Oy 2013: The North Karelia Social Security Association 2013.)

A membership fee is the first and foremost means to maintain and develop associations' activities. An annual meeting determines amount of the membership fee based on a proposal of the board. Supporting members can be individuals or legal entities. A supporting membership fee is usually higher than the regular membership fee. There can also be so-called honorary members, who are not charged at all. (Avoine Oy 2013: The North Karelia Social Security Association 2013.)

The board is responsible for maintaining a register of members. The task may be designated to a member of the board or a member outside the board. Sufficiently versatile register allows production of, for example, questionnaires or other reports. Web based systems can ease the register maintaining process, as members get to update membership information themselves. Also, payment status of membership fees is easy to control with the help of efficient register. The register contains full name and place of residence of each member. Other information included in the register may be a membership identification number, email address, date of accession, and even date of birth. Members have right to access to information concerning themselves in the register. Personal Data Act regulates issue of forwarding information from the register. The board can make a decision on forwarding the information in

accordance with the Personal Data Act. (Avoine Oy 2013: The North Karelia Social Security Association 2013: The Office of the Data Protection Ombudsman 2010.)

2.3 Management and economic issues

The board is an executive and preparatory body chosen by the annual meeting. Duties of the board consist of careful management of the association according to the acts, regulations, and association rules. The most common roles within the board are the chairman, vice chairman, secretary, and treasurer. The board acts as an example to the other members, and it affects directly on practices and culture of the association. (The North Karelia Social Security Association 2013: TAMY 2013.)

The association is always obligated to keep accounts. In small associations a treasurer can take care of the bookkeeping, but in larger ones, the book keeping is purchased from a bookkeeping agency. An essential part of accounting is retention of documents: for example accounting documents must be preserved at least for ten years. The association must provide financial statement for each financial year. According to Association Act, administration and economy of the association must be inspected annually. In large associations auditing is carried out by an auditor, in the smaller ones it is taken care of by an operation inspector. (The North Karelia Social Security Association 2013: TAMY 2013.)

It is necessary that the association applies diligent document archiving routines so that the information can be easily accessed later on. A clear archiving plan facilitates creation of a logical system. The archiving plan should give guidelines on which material should be stored forever, and which only for a certain period of time. Important documents include for example agenda, notice of meeting, minutes of meeting, operational audit report, annual report and action plan. Today, the safe preservation of documents is possible to carry out in the passwords protected areas of the association's website. (The North Karelia Social Security Association 2013: TAMY 2013.)

3 Information management

Knowledge can be built from information, data or combination of them, but when data is a fact and always correct, information may as well be wrong. This is due to a fact that information captures data and knowledge at a single point, and consequently, knowledge consists of what we know including our beliefs and expectations. Wisdom handles individual's or organization's ability to learn from the other factors. (Ingebrigtsen 2013.) According to Rowley (2006, p. 5): *"There are number of different ways to approach the discussion of the nature of information and knowledge. One of the useful starting points is to examine the DIKW (Data, Information, Knowledge, Wisdom) hierarchy... ..which defines information in terms of data, knowledge in terms of information, and wisdom in terms of knowledge."* Understanding the differences between the terms enhances quality of decisions (Ingebrigtsen 2013).

Organizational effectiveness is especially important for non-profit-organizations, since they are obligated to accomplish their goals effectively due to donations they receive. Figuratively speaking, organizational effectiveness goes hand in hand with effective use of resources. Consequently, organizational effectiveness can be boosted with knowledge management which refers to knowledge as similar target of management as for example human resources, funding, and production. (Sarngadharan & Minimol 2010, p. 33.) According to Bontis & Choo (2002) information management forms a basis for knowledge management, because it handles processing and adding value to information including among other things access, control, coordination, timeliness, accuracy, and usability of information. As a matter of fact, today's society is called information society because information is seen as one of the key resources, and managing it equally important as managing other resources (Sarngadharan & Minimol 2010, p. 33).

Information management means management of information from one or more sources to one or more audiences. Information management strongly overlaps with data management, and it consists of organizing, retrieving, acquiring, securing and maintaining information. Terminology connected to the concept is complicated. For example, because the interdependent and overlapping terms

information system, Management Information System (MIS), Enterprise Resource Planning (ERP), and information technology management (ITM) are often confused. It is essential to clarify their meaning with the help of literature review.

3.1 Information management in general

Information management can be executed with the help of different information management systems. An information system is an entity consisting of hardware, software, protocols, methods, and people utilizing them. Organizations utilize variety of information systems which are designed for execution of such key functions as for example accounting, order processing, invoicing, warehousing, and marketing. Information systems have internal interfaces to enable co-operation between different systems inside the organization, as well as external interfaces to enable connections to environment. The information systems receive inputs and forward outputs. In order to make the information systems work properly, it is important that the information systems are constantly maintained, updated and developed. (Poutsari & Holopainen 1999, p. 145.)

Information technology management concerns the operation and organization of information technology resources independent of their purpose. (Laundon & Laundon 2010.)

According to Cleveland (1982), the actions taken to create an information system that solves an organizational problem are called system developments. Developers must have strong knowledge of the target organization to be able to develop an information system that meets the needs of the people involved. In other words, the developers have to understand organizational structures, objectives, operations, and data flows between processes, not forgetting financial factors. (Cleveland 1982.)

3.2 Management information systems (MIS)

Management information systems (MIS) i.e. enterprise applications are distinct from other information systems: they are used to analyse and facilitate strategic

and operational activities (Laundon & Laundon 2010). Management information systems are typically computer systems used for managing five main factors:

- hardware
- software
- data (information for decision making)
- procedures (design, development and documentation)
- people (individuals, groups, or organizations) (O'Brien 1999.)

First, management information systems provided organizations' managerial level information concerning sales, inventories, etc. Later, the term was broadened to cover such decision support systems as resource management, human resource management (HRM), enterprise resource planning (ERP), enterprise performance management (EPM), supply chain management (SCM), customer relationship management (CRM), knowledge management (KM), project management, and database retrieval applications. (Laundon & Laundon 2010.)

An ERP system facilitates the flow of information between all business functions within the organization. It also manages the connections to external stakeholders. The ERP system may include finance, accounting, marketing, human resources, production, inventory management, and distribution. A SCM system enables more efficient management of the supply chain by integrating the links in a supply chain. This may include suppliers, manufacturers, wholesalers, retailers, and final customers. A CRM system helps business to manage relationships with potential and current customers and business partners across marketing, sales, and service. A KM system (KMS) helps organizations facilitate the collection, recording, organization, retrieval, and dissemination of knowledge. This may include documents, accounting records, unrecorded procedures, practices, and skills. (Laundon & Laundon 2010.)

Sarngadharan & Minimol (2010) conclude that as any other information system, also the management information systems consist of five elements: input, analysis and processing, storage and retrieval, output, and information flow. The input is fed into the system in a form of raw or semi-processed data,

consisting of reports, correspondence, minutes of discussions and meetings, published documents and books, reports etc. The storage and retrieval preserves data or information for easy and effortless use in the future.

The analysis and processing converts the data into desired information covering such methods as abstracting, compiling, classifying, calculating, relating, interpreting, and so on. It is important to classify, codify and store information in such a manner that it can be taken out at any future date quickly and with appropriate effort. Generally, the information flow procedures cover the receipt and dispatch of correspondence, reports and other materials, their transmissions to different joints, and their handling during the movement from one point to another. The process involves the determination of communication channels, and their utilization with minimum time and effort, including:

- the flow of input into the systems
- the flow output to the user
- the flow of data to and from storage systems
- the flow of data within the data processing systems (Sarngadharan & Minimol 2010.)

According to O'Brien (1999) management information systems produce fixed, regularly scheduled reports based on data extracted and summarized from the organization's underlying transaction processing systems to middle and operational level managers to identify and inform structured and semi-structured decision problems. With information a management information system provides, organization is able to make decisions, and to manage itself efficiently and effectively. (Comtroller of the Currency Administrator of National Banks 1995.) The following are some of the benefits that can be attained for different types of management information systems:

- identification of strengths and weaknesses
- creation of a communication and planning tool
- production of an overall picture of the organization
- enhancement of ability to act according to customer feedback

- ability to improve marketing and promotion activities (Wallace 2007).

The management Information systems can help a company to gain a competitive advantage. Competitive advantage is a firm's ability to do something better, faster, cheaper, or uniquely, when compared with rival firms in the market. (Wallace 2007.)

4 Cloud computing

Cloud computing (CC) offers another interesting way to organize information management. Even though cloud hype is reality, any move to the cloud should be based on a thorough situation and business analysis (Hugos & Hulitzky 2011, p. 65). To be able to execute the needed analysis, in this and furthermore the next chapter, possibilities to utilize cloud computing, especially benefits, and risks of Google applications, as means to produce the needed plan are closely examined.

4.1 Short history of computing

Regardless its present popularity, neither the concept of cloud computing nor the technology behind it is new. Laudon & Laudon (2010) identify five eras of MIS evolution corresponding to the five phases in the development of computing technology: mainframe and minicomputer computing, personal computers, client/server networks, enterprise computing, and cloud computing. The first era started in the 1950s, and it was period of mainframe computers of IBM. These computers required a whole room and teams to run them. IBM supplied the hardware and the software. As technology advanced, computing capacity increased and costs decreased. Smaller, more affordable minicomputers enabled large businesses to have their own in-house computing centers. (Laudon & Laudon 2010.)

The second era with personal computers began in 1965 as microprocessors started to accelerate the process of decentralizing computing from large data centres to smaller units. In the late 1970s minicomputers were replaced by relatively low cost computers which were to become mass market commodities.

The computing took the first steps toward interconnecting networks and the popularization of the Internet. (Laundon & Laundon 2010.)

The third era with client/server networks begun as technological complexity increased and costs decreased further. At the same time, the need to share information within organizations grew, and, apparently computers on a common network access shared information on a server. Eventually, the technology enabled millions of people access data simultaneously. (Laundon & Laundon 2010.)

Enterprise computing gained more and more space during the fourth era. High speed networks tied different business areas together offering a complete management structure. The fifth era consists of cloud computing, which utilizes networking technology to deliver applications as well as data storage independent of the configuration, location or nature of the hardware. This has led to unseen levels of mobility in which MIS is accessible remotely with laptop and tablet computers, or even smart-phones. (Laundon & Laundon 2010.)

Nowadays, private persons as well as large and small businesses benefit from cloud offering. An every-day-example of cloud computing are the emails like Yahoo, Gmail and Hotmail. From a consumer's point of view, only an Internet connection is needed to get started. Server and email management software are located on the cloud, and they are both managed by the cloud service provider. End users access cloud-based applications through a web browser, thin client or mobile app while the business software and user data are stored on servers at a remote location. Examples include Amazon web services and Google App engine which allocate space for a user to deploy and manage software in the cloud. Availability of high-capacity networks, low-cost computers and storage devices as well as the widespread adoption of hardware virtualization, service-oriented architecture, autonomic, and utility computing have led to a growth in cloud computing. (Wikiinvest 2013.) According to Market-Visio solely Finnish market share of clouds services will grow 20-22 % per year (Salo 2012).

4.2 Cloud computing characteristics and deployment models

Cloud computing is characterized by five main attributes: on-demand self-service, network access, resource sharing, scalability, and measured service. (Nielsen 2013, pp. 10-11.) In other words, cloud computing relies on sharing of resources to achieve coherence and economies of scale. It consists of application, storage and connectivity. Each of just named segments serves different purpose, and contains different global products accessible via Internet. Cloud computing targets on maximum effectiveness of the shared resources by enabling individual computers to share memory, processing, network capacity, software, and other IT services on-demand. It allows companies to avoid upfront infrastructure costs, and focus on projects that differentiate their businesses instead of infrastructure. The flexibility and scalability of cloud services enable the rapid adaption of IT in altering needs. Resources can be allocated as necessary. (Nielsen 2013, SATW 2012.) According to Hamdaqa & Tahvildari (2012) the goal of cloud computing is to avail users with all of the technologies, without the need for deep knowledge or expertise of them. The cloud aims to cut costs, and help the users focus on their core business instead of being impeded by IT obstacles.

The main enabling technology for cloud computing is virtualization, which creates an abstract layer between computing resources and the application that use them. Resources in cloud datacentres are shared between large numbers of users who have diverse needs and run different applications. Virtualization allows customizing, mounting, and allocating these resources to the users based on their needs. Virtualization enabled cloud computing to create a general virtual infrastructure, and to provide the infrastructure as a service. By minimizing user involvement, automation speeds up the process and reduces the possibility of human errors. (Hamdaqa & Tahvildari 2012.)

There are four main types of cloud platforms i.e. deployment models: public cloud, private cloud, hybrid cloud, and community cloud. A public cloud offers good variety of storage and computing services at affordable price, because the provider covers the virtual resources from application to hardware. Users face no bandwidth or hardware costs and setup is usually quick and easy. The public

cloud grants the users an easy connection to servers and efficient information sharing. The service assures appropriate use of resources as the users pay only for the services they require. (Janssen 2013.) The public cloud is said to be reliable, and it is usable everywhere where there is an access to Internet. There is no need to install nor buy additional hardware or software, manage nor maintain: the cloud server does it all. (Samara 2012.)

Private clouds, operated by a cloud computing providers, utilize the same technology as public clouds, but they are built to an individual company. There can be many reasons, strategic, operational or cultural, why organizations decide to have an own, private cloud. (Lozano & Marks 2010, p. 37; Hugos & Hulitzky 2011, p. 104.)

Hybrid clouds are combinations of public and private clouds. These clouds are created to meet needs of an individual organization. For example the organization may need to prevent security risks and, at the same time, take advantage of possibilities a public cloud has to offer. (Lozano & Marks 2010, p. 265; Hugos & Hulitzky 2011, pp. 104-106.)

A community cloud is a cloud service model with an infrastructure shared with several organizations sharing common computing concerns such as audit requirements, joint projects, and performance requirements. Community cloud can be on-premises or off-premises, and it can be governed by the participating organizations or a cloud computing provider. (Rouse 2009.)

4.3 Service models

There are three service model of cloud computing. An Infrastructure as service (IaaS) is the most basic cloud-service model. Providers of the IaaS offer hardware, physical or virtual machines, and other resources such as images in a virtual-machine image-library, storage, firewalls, load balancers, IP addresses, virtual local area networks (VLANs) and software bundles. IaaS-cloud providers supply these resources on-demand from their large pools installed in data centres. The service provider owns the equipment and is responsible for housing, operating and maintaining it. There is no maintenance

for setting up and running the infrastructure for the customer. IaaS characteristics are automated administrative tasks, dynamic scaling, platform virtualization and Internet connectivity. Cloud providers typically bill IaaS services on a utility computing basis: cost reflects the amount of resources allocated and consumed. There is a high scalability of the systems required based on customer actual needs. (Cebula & Huth 2011; Rouse 2012.)

A Platform as a Service (PaaS) system goes a level above the Software as a Service setup, and it consists of infrastructure software, a database, middleware and development tools. (Hugos & Hulitzky 2011, p. 44; Rouse 2012.)

According to Lozano & Marks (2010) there are three types of cloud services. With a Software as a Service (SaaS), users have the least control over the cloud. Provider of (SaaS) permits the users to access to resources and applications within the cloud, but the cloud providers manage the infrastructure and platforms on which the applications run. The SaaS makes it unnecessary for the user to install software on own devices because the cloud is accessible via the Internet. It allows the users to run the newest software without having the newest hardware. Consequently, it is also referred as “on-demand software”, and it is utilized in number of areas such as customer relationship management, document management, service desk management etc. The SaaS providers usually price applications using a subscription fee. (SATW 2012.)

4.4 Benefits

The idea of a cloud computing is that the most of its complexity is hidden and invisible, so that the users are able to concentrate on the essentials (Salo 2010, p. 47). As a matter of fact, cloud computing allows companies to make a shift from managing technology to managing business processes. Companies can reduce their fixed costs structure and redirect their money to activities more directly related to revenue generation. (Hugos & Hulitzky 2011, p. 101.) Companies do not need to make large upfront investments into cloud services, nor worry about excessiveness of acquired capacity. Leaving off services is as easy as acquiring them was. (Salo 2010, p. 81.) SATW report (2012) states that

ability to simultaneously share documents and other files over the Internet enhances internal and external collaboration. Other key benefits of cloud computing are flexibility, scalability, affordability, reliability, and independence of time and space.

Cloud services can be used anywhere where a network connection is available (Salo 2010, p. 45.) No installation work on individual computers is required, and maintenance of applications is easy. Software is always up to date due the service providers' execution of updates with a push of a button without disturbing customers' operations. These centralized updates make the service quick, easy and inexpensive compared to distributed updates. (Salo 2010, p. 47, p. 82.) Independence of individual devices enables users to access systems by using a PC, a laptop, a mobile phone, a notebook, etc. (Salo 2010, p. 81; SATW 2012). This, however, requires trust in the cloud provider. (Salo 2010, p. 81.)

Service can be easily scaled up or down, with no effort required by the operational personnel at time of need and preferably from minimal to no effort by the application developers in advance (SATW 2012). Interaction between the service provider and the customer has been minimized by increasing share of self service and automation (Salo 2010, p. 81). Agility improves with users' ability to re-provision technological infrastructure resources. (SATW 2012.)

A private cloud should replace almost all of the computing needs of the organization, so that the investment would become profitable. Utilization of public clouds is more reasonable for organizations of smaller scale. (Heino 2010, pp. 212–214.) Multi-tenancy of nearly all public clouds enables share of resources and costs across a large pool of users. It allows centralization of infrastructure in locations with lower costs, such as real estate, electricity, etc. Peak-load capacity also increases. Services and capabilities that are non-core to the company are better and more cost-efficiently produced by entities for whom this activity is the primary business and who can survive economies of scale. (SATW 2012.)

Technical environment provided by the cloud service producer is generally protected by a variety of methods. A firewall and an intrusion detection system, which is, usually, called Intrusion Detection System (IDS) or Intrusion Detection and Prevention System (IDPS) protect the cloud computing machinery. (Heino 2010, p. 93.) The information that is transferred to the cloud is encrypted. Even if managed to access the information after encryption, an intruder could not change the information back into a readable format. Also resistant of the servers against such attacks is increased, for example, by removing not required system services. (Heino 2010, p. 93)

Greenness is another characteristic of the cloud computing. It gathers large IT capacity in fewer data centres, allowing better reuse of, for example, cooling energy. Infrastructure can be optimized for consumption. Servers are better utilized, as several virtual machines run on them and non-used servers can be awakened only when needed. (Lozano & Marks 2010, pp. 40-41.)

4.5 Risks

Cloud computing has now emerged to become one of the best methods for companies wanting to revamp their IT infrastructures. However, certain issues and problems related with cloud computing are good to know and recognize. A move to cloud cannot be exactly described with the word unobstructed.

The latest noticeable risk concerns security of the clouds related to American intelligence service. According to Tietoviikko (2013), Edward Snowden, an American information security specialist exposed a spy scandal related to The National Security Agency (NSA). The ever expanding scandal has especially shaken the status of American public cloud providers, but it has affected on the private cloud providers, too. (Tietoviikko 2013.) This risk is underlined by the Foreign Intelligence Surveillance Act (FISA) which allows the American authorities indefinite intelligence rights (Putkonen 2012).

When selecting a cloud service provider, one of the most challenging of the initial issues is still the need to be able to assess the service provider's service continuity. It is impossible to predict will the cloud service provider succeed, or will it even exist after few years' time. (Salo 2010, p. 105, p. 114.) This risk, that

operations of the cloud service provider may even be put down, especially concerns customers of small, unlisted companies (Heino 2010, p. 95). Cloud computing also lacks standardization. Because standards are still being developed, it is difficult to compare services of different service producers with each other, and organizations face difficulties and gain expenses when moving to another platform or transfer data between platforms. Data lock-ins and tools lock-ins seem to enhance initially chosen service provider's business due they seem to hinder customers to switch the producers because switching costs may become too high. (Salo 2010, p. 102, p. 105, p. 114; Viswanathan 2013). Some steps have been taken forward, though. Open Cloud Computing Interface (OCCI) is one of the standards Open Grid Forum is working on. The purpose is to remove blockings by harmonizing programming interfaces of service providers. (Salo 2010, p. 114.)

Regardless of commonly recognized cost efficiency of cloud computing, organizations moving to it may face problems with compatibility between their contemporary IT systems and the cloud. A solution for the problem is a hybrid cloud, which is capable of addressing most of the compatibility issues. (Viswanathan 2013) The new approach causes uncertainty due to concern for safety, desire to take advantage of the rest of the investment already made, and know-how of the personnel. (Salo 2010, p. 71.)

Because it is entirely based on the Internet, cloud computing is vulnerable to attacks (SATW 2012). According to Salo (2010, p. 36), the biggest worry concerning the cloud services involves such negative associations as information leakage, sale, identity theft. IaaS provides the greatest transparency for security and reliability, and SaaS services the weakest. PaaS is in the middle, but in general, however, closer to the IaaS. (Salo 2010, p. 36) On the other hand, all the modern IT systems are more or less connected to Internet so actually, level of vulnerability is basically the same as everywhere else. Of course, the fact that cloud computing is distributed through network also makes it easier for organizations to quickly recover from attacks. (Viswanathan 2013) Consequently, security level of services and products based on the cloud computing may even be better than in traditional systems, because the provider

is able to devote resources to solving security issues that many customers cannot afford on their own. (SATW 2012.)

The security concerns of the hybrid and private clouds are minor to the public cloud, because applications, data, and hardware are kept at the premises of the company or the contractor. The fact that in the United States, NASA and the Air Force rely on cloud services, should underline the reliability of cloud services. Nebula, a hybrid project of NASA, utilizes open-source technologies, which have open interface, for example, with cloud service platforms of Amazon and Google. (Salo 2010, p. 104.)

A bottleneck of cloud computing is data transfer. Large amounts of data and the limited transfer rates make the use of services slower. Even though the transfer rates are eventually constantly improving, the amount of transferred data is increasing even quicker. (Salo 2010, p. 101.)

Risk, that facilities of the cloud service provider may become damaged by a fire, vandalism or natural disaster, is also noticeable. Any fault in telecommunications network may prevent a user from accessing the application and data. The cloud service provider can also misplace the capacity addressed to the customer, or hardware failure, software failure or human error can corrupt the capacity. (Heino 2010, p. 95.)

5 Google

During the past fifteen years **Google** has grown to offer products from search to Chrome and Gmail as well as to advertising programs and cloud computing. The company has assisted organizations all over the world to enhance their success, productivity and visibility both on and off the web. Google seems to be so devoted to its mission, that apparently, the product and service offering keeps on diversifying and developing in the future.

Imelty already possesses a Gmail account. Because objective of this study is to plan a cost-effective and easily deployable way for Imelty to enhance its information management, in this sub-chapter, possibilities of Google are

examined. Also an adequate presentation of the company itself is given on the next pages.

5.1 Company at glance

Google Inc. is a rather young company: two Stanford University students Larry Page and Sergey Brin founded it in 1998. The founders called the search engine by the name “Google” as a result for playing with a word “googol”, a mathematical term for a 1 followed by 100 zeroes. The company is headquartered in California, USA, and the first public offering of its shares took place in 2004. Today, Google has more than 30 000 employees of whom over fifty percent are located outside USA. Alongside with its international personnel, the company has more than 70 offices in more than 60 countries, and it maintains globally more than 180 Internet domains. With these means the company serves hundreds of thousands of users and customers around the world. (Google 2013.)

Google is one of the five most popular websites in the world (About.com 2013). In the fiscal year 2012 Google Inc. reached 50 billion Dollars in revenues (Google 2013). According to Business Ferret (2012) since 2007 to 2012 there have been ups and downs, but Google Inc. has managed to maintain its overall, strong financial position. Within technology industry, computing over the Internet has started increasingly reduce demand for software installed on desktop machines. During 2012 Google Inc. topped Microsoft Corp. and become the World’s second-largest technology company. Only Apple Inc., the World’s most valuable company, was able to surpass Google among technology businesses. The rise of Google reflects the ascension of the Internet as the delivery channel for software and computing tasks that used to be dominated by the Microsoft-oriented PC industry. Google has also become an advertising powerhouse producing the world’s leading mobile operating system and search engine. (Womack 2012.)

Regardless the fact that most services Google provides have remained free of charge, the company makes money through unobtrusive, targeted text advertisement links. Although most of Google's profit comes from Internet

advertising revenue, the company also sells some subscription services, such as Google Earth Plus and Google Earth Pro. Google also sells enterprise searching tools, servers, and search technologies for corporations. (Karch 2013b)

Google has ten core values in accordance with its statement “Google’s mission is to organize the world’s information and make it universally accessible and useful”:

- Focus on the user and all else will follow
- It’s best to do one thing really, really well
- Fast is better than slow
- Democracy on the web works
- You don’t need to be at your desk to need an answer
- You can make money without doing evil
- There’s always more information out there
- The need for information crosses all borders
- You can be serious without a suit
- Great just isn’t good enough. (Google 2013.)

The first value handles creation of the best user experience possible. The second and third value concentrates on improvements in processes of finding information. The fourth value is about enhancing open source software development and ability to assess importance of all the web pages. Mobility of today’s information is underlined with the value number five. The company internal integrity and democracy as a base for existence are presented with the help of the sixth value. The seventh and eight values bring out an idea of developing global access to information in every language. The ninth value states that work should be challenging, yet challenge should be fun. General need to constant development and improvement are focuses of the last value. (Google 2013.)

5.2 Products and services

Google's mission and core values are put well in practice. Google's offering consists of an extremely large portfolio of products and services. But while it's easy to get started, it may be hard to get a full benefit of all the available services and products. This chapter aims to open up Google's offering. Google's total offering consists of more than hundred products and services, but only the most appropriate individual applications related to this research are taken up for a closer examination.

Google is generally known as a web search engine based on keyword searches that promote finding other sites on the web. As a matter of fact, Google has grown to be so popular search engine that its name is commonly used as a synonym for any Web search. Not only does Google search for standard Web pages, but it also provides specialized searches for images, patents, products, videos, stock reports, and more. With the help of translation tools, Google enables accessing information in also in foreign languages. Currently the company offers search interface in more than 130 languages, but it constantly aims to enlarge its language offering. (Google Support 2013.) Beyond the well-known search engine, Google allows consumers and organizations also create blogs, send emails, and publish web pages. Google has social networking tools, organization tools, and chat tools, services for mobile devices, and even Google branded merchandise. (About.com 2013) Google's advertising solutions including display, mobile and video ads as well as the simple text ads help thousands of businesses to bloom. Eventually, Google wants to produce as many language versions of the rest of Google applications and products in as many languages and accessible formats as possible. (Google Support 2013.)

Gmail was launched in 2004. It included features like quick search, comprehensive amounts of storage and threaded messages. In the same year the company acquired Keyhole, and in 2005 launched Google Maps and Google Earth. The acquisition eventually turned Google into the place to go for directions. Today Maps features live traffic, transit directions and street-level imagery. Earth lets consumers to explore the ocean and the moon. In 2006, Google acquired online video sharing site YouTube. Today 60 hours of video

are uploaded to the site every minute. In 2007 Google presented Open Handset Alliance and Android, an open platform for mobile devices that now powers millions of smart phones. In 2010 the company rolled out technology with Sony that weds traditional television viewing with Web surfing. The company also has invested money on building of more widely available and faster ways to connect to the Internet. Google+, a Google's response to Facebook, was presented in 2011. Google provides special concepts based on partly different, partly same products and services, for customers, enterprises, and developers. (Google Support 2013.)

5.2.1 Google Chrome and Google Chrome Store

Google Chrome is a free web browser developed by Google. It was initially released in September 2008. Google Chrome is available for Windows, Mac, and Linux. (Google Support 2013.) After Internet Explorer with a share of 57 % and Firefox with a share of 19 %, it is, with a share of 16 %, the third-most popular web browser when considering the size of its user base (Netmarketshare 2013). Each of these browsers has strengths and weaknesses, but until Firefox 4 and IE9, Chrome was the fastest of them. Now the differences between the browsers have diminished. Chrome differentiates itself through constant updates, but also through its extensive Web Apps Store, which offers apps that blur the line between Web and local apps in some unique ways. This is due to Chrome OS, Google's desktop operating system based on the Chrome browser. Chrome remains the most integrated software for accessing anything Google related. Chrome is also available in mobile versions for Android and iOS. (Widder 2013.)

The Chrome Web Store is Google's online store for web applications for Google Chrome or Google Apps. Web apps are programs that are designed to be entirely used within the browser. In the Chrome Web Store, there are thousands of available free and paid apps, extensions, extra features, functionalities, and themes from photo editors to games like Angry Birds to be added to Chrome. (Google Support 2013.)

5.2.2 Google account

Google Account is used to log in to Google services. It is a combination of an email address, which does not have to be Gmail address, and password. A new Gmail address can be associated with an existing Google Account, but two existing Google Accounts cannot be merged together. (About.com 2013.)

5.2.3 Google Apps

Web applications are generally referred as apps. Google Apps with a capital a, is a suite of hosted services that businesses, schools, and other organizations can administer using Google's servers and their own domain. Use of Google Apps Free Edition has been limited to ten users. Google considers a user to be the same as the number of distinct email inboxes needed. (Karch 2013a: 2013d.) Google has developed concepts for different user groups:

- Google Apps Free Edition
- Google Apps for Business
- Google Apps for Non-profits
- Google Apps for Education (Google Support 2013.)

Google Apps for Governments (Google Support 2013.) Google Apps free edition is sometimes referred to as standard edition. As of December 6, 2012, Google has no longer offered new accounts for the free edition of Google Apps. Anyhow, old customers have been granted to continue to use it for free. Google Apps for Non-profits is available only in the USA. Google pricing is flexible and dependent on usage of services. Differences between Google Apps for Free Edition and Google Apps for Business are listed in the table x. (Google Support 2013.)

5.2.4 Google drive and Google drive applications

Google Drive is a file storage and synchronization service enabling cloud storage, file sharing and collaborative editing. It is a home of an office suite of productivity applications that offer collaborative editing on documents, spreadsheets, presentations, etc. Drive is an alternative for emailing

attachments. Because it is a cloud based service, files can be stored and access anywhere through the web. The first 15 GB of saving space across Google Drive, Gmail, and Google+ Photos are free of charge. The saved files at drive.google.com can always be accessed straight from user's computer, smart-phone, and tablet. (Google Support 2013.)

Google account is required when working with Drive. Google Drive for Mac/PC can be installed as soon as the user has an access to Google Drive on the web. Google Drive for Mac/PC is an application that installs a folder on a computer, and automatically synchronizes it with Google Drive on the web. If Google Drive is installed on multiple devices, Google Drive takes automatically care of synchronization on behalf of the user. Any time any of the devices has Internet access, it checks in with My Drive on the web. That ensures the files and folders are always up to date. If something is changed on one device, it changes everywhere. Google drive also enables working offline. (Google Support 2013.)

5.2.5 Google sites

Google Sites enables organizations and individuals to create, edit, and share sites. It is an application that enables teams to gather a variety of information in one place including videos, calendars, presentations, attachments, and text. Content is easy to share for viewing or editing with a small group, an entire organization, or the world. Google provides several templates for creation of a Google site. (Google Support 2013.)

In the beginning, the site must be named. The name becomes unique part of the site's Uniform Resource Locator (URL). If a different URL is needed, appropriate changes can be made to the site location. It must be remembered that the chosen name and URL must be unique to the domain in question. The name can be changed later, but the URL will remain the same. (Google Support 2013.)

Page-level permissions allow user to set different levels of access for different people on different pages. Page-level permissions are off by default and only available to site owners. Once the page-level permissions are turned on, and people added to the site, the user is able to control permissions for each page.

Only owners have the ability to delete sites. The owner can also recover the deleted site within 30 days after deletion. (Google Support 2013.)

5.2.6 Gmail

Gmail is a free email service offered by Google. It's also the primary email system for Android devices with Google. Gmail was the first to offer many features that competitors later adopted, such as lots of storage space for old messages and attachments, spam filtering, free Post Office Protocol (POP) and Internet Message Access Protocol (IMAP) access for desktop email clients, and the ability to check multiple email accounts. Currently the most e-mail clients support IMAP in addition to POP. Gmail also integrates other products, such as chat and Google Calendar. Gmail was launched in 2004. (Karch 2013b.)

5.2.7 Google calendar

Google Calendar is a flexible, free online calendar, accessible through the web, mobile devices, many desktop applications such as Outlook and CalDAV, iCal, Mozilla, and Sunbird. Google Calendar also integrates with a variety of third-party tools, such as Triplt and Remember The Milk for extended functionality. Users are able to create multiple public, private, and shared, color-coded calendars for coordinating personal and group schedules. Google allows users schedule events, and share their own calendars with others. As a matter of fact, calendars can be made public for the world to see or share them but only with few. Each calendar can be shared with flexible permissions: admin, make changes, view only, etc. Calendar owners can invite anybody with an email address to individual events. Invitees can be allowed to make changes in case they have a Google Account. Google Calendar includes daily, weekly, monthly and custom views as well as an agenda. Each view can be printed. Flexible scheduling repeats events, automatically, and reminders notify users via email, SMS or desktop alert. The Gmail Tasks to-do list is available from Google Calendar, and you can create calendar events from Gmail, too. (Karch 2013b, Tschabitscher 2013.)

Google Calendars can embed to a Google Site. It must be made sure, though, that the calendar is shared with the members of the site in question, in order to avoid an Insufficient Privileges error. (Google Support 2013.)

5.2.8 Google Forms

Google Forms is a useful tool when planning events, sending a survey, giving students a quiz, or collecting other information. A Google form can be connected to a Google spreadsheet. If a spreadsheet is linked to the form, responses will automatically be sent to the spreadsheet. Otherwise, users can view them on the “Summary of Responses” page accessible from the Responses menu. A form can be created from the Drive or from any existing spreadsheet. (Google Support 2013.)

5.2.9 Google+

According to Karch (2013b) Google+ is Google's newest social media product. Google has not succeeded with social networking sites in the past. They had an early hit with Orkut but allowed it to stagnate. Same thing happened with Google Wave and Google Buzz. Google+ looks promising. The service features easy picture uploading, editing, sharing and posting. Video and text posts are equally as easy, and game fans can play games like Angry Birds without spamming their contacts with unwanted invites. Although it seems to be more of a hit for the geeky crowd and not the average Facebook user, it's already an improvement on Google Buzz, and this evolving service is sure to see improvements in the next year. (Karch 2013b.)

5.2.10 YouTube

YouTube Karch (2013b) continues, is a popular online video streaming service. Users can upload short videos for free and play them back from virtually any device with Internet access. Popular video creators can allow Google to place AdSense ads on their videos and share part of the revenue their videos generate. Traditionally YouTube has been used for more family videos than it has commercial ventures, and it's been criticized for being too light on piracy. Google has struggled to make deals with commercial content producers, and

they currently offer some movie rentals through the Android Market. Recently Google began paying a few content producers to create channels with original content. Netflix and Amazon have begun similar initiatives. (Karch 2013b.)

5.3 Risks and benefits

Basically the same risks concern Google as the rest of the cloud computing industry. The most noticeable risk concerns the NSA spy scandal including indefinite intelligence rights of the American authorities (Verkkomedia 2013: Tietoviikko 2013). What it comes to risks specific to Google Inc., the biggest problems seem to be somewhat inefficient control over operating expenses and cash management including handling of excess cash flow. Although, for example Business Ferret (2012) praises Google's pricing policy, it states, at the same time, that Google's slipping control of the operating expenses is cannibalizing the additional pricing strength. Analysis reminds that the situation is not alarming, yet, but Google really needs to take control of these weaknesses or they might eventually start to diminish the margin. It seems that Google possesses far too much excess cash due to a massive amount of excess cash flow the company is receiving. The comprehensive amount of unutilized resources dramatically lowers the return on assets and brings down edge on innovation and competitiveness. It is suggested Google should spend the excess cash to keep its strong position in the market. (Business Ferret 2012, Liedtke 2010.) Google's transparency about its unorthodox ways may be one reason the company hasn't yet been target of wide criticism of its shareholders, although most analysts agree the stock price probably would be higher if management were to use some of the company's excess cash to pay a quarterly dividend or buy back shares. (Liedtke 2010.)

6 Imelty

In order to produce real, practically applicable results, the constructional research aims to identify and understand the current situation and the factors which led to it This part of the study is, at least partially, based on previous knowledge. The innovation work starts by producing a current state analysis,

which should utilize such ethnographic methods as document analysis, observation and interviews. The current state analysis should reveal the target organization's problems and goals. (Lukka 2001.) The ethnographical methods utilized in this research are the document analysis and observation.

This phase of the constructional research is creative and heuristic, and there are very few universal methodological guidelines concerning the execution of it. (Lukka 2001.) Along with an adequate presentation of the target organization, Imelty, this chapter also aims to generate an appropriate picture of the general operational environment of the association. The writer creates corresponding target states to the uncovered problems in the current state, and then seeks solutions for the problems. As a treasurer, the writer has been able to observe and make conclusions of the target organization. These personal observations clearly ease execution of current state analysis. The current state analysis is presented in the attachments 1-3. The factors of the analysis are led from the earlier presented theoretical framework.

6.1 External environment: Imatra in a nutshell

Imatra, the home town of Imelty, is a small, industrial town in South-eastern Finland. Imatra was founded in 1948, and its current population consists of 28,289 inhabitants. Lake Saimaa, River Vuoksi and the Finnish-Russian border characterize the town, of which main employers are Stora Enso, Municipality of Imatra, and Ovako Bar Oy Ab. St Petersburg is situated 210 kilometres to the Southeast, and Finland's capital Helsinki 230 kilometres to West from Imatra. Imatra shares a boarder with Russia. Just on the other side of the boarder is located a Russian town called Svetogorsk. Imatra and Svetogorsk form up together the unique, Russian-Finnish twin town between the European Union and Russia. Today, the concept of 'twin towns' is used to market the joint advantages especially to the business sector. (Imatra 2013.)

Today, South-eastern Finland increasingly gains tourism based export revenues. Compared to other areas in Finland, the yearly sum is truly considerable. In the year 2012, South-eastern Finland was visited by 4.1 million

tourists, of which half were foreigners. Tourists left some 1.2 billion Euros to the area. (Imatralainen 2013.)

Imatra is in the process of developing a pedagogically integrated 9-year basic school, together with the National Board of Education. In addition to basic education in Finnish, there are international classes at the Linnala primary and Mansikkala lower secondary schools, in which tuition is given in English. Russian language can be studied at the Finnish-Russian School of Eastern Finland, starting from preschool. At the Linnala and Mansikkala schools, students can specialize also in music. (Imatra 2013.)

6.2 Current state analysis of Imelty

Imelty is a parents' association registered in Imatra. It is a politically and financially independent non-profit-organization. With the help of the formal association the parents aim to support studies taking place in the English language international classes both at Linnala primary and Mansikkala lower secondary schools in Imatra. Beyond financial and ideological support, Imelty also enhances co-operation of the schools, the families and other interest groups. In the end, the association targets to promote generation of positive image of the international classes in the area. Imelty has published operational rules in pursuance of registration, but it hasn't bred its general principles into shared values. Officials' directions are under way. (Imelty 2013.)

According to the rules, all of the about 180 pupils from six to seventeen years old at international classes along with their guardians as well as teachers are able to seek for the membership of Imelty. Consequently, especially the membership of the families is regarded as a volunteering necessity. Maybe that is why there is no formal application form available. The membership consists of some 140 families whose children are studying at international classes. The most common language among the members is Finnish. The minor languages are Russian, English, Spanish and Chinese. The membership covers the whole family entity regardless of the number of children studying at the international classes, and belonging to the same family entity. Naturally, Imelty welcomes private persons as well as legal entities to seek for a supporting membership.

On the other hand, no actual attempts to gain such members have been made. Imelty does not have honorary members. (Imelty 2013.)

The membership grants the power. The board consists of 20 – 21 officials. The roles of the board members are the chairman, vice chairman, secretary, treasurer, and other class and school representatives. Two officials, a representative and a deputy, are selected from amongst of guardians of each class from the first to the ninth. The class representative has to be a member of Imelty. The treasurer can be nominated outside Imelty. Also teachers of Linnala primary and Mansikkala lower secondary schools nominate one representative from amongst teachers of the both schools. Annual meeting confirms the board members based on initiatives of guardians and teachers. An official's term lasts two years at a time. (Imelty 2013.)

The board keeps the members up to date of the current events and decisions, as well as acts as an example to the other members. The communication channels are bulletins distributed to the pupils, e-mail, website, and Facebook. At least once or twice a year, Imelty also seeks visibility in the local newspapers etc. The association does not hold a permission to update its current website because the owner of the website is Linnala primary school. Consequently the website only provides some general information of Imelty including the contact information. A Facebook account was established in the early 2013, and it has not yet gained wide popularity among the members. A letter of welcome is distributed to the new members. Language of communication is Finnish. Only occasionally the members are informed in English, too. Imelty possesses a Gmail account which it already utilizes in communications. Some of the most important documents, such as agenda, notice of meeting, minutes of meeting, financial statement, operational audit report, annual report and action plan, have been established in Google Drive, and viewing rights have been granted to the board members. Currently, the information is still scattered between many locations, and no archiving plan has been produced so far. (Imelty 2013.)

The most important operational areas are the Yearbook project, International evening, scholarships, and travel subsidies. No surveys have been executed so

far to study general satisfaction among the membership. The main interest groups of the association are:

- the members
- freeloaders: the families who don't pay the membership fee but still get many benefits
- teachers and administration of Linnala primary and Mansikkala lower secondary schools
- The South Karelia IB (International Baccalaureate) World School
- City of Imatra
- sponsors, etc. (Imelty 2013.)

The Yearbook offers a full picture of the studies at international classes. It shows the reader what school life, as an E-line pupil is, from the first grade to all the way to the matriculation examination, as International Baccalaureate (IB) classes also take part in production of the Yearbook. Due the Yearbook is full of photos and stories of events and school work during the school year, it is a true treasure for many pupils. The Yearbook can be considered to be a membership based perk. The circulation reaches about 160 households in Imatra. (Imelty 2013.)

The International evening is an event, where parents and students can enjoy music, activities and something to eat. It promotes co-operation between students, teachers and parents, while providing a nice evening out for all. (Imelty 2013.)

Once a year, the scholarships are granted for two pupils at each class from the first to the ninth based on their achievements in the English studies. Each class is also able to seek twice for travel subsidies during the nine years of school: once for homeland, once for abroad. (Imelty 2013.)

Imelty basically targets to a zero result. During 2012-2013 total costs of 8900 Euros slightly topped the total income of 8300 Euros. The most significant individual expense item was the Yearbook project of which total costs were 4700 Euros. The sum includes among other things the printing costs. The second largest expense item was the schoolbooks Imelty bought to Linnala and

Mansikkala schools. The total sum was 2500 Euros. The granted travel subsidies consisted of 420 Euros, and scholarships of 480 Euros. Administrative costs including banking and accounting costs were 750 Euros. (Imelty 2013.)

Income base of Imelty is also rather narrow. Fundraising basically consists of four items: membership fees, sale of Yearbook, sale of advertisement space to Yearbook, and recreational sales in connection of different events. During 2012-2013 the selling of the eighth Yearbook produced 4200 Euros, the local companies and other organizations bought advertisement space to Yearbook by 2400 Euros, the membership fees produced 1100 Euros, and the recreational sale 500 Euros. The annual meeting confirms the amount of the membership fee. In the year 2013-2014 the membership fee is 10 Euros. The amount of supporting membership fee is fifty Euros. (Imelty 2013.)

7 Innovating and composing the solution model

The current state analysis uncovered multiple developmental needs. The target states for the problem areas were composed and corresponding solutions developed based the observations of the writer. They are presented in the appendices 1-3. On the other hand, the found solutions are only ideas of how to do it, and do not solve the problems on their own, because they lack practical approach with realistic methods. They do not answer the question: "With what can it be done?" The aim of this chapter is to reflect the results of the current state analysis to the theory presented in the previous chapters, and to innovate, plan and describe the required solution model to the target organization.

7.1 Conclusions derived from the current state analysis

The received donations, human resources, knowledge, and information seem to form the main resources of Imelty. When comparing the current state with the target state, it is obvious that there is a need to develop information management of Imelty. Based on analysis it can be concluded that even though Imelty is a rather small non-profit-organization, it possesses and produces surprisingly wide variety of different kind of information. Imelty should be able to

manage information related to such areas as the membership, financial issues, communications, and project management including customers and sales.

The board of Imelty does a wonderful job while communicating the essential issues to the members. The problem is that the information is scattered between many locations. The current procedures do not allow the members and other interest groups to access the relevant information regardless of time and space. There is a risk that consequently, the information may basically end up having mainly one direction: from the board to the others. Because no surveys have been executed, it is unclear, does the applicable information reach all the necessary interest groups. Does, for example, information concerning the noticeable amount of Euros the parents, through Imelty, spend on the schoolbooks of Linnala and Mansikkala international classes ever reach the town of Imatra? Are the members themselves aware of these acquisitions? How do they feel about them? The level of satisfaction within the membership has not been studied, and there is an obvious risk that Imelty may move bit by bit further away from the members. It might be a good idea to research, for example, through a survey, do the current operations correspond the needs and requirements of the membership, or should Imelty change. Also external communication should probably be boosted.

The management information systems are essential tools of corporate management. It is clear that context of a small non-profit-association is totally different. On the other hand, by concentrating on the areas of information Imelty manages, also similarities can be identified. Only the scale is smaller. Imelty could not handle all of its information with only one information system. At least, it needs different systems for managing membership, accounting, projects, communications, customer information, sales, and documents. Beyond these information systems, there should be another system, a similar to a management information system, to conclude the other systems together. Imelty has got a website, but the association does not hold a permission to update the content, because the site owner is Linnala primary school.

The accessibility of the information has to be developed, and consequently, guidelines be produced to prevent dependability of only a few individuals.

Attention should be paid on the need to define different access rights for different kind of information. Based on the content of information, it could be categorized according to three different user groups:

- group 1; the chairman, the vice chairman, the secretary, the treasurer
- group 2: the other board members
- group 3: the other members and interest groups

The importance of ability to transfer information and knowledge is underlined when the composition of the board is changed, or when Imelty acquires new members. To maintain and activate the existing members, Imelty has to be active promoter of conversation. The atmosphere has to be open and the members should be encouraged to come up with their own ideas, and bring these initiatives forward. In order to allow them to do so, a method for gathering the members' initiatives should be composed. Openness is a key to trust, and the trust is a key to the satisfied members who grant the continuity of the operations. In the ideal situation, the information is bidirectional, and all the involved people with appropriate rights could access the up-to-date information, whenever and wherever it would suit them.

7.2 The solution model

This solution plan is based on the free of charge offerings of Google: Google Drive, Google Sites, and Gmail. Imelty already possesses a Google account which is required when using these applications. With Google, Imelty gains numerous benefits. Because the association is a regular user, the service is free. Google is also a solid company, dedicated to constant development, improvement and product safety. Already now, the service and product offering lacks a real competitor.

With Google Drive, Google Sites, and Gmail Imelty can create separate information management systems for managing membership issues, planning, accounting, customer information, projects, sales, and documents, but also a system that gathers effectively the essential information from all the other above listed systems together.

Imelty can utilize the Drive as an alternative for emailing attachments. Because it is a cloud based service, files can be stored and access anywhere through the web. The Drive also accepts pdf format which allows Imelty to apply an efficient and safe enough document management and archiving routines concerning the most essential documents such as agenda, notice of meeting, minutes of meeting, financial statement, operational audit report, annual report and action plan, etc. As a matter of fact, some documents such as minutes of meetings have already been stored in the Google Drive, and viewing rights have been granted to the board members. Thus, it would be recommendable to utilize The Drive particularly as an archive. Naturally, an archiving plan with a comprehensive folder map should be produced and attached to the operational manual. The importance of the folder map would be underlined in connection of change of the persons responsible. The content of the Google Drive to appropriate extend can be linked to a Google site. A website, based on the Google Sites, would provide more user friendly environment to view the contents of the Google Drive.

It is clear the association needs a website with interesting and concurrent up-to-date content. The Google Sites based website would allow Imelty to share information in accordance with different access rights. The content would be easy to share for viewing or editing with a small group, an entire organization, or even the world. The website could actually be utilized as if it was a management information system. The statement is not as far-fetched as it at first might sound. The Google site allows coordination of all the essential information from all the other information management systems, in this case the Gmail and the Google Drive, with its applications under the same roof. In Imelty's case the site owners are the chairman, the vice chairman, the secretary, and the treasurer. Based on the content of information, there are three access categories which can be used when information is defined:

- owners; the vice chairman, the secretary, the treasurer
- editors; the other board members, other members
- viewers; the other board members, other members, other interest groups.

The files produced with such Google Drive applications as Google documents, Google Spreadsheet, Google Presentations, and Google Forms, can be published at the Google site or sent to the receivers through the Gmail. They allow individuals, as well as teams and other smaller groups among other things work efficiently for example on a budget or a project. With the Google Forms Imelty could execute the needed surveys for example to study the level of membership satisfaction, or gather members' initiatives. Google Forms is also a useful tool when giving a quiz, collecting initiatives or gathering information any information. A new Gmail address can be associated with an existing Google Account. This functionality could be utilized in connection of the Yearbook project by providing the project with its own Gmail address. A good example of a project is the Yearbook project, which actually would require also its own subpage to the Imelty website.

The Google Calendars can embed to a Google Site. With the help of a Google Calendar Imelty would be able to inform the board as well as regular members at the Google based website about important dates concerning the board meetings as well as any other events. The users would be able to check the dates any time from the on-line calendar.

The just introduced solution model includes only a narrow, but evaluated and appropriate, sample of Google's free-of-charge offerings. The basic idea of the produced model is just to grant Imelty means to start its process of enhancing its information management. Naturally, the use of the Google offering can be expanded if needed.

8 Summary and discussions

The aim of the last chapter is to summarize and discuss the research process and the results derived from it. It compares the research objective to the research outcome, analysing how well the writer managed to find solutions to the research question, and were the chosen research methods and theoretical framework appropriate or did the research suffer from drawbacks based on fault decisions or external factors. Chapter eight also concludes some of the most

relevant experiences related to the research process from the writer's point of view.

8.1 Description and assessment of the research process

Organizational effectiveness is especially important for non-profit-organizations, since they are obligated to accomplish their goals effectively due to donations they receive. Figuratively speaking, organizational effectiveness goes hand in hand with effective use of resources, and it can be eventually boosted through knowledge management. According to Bontis & Choo (2002) information management forms a basis for knowledge management, because it handles processing and adding value to information including among other things access, control, coordination, timeliness, accuracy, and usability of information. (Sarngadharan & Minimol 2010, p. 33.)

All though it is a rather small non-profit-organization, Imelty possesses and produces surprisingly wide variety of different kinds of information. Beyond received donations and human resources, knowledge and information are the main resources of Imelty, On the other hand, concurrently, unmeasured amount of time is wasted in search and share of information and knowledge, and the lack of systematic way to manage them clearly dilutes the organizational effectiveness. The importance of ability to transfer information and knowledge is underlined when the composition of the board is changed, or when Imelty acquires new members. Open and conversational atmosphere is highlighted when the interest turns to the area of maintaining and activating the existing members.

The idea for this research started to mature during the winter 2012-2013. The initiator for the research was the writer who already then acted as a treasurer in the case organization. After being able to see the association as whole, but also identifying individual developmental needs, the writer felt willingness to contribute the operations in a form of this investigation to enable more efficient use of its resources. The writer's motivation for this work stemmed from a desire to create the most ideal solution for the people involved.

The composition of a plan which would help Imelty to enhance its information management in a cost effective and easily deployable way became an objective of this research. The writer decided to utilize abductive reasoning and the schema the constructional research. According to Anttila (2007) the abductive reasoning starts from the concreteness, proceed to structuring the concreteness with the help of theory, and ends as it returns back to the concreteness. With constructive approach the solution model is sought through a model, pattern or plan. The constructive approach is divided into six phases as follows:

- Identification of a current and interesting research problem
- search of pre-understanding
- composing and innovating the solution model
- practical test
- connection to the earlier research
- scope of feasibility. (Kasanen, Lukka & Siitonen, 1991, pp. 301-327.)

The theory followed ideas of formal concept analysis, and its role was to guide, to explain and to give framework for the empiricism (Puusa 2008). With the help of theoretical framework, the writer sought understanding of the concepts at hand. Separate chapters opened up the most essential terms of the conceptual framework, and an individual chapter was dedicated to adequate presentation of Imelty, which actually commenced the operational framework of the research.

The empiricism stemmed from two research units: current state and target state of information management within the target organization. The chosen research methods to study the operative framework were qualitative, the document analysis and observations. With the help of document analysis the documents of the target organization were interpreted to appropriate extent to gain better understanding of the studied subject (Robson 2002, p. 88). The observations of the writer supported the analytical process. Consequently, the results of the current state analysis allowed the writer to create the final solution model.

8.2 Connection to the earlier research

This study is related to research concerning improvement of operational effectiveness of non-profit organizations by improving their information management. Cloud computing, more closely Google applications, are selected as means to accomplish it. During the recent years cloud computing has appeared as a topic in numerous studies, which truly levels the research path of this research. There are also several studies made about Google and Google Apps, but the Google applications are clearly a less studied area. Previous research concerning the management information systems, and non-profit organizations' information needs is also available.

8.3 Novelty value

In the big picture, novelty value of this research comes from its way to look at the topic from a different, unforeseen angle. This study approaches the research area by reflecting the context of the non-profit-organizations and their information management systems to the corresponding systems of corporations including the management information systems. The approach opens a wide view over the topic. By concentrating on areas of information to be managed, instead of the scale of operations, one cannot avoid noticing similarities between the contexts of these two operators. This research asks why they could not use tools called with similar names, too.

8.4 Feasibility

There are also some, at least partly, overlapping parents' organizations in Linnala elementary and Mansikkala lower secondary schools. Apparently these organizations as well as other small non-profit organizations could utilize, without a doubt, the results of this research. The scalability and convertibility of the Google offering grant large variety of possibilities to differentiate the service. Also the model of current state analysis (appendices 1-3) produced during the research may become helpful for similar organizations.

8.5 Validity and reliability

The research problem was derived from an existing problem of Imelty. It can be stated that this study is valid.

With a literature review the researcher ensured the understanding of the research related concepts. Descriptions of the problem areas of the current processes were composed, and the researcher assessed them based on personal experience and the literature. The conclusions are based on the solution model derived from evaluation of identified problems. Consequently, it can be concluded that the concepts related to the studied phenomenon are reliable.

8.6 Source material

Large amount of applicable and concurrent information is available in virtual libraries but also scattered around the social media. Due to that, utilization of electronic sources is clearly emphasized in this research. Cloud computing has become a hit during the recent years, not mentioning information management and information management systems which are already classical areas of research. Also quite a few studies handle one way or another Google. On the other hand, earlier research or other relevant sources concerning applications of Google are significantly harder to find. Same applies with management information systems.

The support service of Google provides much information, but the service is not as user friendly as it could be. Locating the correct information takes ages, especially if the researcher does not exactly know what it is that should be looked for. The dilemma is due to incomplete lists of the Google applications.

8.7 Assessment and recommendations

Philosophically the research bordered on context of a development project. The research problem was derived from the existing context of Imelty according to the guidelines of the constructional research. The comprehensive study concerning essence of associations, information management, information management systems, management information systems, cloud computing in

general, and the in depth study of Google provided the writer with the needed information of the theoretical framework. The existing documentation became a handy tool when the current state knots were identified. In addition, the researcher's personal observations of were utilized, because of the valuable information they provided.

The primary research question was: "Could the free of charge Google applications be utilized to enhance information management of Imelty?" Secondary research questions were composed as follows:

- What kind of information does Imelty possess?
- How they could be managed with the help of Google?
- What are the risks?

The researcher was able to find answer the research questions with the help of the chosen approach, methods, and analytical tools, but also the composed solution plan.

This study strongly and demonstrively suggests that with the help of Google's large, free of charge product and service offerings, Imelty could easily and truly cost effectively boost its overall operational efficiency in a form of more appropriate use of the resources due to enhanced information management. The Google applications can help Imelty to defragment the currently scattered information. The association can also increase bidirectional exchange of information between the board and the membership as well as the other interest groups. The new site with the information stored in the Google Drive would allow all the people involved to access the information according to their roles wherever, whenever, and with the device of choice. Also a public role with access to public information would come in question. The Google site could also be used as means to market Imelty to the different internal and external interest groups or even to find new ones. For example Imelty is not the only parents' association at Linnala primary and Mansikkala lower secondary schools. Maybe with the help of newly organized information these overlapping organizations could find ways to grow closer and boost their efficiency all at the same time.

Undoubtedly, Imelty would be able to move closer, but eventually also with hard work and devotion reach the described target state. The main reason for the positive progress would be the increased accessibility of the information. On the other hand, it is not enough to be settled for organizing the information by using the tools Google has to offer. The new procedures must also be described and written down into an operational manual. In the end, the manual should be published at Imelty's website to grant the maximum accessibility. The board should also name a person responsible to do the updating work. Without the named person or persons responsible, there is a danger that after a while information becomes out-dated and useless.

It is important to understand that even though this research has produced number of ways to develop and improve the current state of information management of Imelty, all the change does not have to take place immediately. To avoid exhaustion, it is better to start with one step at the time, but a concrete step. Even the smallest steps are valuable because as the dependency on individuals decreases, operational efficiency increases. Also, the risks of cloud computing including Google's public cloud are better to bear in mind.

Although the research has produced many applicable solutions to be utilized by the target organization, some definite weaknesses can be identified in the research process, too. Firstly, the co-operation of the researcher and the target organization is one of the most essential requirements of the constructional study. Without it, there is a big risk that results of the study will never be executed (Lukka 2001). The writer has not marketed or inducted the target organization to the research process. Secondly, even though a practical test is an essential part of any constructional study (Lukka 2001), in this particular research, it is left for less attention. This research does not include large practical tests performed with the target organization and reported afterwards. Only the writer has acquainted herself with the Google application in order to be able to assess the suitability for Imelty.

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CURRENT STATE ANALYSIS: Membership management

APPENDIX 1

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
<p>Seeking for a membership</p>	<p>Rules and practices of Imelty do not match at the moment. According to the rules, each pupil with a family, as well as the teachers at international classes are allowed to seek for the membership of Imelty.</p> <p>A formal application process including the application form does not concurrently exist. The membership is regarded as a volunteering necessity based on the benefits all the children receive.</p>	<p>The application process is described and the application form published on the website. The application forms are distributed into the backpacks of the new pupils at the first class in the beginning of the autumn term. The applicant fills in the name, contact information (address, phone number, email address), as well as names and classes of every other pupils belonging to the applicant's family entity, and studying at international classes. The applicant identifies an already existing membership with the help of a tick box in the application form. The board approves the new applicants. Name of each new member is entered into the minutes and member register.</p>	<p>Imelty establishes an application process including an application form which is usable also when updating existing member's personal information.</p>
<p>Recommendation</p>	<p>Imelty does not officially utilize recommendation process when acquiring new members.</p>	<p>Imelty applies a described process of the recommendation. Referee, a member of Imelty, delivers applications with applicants' information to the board. A referee can for example be the class representative.</p>	<p>Imelty starts to utilize an official recommendation</p>

CURRENT STATE ANALYSIS: Membership management

APPENDIX 1

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Supportive members	The association does not have supporting members. Supporting members' recruitment does not happen.	Imelty has at least some supportive members. They are informed and personally invited to events organized by the association. They are mentioned by name in the minutes of the Annual meeting, and, for example, in the Yearbook.	Recruitment of supportive members is activated.
Honorary members	Imelty does not have honorary members.	The board or any of the members suggests a nominee for an honorary member to the Annual meeting. The Annual meeting approves the nomination. The honorary member/s is/are mentioned by name in the minutes of the Annual meeting, and, for example, in the Yearbook. Imelty has at least one honorary member, who is informed and personally invited to events organized by the association.	Application of nomination of honorary members is introduced.

CURRENT STATE ANALYSIS: Membership management

APPENDIX 1

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Secession	Acc. to the Association Act, belonging to an association is voluntary. In Imelty the members are not actually able to secede from Imelty. The membership is regarded as a volunteering necessity because of the common perks.	The members are officially able to secede from the association by informing the board of their decision.	Imelty starts to apply secession procedure in practice.
Dismissal	Rules and practice do not match at the moment. According to the rules the failure to pay the membership fee can result in the dismissal from the association. Because the association does not apply any formal application procedures, the members cannot actually be dismissed either.	Consistent consequence for improper action.	Imelty starts to apply dismissal procedure in practice.
Membership	The membership is regarded as a volunteering necessity. There is no formal, documented process behind the membership.	Because of the formal process, it is easy to monitor the membership. Number of exclusive perks has been increased.	The formal process is introduced.
Welcome the new members	A bulletin where activities of Imelty are presented is distributed to the new members in the beginning of the autumn term.	In the autumn, Imelty organizes a member evening especially for all the new members. Naturally the old members are welcomed, too.	Welcoming routines are developed further.

CURRENT STATE ANALYSIS: Membership management

APPENDIX 1

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Membership register	The treasurer upkeeps the register in an Excel workbook. Member register contains the contact details of the members and the names and classes of the pupils studying at the international classes and belonging to the same family unit. The information may be incomplete or include errors because updating is slow and rather difficult.	The treasurer and the secretary co-ordinate the upkeep of the register. The members do the most of the job themselves. There is an appropriate amount of different methods to take care of the maintenance. A form on the website allows the members to maintain personal information themselves. Alternatively, members may inform the board of changed contact details with the help of the application form which is distributed to the pupils' backpacks in the beginning of the autumn term.	The primary responsibility for the maintenance of the contact details is transferred to the members.
Perks	In addition to travel subsidies, ability to join the board, and participate in the Annual meeting, the membership does not contain any other benefits exclusive only to the members.	New perks are: - Yearbook at a discount price - travel subsidies - ability to influence (surveys, initiatives, board, annual meeting etc.)	The perks' policy is developed further.
Initiatives	Members' initiatives are not systematically gathered.	There is a simple tool that allows initiatives to be collected. Members are encouraged to make initiatives. The members' alternatives to influence practice have more variety than before.	Imelty starts to gather initiatives.

CURRENT STATE ANALYSIS: Membership management

APPENDIX 1

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Membership satisfaction	It is not known, whether current operations correspond to membership needs and requirements. Imelty does not have an effective method which would help it to examine membership satisfaction.	Imelty is able to make quick and easy surveys to the membership. Imelty executes surveys on regular basis on a variety of topics and reacts to the results.	Survey

CURRENT STATE ANALYSIS: Communications and information management

APPENDIX 2

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Communications plan and strategy	A communication plan and strategy are missing or under development.	The transparency of operations has increased, and will continue to increase. Actualization of the communication strategy is monitored actively. Communication is more effective. The communication strategy is available on the association's website.	Internal and external communications strategy and plan are outlined, the methods, tasks, schedules persons responsible, and responsibilities are defined.
Location of information	Information is scattered between many locations such as Gmail, Google Drive, an external drive, the officials and their devices, cd's, etc. Locating and utilizing the correct information is hard and time consuming. No archiving plan has been produced so far.	The essential information is easily accessible. The new website has enhanced communication and effective information management. The members are familiar with the purpose and activities of the association, and they are committed to it.	Concerning the information Imelty defines the following guidelines: From who? To whom? How? When? For how long?
Information access rights	Imelty possesses many kind of information. At the moment Imelty has not defined who should have access to the information.	Access rights of different information are clearly written down to the operational manual.	Access rights are defined.

CURRENT STATE ANALYSIS: Communications and information management

APPENDIX 2

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Communication channels	The communication channels are bulletins distributed to the pupils, e-mail, website, and Facebook. At least once or twice a year, Imelty also seeks visibility in the local newspapers etc. The association does not hold permission to update its current website because the owner of the website is Linnala primary school.	The new website has enhanced communication and effective information management. The members are familiar with the purpose and activities of the association, and they are committed to it.	A new, association owned website is produced.
Language	With a few exceptions the language of communications is Finnish. However, many families of the pupils at Linnala and Mansikkala do not speak Finnish.	Languages of communications are Finnish and English.	Communications in English is enhanced.
Association rules	The association rules are not confidential, but still are not easily accessible.	The association rules are published and available on the association's website.	The accessibility of the association rules is enhanced.
Shared values	Imelty has published operational rules in pursuance of registration, but it has not bred its general principles into shared values.	Imelty has established shared values. They are checked e.g. before every Annual meeting and the needed changes are made. The shared values help to promote the association as well as to solve problems and conflicts.	The board produces values in accordance with its motif. The Annual meeting confirms them.

CURRENT STATE ANALYSIS: Communications and information management

APPENDIX 2

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Operational manual	Imelty hasn't composed an operational manual, yet officials' directions are under way.	Imelty upkeeps an operational manual at its website. The operational effectiveness is higher than before due to easily accessible instructions and guidelines. Information management, transfer of knowledge, and internal and external communications have become more effective.	Imelty produces an easily accessible operational manual.
Imelty contact details	Composition of the board and the contacts details are poorly exposed. There is not a public or limited-access-list of the former and current members of the board.	Information is published on the website.	Information visibility is improved.
Calendar	There is no public calendar, where the members could check the coming events, for example the board meetings, the period of yearbook project, due date for the membership fees etc.	A public calendar is available on the website and updated frequently.	The calendar with common access is created.

CURRENT STATE ANALYSIS: Communications and information management

APPENDIX 2

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Yearbook project, advertisement follow up	In 2013 the treasurer sent at least one e-mail per week. The sold advertisements were reported in the attachment. During the project dozens of e-mails were sent to the class representatives and Yearbook team, who distributed the report to the parents. At the moment customer register is located in a Google Sheet in Google Drive. The chairman, secretary and treasurer have access to the register.	<p>When the parents sell the advertisements, they ask permission to publish the organization's name at the website.</p> <p>List of the sold advertisements is available at Imelty's website.</p> <p>Number of e-mails concerning the issue is cut down.</p>	Follow up of advertisement agreements is executed more efficiently.
Internationalization	The global as well as area internationalization constantly escalates. Need to know foreign languages and cultures are increasing ever faster.	Continuity: there is a need for Imelty to exist also in the future. It carries on with its good work to enhance local possibilities to obtain education in English by enhancing its operations.	Imelty takes initiative and actively develops its own operations.
Other parents' associations	Currently, there hardly is any co-operation between the different parents' associations e.g. in Linnala and Mansikkala. Because of these overlaps, operations are not as efficient as they could be.	Imelty starts to co-operate with other parents' associations.	The different parents' associations have moved closer to each other. The co-operation has helped to eliminate the overlaps. The operatives are more efficient than before.

CURRENT STATE ANALYSIS: Financial management

APPENDIX 3

FACTOR	CURRENT STATE (PROBLEM)	TARGET STATE	SOLUTION
Financial statement	The financial statement is not confidential, but still it is not easily accessible.	The financial statement is published and available on the association's website.	The accessibility of the financial statement is enhanced.
Annual report	The annual report is not confidential, but still it is not easily accessible.	The annual report is published and available on the association's website.	The accessibility of the annual report is enhanced.
Operating plan	The operating plan is not confidential, but still it is not easily accessible.	The operating plan is published and available on the association's website.	The accessibility of the operating plan is enhanced.
Budget	The budget is not confidential, but still it is not easily accessible.	The budget is published and available on the association's website.	The accessibility of the budget is enhanced.