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ADDING FURTHER EFFICIENCIES TO THE LAUNDRY AND HOSPITALITY INDUSTRIES

– Commissioned by CompanyX

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BACHELOR'S THESIS (UAS) |ABSTRACT

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Adding Further Efficiencies To The Laundry And Hospitality Industries

This dissertation investigates the number of customers who rent laundry from CompanyX and experience problems with the service process that they receive. The research gauges the significance of the problems experienced and explores what technologies could enhance the service processes of CompanyX.

The research methodology used was an internet based customer survey, to empirically determine the quantity of customers who experience service process problems. Further investigation was performed to identify possible technology improvements that could be implemented in the laundry rental industry.

The research resulted in 27.4% of the targeted customers responding to the customer survey and 85% of those respondents indicated that they experience problems with service process received from CompanyX.

The conclusion is that more than 27% of the targeted customer base experience problems and that there are technologies which can be implemented to improve the service process.

The research recommends making use of proven technologies to automate ways of measuring service delivery so that customer service can be more easily managed. One of the technologies is a simple internet based customer service measuring mechanism, and another recommendation is to use RFID technology to tag individual laundry items to be able to empirically measure the service process.

KEYWORDS:

(customer service, RFID, laundry tag, asset tracking, laundry theft)

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1 Introduction

The very competitive nature of the global Hotel and hospitality industries prompts organizations to explore ways of enhancing their internal efficiencies and value offerings to their respective customer bases. One of the ways that organizations are using to enhance their internal efficiencies is through outsourcing of some non-core functions of their business. An area that is often outsourced with hospitals and hotels is the area of Laundry management. Sanders mentions how the vendors of outsourcing provide non-core services to hospitals, which then allows the hospitals to focus on serving patients (Sanders 2004).

1.1 Purpose of the study and research questions

A Finnish company that hotels and hospitals outsource their textile management from is CompanyX who is member of the GroupX group of companies. CompanyX provides the service of the rental of clean linens to hotels and hospitals (CompanyX 2015). A discussion with a hotel, a customer of CompanyX, revealed some of the troubles that they experienced with the services received from CompanyX. Subsequently this research was commissioned by CompanyX to explore the impact that these troubles have on their customer service, and what steps can be taken to improve their efficiencies. The research also shows where new innovations could provide ways to differentiate organizations from their competitors.

The ultimate purpose of this thesis is to research the troubles that customers of CompanyX experience, how these troubles affect the service levels that CompanyX provides, and how technology could add further efficiencies to the services of CompanyX. Rauch highlights the importance of being able to measure the quality of service provided by hotels, as can be seen in the research by Rauch et al (2015), in their article Measuring Service quality in mid-scale hotels in International Journal of Contemporary Hospitality Management. The research points out that “Competition among hotels to attract and retain customers is intense and customers may be less likely to return to a hotel if the property fails to meet its customers’ expectations relative to service quality, regardless its price-point.” (Rauch et al, 2015).

The dilemma which CompanyX experiences centres on the lack of meaningful data about their laundry pool that is rented to the customers. The laundry product inventory is owned by CompanyX and, unless specifically agreed by a customer, is

shared across all the customers of CompanyX. Getting meaningful data about the laundry pool is an industry wide dilemma which CompanyX also confirmed. The objective of this thesis is to identify the some of the troubles that customers experience and to quantify how many of the customers face the same troubles. The hypothesis is that by using technology to individually identify linen textile items, it would provide an opportunity to generate data on the linen usage. That data would help management to empirically measure the service levels that CompanyX provides.

The author has been involved with the I.T. industry since 1990 and run or owned various software development companies since 1996. He has been exposed to the hospitality industry for the past 10 years, and has experience with hotels searching for possible technology solutions that could address issues related to laundry losses. An interview with a hotel manager led to discussions with CompanyX and this research work.

To Clarify the Research questions, the research has been clearly defined in consultation with CompanyX. Interviews with CompanyX, site visits to the laundry plant in Turku and a customer survey provide primary data for the research. Further secondary data is sourced from various other sources such as Journals, published works and internet resources. Discussions with CompanyX suggested that the research address the following:

To explore the current state of the CompanyX Service process to their customers.

The following questions should be answered:

- How many responding customers experience troubles with the services provided by CompanyX?
- How significant to responding customers are the troubles they experience?
- How can technology add further efficiencies to the Laundry and Hospitality industries?

1.2 Thesis Outline and structure of study

Figure 1 describes the structure of the study.

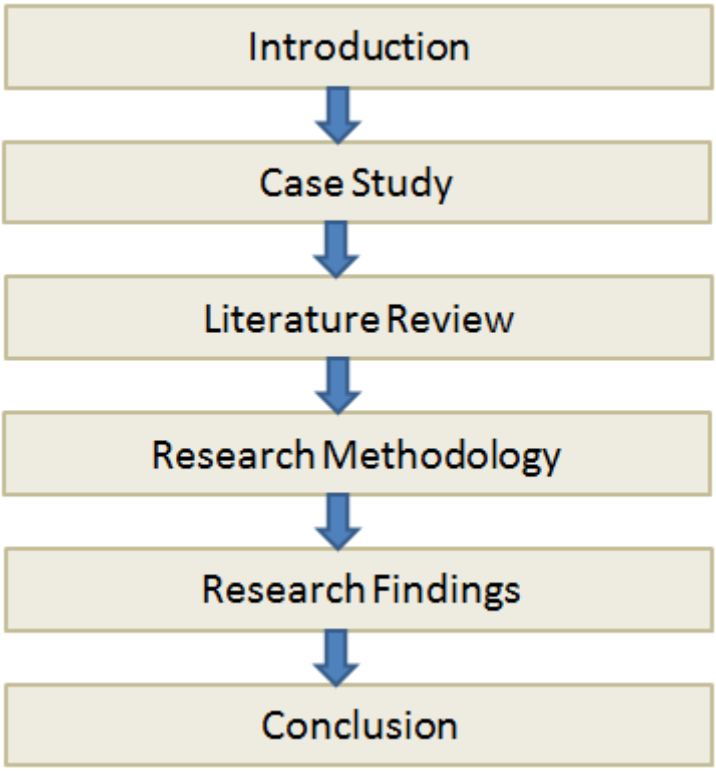


Image 1. Structure of study

As can be seen from Figure 1, the study is divided into six chapters. The first chapter introduces the study, then covers the purpose of the study and includes the research questions that are used for the study. The second chapter explores the case study of CompanyX and discusses research with customers in the area of CompanyX service delivery. The problems and challenges that the research uncovered are then described.

The third chapter deals with the literature review and covers two areas. The first area is Customer service, the customer service framework that can be used in defining customer service, explores exceptional service, discusses the benefits of quality customer service and lastly covers customer satisfaction. The second area

is RFID, with a brief history of RFID and then investigates ways that RFID is used in the laundry business. How RFID adds value to organizations is explored, and then discusses some of the factors of success of RFID in the laundry industry. The fourth chapter covers the Research Methodology used in this research task. Then the fifth chapter presents the research findings. Lastly the sixth chapter presents the conclusion and offers recommendations of what actions can be taken to enhance the efficiencies of a world class organization.

Note: The term laundry and textile linen items can be used interchangeably in this work and both mean the same thing. The commissioning company's name has been changed to CompanyX for confidentiality reasons

2 Case Study

The information in this case study was sourced from interviews with CompanyX staff, a site visit to the laundry plant in Turku, an interview with a customer of CompanyX, and the remaining data was sourced from internet resources.

2.1 Background

CompanyX provides the service of Linen Rental to the hospitality industry in Finland, Sweden, Estonia and Russia. CompanyX is part of the textile services group GroupX, who has operations in 23 countries in Europe and Asia. (CompanyX 2015)

CompanyX owns the textile linen products that are rented out to their customers. The customer base is divided into three primary sectors; (a) pool customers who make use of the shared laundry pool, (b) individual customers who make use of their own dedicated laundry and (c) the sea transport company ShippingLineX. The hotel customers range from low end hotels such as Hotel A hotels, to the up-market hotels like Hotel B and also ShippingLineX. The major hotel chains of Hotel C, Hotel D and Hotel E are customers of CompanyX.
Note: The customer names have been redacted for confidentiality reasons.

The CompanyX business volume accounts for approximately three million transactions per year. The product lines include Bath towels, Bath Sheets and Bath mats. There are eight CompanyX laundry plants in Finland, three laundry plants in Sweden, one laundry plant in Estonia and one laundry plant in Russia. When CompanyX purchases new laundry, the new laundry is delivered to the Estonia laundry plant, where it receives its first wash and then is introduced into the group operations. With old “used” laundry, once it has reached its end of life, it is handed across to the parent company GroupX. The discarded laundry is either used in some of the products, which are mats that GroupX provides. The completely useless old laundry is incinerated as a fuel source in the laundry plants.

The customer who pays the CompanyX invoice may be the hotel, but the laundry is collected by the cleaning staffs contracted to the hotel, so hotel staff themselves often do not see the laundry. Laundry contracts are negotiated with the financial management of the customer (hotel) but the daily management of the laundry resources is handled by the housekeeper of the hotel. Sometimes when contract changes occur the customer still expects the same level of service that was received previously, even though the new contract may no longer cover it.

In Finland the logistics are handled by third party contract logistics services. The third party logistics vehicles carry the CompanyX branding in keeping with the corporate branding image. There is only one CompanyX owned delivery vehicle and that is based in the island of Auland.

Problem laundry or badly soiled laundry is collected in water dissolving bags and delivered to CompanyX. The bag is placed directly into the laundry process and special cleaning is used to ensure a clean result. If laundry is badly soiled it goes through another cleaning cycle and is charged to the customer.

CompanyX laundry process Summary:

- Receive soiled textiles process.
- Sort soiled textiles process.
- Laundry washing process.
- Clean textiles dispatch process.

The soiled laundry is collected from customers by a third party delivery service and then delivered to the laundry plant where the soiled laundry is placed in the soiled laundry area. The seal is checked on the roller cage when the soiled laundry is delivered to the laundry plant. The soiled laundry has a paper tag on the on the roller cage, which is checked manually, although the roller cage does have RFID capability.

Image 2. Receive soiled textile products process

The soiled laundry is then sorted so the items can enter the relevant process line for the washing program eg: towels, sheets, etc. or by customer. Once the soiled laundry has been sorted it is emptied into laundry bags in preparation for being placed on the hanging monorail.

Image 3. Sort soiled textile products process

The soiled laundry bags then drop the soiled laundry from the carousel into the tunnel washer where the laundry washing commences. Once the washing has been completed the washed laundry is moved to the press to remove excess water from the laundry. The pressures involved in the press are high eg: 20 tons. From the press the laundry is moved into the dryers where the laundry is dried. Once the laundry has completed the drying process the dry laundry is moved to the laundry ironing and folding machine.

Image 4. Textile products wash process

Once the ironed and folded laundry is finished on the ironing and folding machine then laundry is moved to the packing area and packed into the roller cages. Once the packed into the roller cage is complete the roller cage is sealed. Then the roller cage is moved to the laundry dispatch area.

Image 5. Textile products wash process

During summer time when there is a lot of laundry in the laundry process, sometimes it can happen that clean laundry is stored in the same area as the dirty laundry. Attention is paid to keeping at least 2m between the dirty and clean laundry – according to regulations.

Image 6. Clean textile products dispatch process

2.2 Problems and Challenges

A discussion with a customer of CompanyX disclosed the troubles they experienced with the linen rental service from CompanyX. The troubles the hotel experienced were as follows (a) Occasionally soiled linen textiles were found with a clean linen textiles delivery. (b) Occasionally the quality of the linen textiles was poor, with some of the received linen textiles being either torn or frayed. (c) The hotel staff kept excess linen textile stocks in the delivered roller cages, to ensure constant availability of linen textiles. (d) The hotel complained that roller cages were difficult to move between floors if the hotel did not have elevators in their building. (e) Linen textile counting was sporadic due to the lack of time available for the hotel staff to perform the count task.

A discussion with CompanyX revealed that effort was being made to improve the level of customer satisfaction overall.

3 Literature Review

3.1 Customer Service

Services have become a highly competitive item in the last 20 years and subsequently a lot of attention is focussed on services. Zeithaml et al. (2006, 4) define services as “Services are deeds, processes and performances” where they point out that all economic activities whose output is not a physical product and construction, is usually consumed at the time it is produced, and then provides added value in ways that are essentially intangible concerns of its first purchaser.

James Fitzsimmons says a similar thing where he says, “A service is a time perishable, intangible experience performed for a customer acting in the role of co-producer.” James Fitzsimmons (2008, 4).

Kotler and Keller (2009, 789) describe service as “service is any act and performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything”.

3.1.1 What is Customer Service?

Kotler and Keller show (2009, 387-388) that the service component can be broken down into five categories; the first category is pure tangible goods with no service accompanying the goods eg: soap, bread, etc. The second category is tangible goods accompanied by one or more services eg: cell phone, motor vehicle, etc. The third category consists of equal parts of goods and services, such as a hotel / spa. The fourth category consists mainly of major services, additional services and then supported by the goods eg: airline travel package. Finally the last category is the pure services offering eg: software development.

Lahtinen and Isovita (1994, 110-111) say that services can be classified in different ways but mainly they highlight in three main categories, 1) standard vs. customized services eg: a telephone company or a grocery store provide the same services to every customer but a fitness club, bank, restaurant or insurance companies provide more tailored services to the customer, according to their needs. 2) consumer vs.

industrial service eg: the service that is given to the final consumer is a consumer service and services that are provided to the customer to shape their own final product is an industrial services. A bank provides both industrial and consumer services. 3) Personal vs. non personal service where the criteria is if personal contacts are needed in the service transaction. Eg: medical treatment or hair cutting need direct contact with customers but in contrast security companies, power plants and auditing companies provide services without personal contact with the customer.

Customer Service is a fundamental component of a business and depending on the product or service that is provided can either lead to loyal customers or to lost customers. Customer Service is all about making the customer feel valued and important, and its value can be seen in the loyalty of satisfied customers.

3.1.2 Framework - Customer Service Perspective

A framework that can be used to define Customer Service is the Customer Service Perspective (Martin et al, 1989) where the Customer Service Perspective is described as "*A customer service perspective maintains that - the most important activity in which an organization engages is interacting with customers.*" Customer service is all about the individual who is the customer, because it is the individual that decides on whether the service is acceptable or not.

Image 7. Customer Service Perspective (Martin et al, 1989)

As Image 7 shows, customer service perspective starts understanding your customer and knowing as much as possible about the customer. What is also important is not just how knowing everything about them, but also understanding how they see your company. The customer plays an important role as they are the ones who buy the services and if they like the service they can become a repeat customer and also bring in new customers.

From there the second stage in the customer service perspective, as seen in Image 7, is defining quality service standards. Here you decide what standard of quality service you want to provide to the customer. At this point you can prioritize the quality service standards so that the customer can benefit from the products or service provided. Once the service standards have been set then the third stage as seen in Image 7, is to build the team who will carry out the task of providing the quality product or service. This begins with writing the job specification in Quality Service terms and then screening the job applicants to find individuals who have Customer Service abilities. Once the staffs have been appointed, the relevant Customer Service training is undertaken to ensure that quality standards are

understood and followed. Overall, the organizational climate needs to encourage Quality Service and the leadership needs to be advocates of that Quality Service culture.

Having trained staffs, providing the quality service or product is good, but attention needs to be paid to measuring just how good that delivery is, as seen Stage 4 in Image 7. This means that systems for service measurement need to be in place, which could be regular check-ups on what is being done. A Service Audit can provide the company with valuable insight to how well they are providing their product or service. Another benefit that a Service Audit can provide is that it can be the starting point for Problem Resolution. Problems do occur, even though activity has been planned and orchestrated to avoid problems. What can make or break service or product offerings are just how problems are dealt with.

As seen in Image 7, Stage 5 proactive problem solving begins with having an organizational climate of Customer Problem Solving, where all staffs work towards speedy resolution of any problems that they are made aware of. The customer service team is a good place to start when working towards problem resolution because they are the ones who have initial customer contact. However, they are not the only ones who are responsible for problem resolution. Any staff member can contribute towards solving the problem. Overall, a happy or satisfied customer is the goal of the company, and achieving that is most important.

3.1.3 Exceptional Service

Serving a customer could result in a satisfied customer, but not necessarily a loyal customer because there is so much competition these days that it is very likely that what a company provides can be sourced from other sources too. A way to engender loyalty is by providing exceptional service. To begin with a product or service which the company provides should be perfect as described in “Exceptional Service, Exceptional Profit : The Secrets of Building a Five-Star Customer Service Organization” (Inghilleri et al 2010, pp. 8), where the idea of a service or product meeting or exceeding customer’s expectations is discussed.

The product or service should be provided in the time frame that is suitable for the customer. The customer's time frame might not be the time frame of the provider so it is sensible for the provider to communicate with the customer and understand what the time frame of the customer is to avoid disappointments. Once the perfect product has been decided on by the customer, and the suitable time frame for the supply of the service or product has been confirmed by the customer, the way in which the product is provided is important. The staffs that provide the product should be friendly and caring about the customer's satisfaction. A smiling face can transform an average transaction into a memorable transaction at no cost to the people involved.

On the rare occasion that the product or service isn't perfect, problem resolution should be effortless for the customer to correct the problem. An effective problem resolution process will help to restore customer satisfaction and helps to ensure service quality. Inghilleri shows that by giving company staff members the discretionary power to resolve customer service complaints, can help to quickly resolve customer complaints, engender customer loyalty and promote service excellence within the company too. (Inghilleri et al, 2010, pp43)

3.1.4 Benefits of Quality Service

Service quality has many benefits, such as providing a competitive advantage to a business, establishing customer satisfaction and customer loyalty and contributing to its image (Bloemer et al., 1998, Ghobadian et al., 1994, Grönroos, 1984). Exemplary customer service is all about anticipating the customer's needs. (Inghilleri et al, 2010, pp06). To create the 'gold standard' of service excellence you need to offer ways for the customer to give you feedback, whether actively, like by phone, in meetings and emails, or you need to have passive ways of providing feedback.

Whenever you measure something, it gets performed, completed, and usually improved upon. (Gerson et al 1993, pp. 6), so by being able to measure the level of service that an organization provides metrics can be defined as to the quality of service that a company provides and improvements can be implemented if required.

Further benefits of having Customer service metrics, is that an organization would know where improvements might be required and metrics could also be used to show where service excellence can be rewarded.

3.1.5 Customer Satisfaction

All the benefits of Customer Service can result in Customer Satisfaction. Customer satisfaction is what can determine customer loyalty and so it should receive attention. Customer satisfaction is a method to identify the actual feeling of a customer about quality of service or product they receive. It is not only about how the customer feels about the product or service quality, but also reflects how the product or service meet customer's expectation or demand.

According to Goodman (2009, 22), "*customer satisfaction is complicated to define because normally it is extenuated by expectation. Customers will be satisfied if the product or service is above demands or expectation.*" By knowing what customer demands are, and understanding what customer expectations are, provides a clear understanding of customer needs. Then delivering products or services to meet those customer needs is a way to ensure customer satisfaction.

Customer satisfaction is influenced by different factors such as; service quality and product quality and price as well as personal factors that include customers' attitude and their emotional state. (Zeithaml & Bitner, 1996,124). According to Armstrong & Kotler (2015) "*Customer retention is perhaps the best measure of quality; a service firm's ability to hang onto its customers depends on how consistently it delivers value to them.*" and loyalty drives profitability and growth (Heskett, 1994; Pugg, 2002). Customer loyalty will be increased with the increase in customer satisfaction. So a direct benefit of customer satisfaction is customer loyalty.

For the hotel industry, since the service chain is complicated, where every detail in this chain can make an effort towards attracting customers. Usually "customer satisfaction does not equal to customer loyalty." (Dickie 2008). Measuring customer satisfaction can help an organization to evaluate the service levels that are provided to the customer. As many of CompanyX's customers are in the hotel industry, customer satisfaction can be a way of achieving customer loyalty. Ensuring

customer communication and service level measurement can aid in achieving customer loyalty.

Defining what the service levels are that a company provides, then providing that service, and measuring what has been done, is the beginning. From there, resolving any problems that may arise, in a timely and effective way, can add more value to the customer experience. By providing ways for customer feedback and then responding to that feedback is a way to ensure customer longevity and company resilience. The long-term benefit of quality service ensures that a company has loyal customers who could be customers for many years. As customer needs change customer service can also change to support the changing customer needs. A flexible approach to customer service is certainly a way to address that.

3.2 RFID

RFID is an acronym for Radio Frequency Identification which describes a technology that uses radio waves as a core component and is used for identification purposes. RFID Journal describes RFID as a term to describe way of transmitting a unique serial number of an object or person using radio waves to a receiver. (RFID Journal, 2015) The unique serial number can read from many meters away and does not need line of sight to be successful.

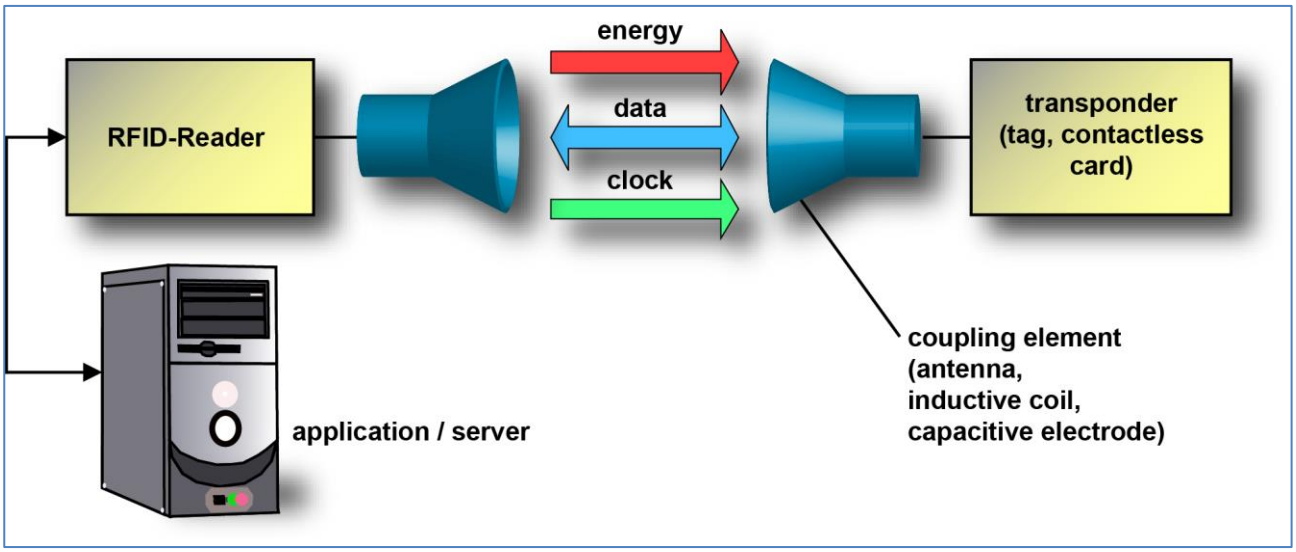


Image 8. RFID explained (RFID-Handbook)

3.2.1 History of RFID

It is generally accepted the RFID originated in World War 2 where many of the combatants used radar as a way to warn of approaching aircraft. The trouble with radar is that it merely returns a reflection from an object, but cannot show whether the object is a friend or foe. The Germans found that if they changed the profile of their aircraft by rolling the aircraft as they approached their airfield it would change the radar reflection and this would be a way for the radar crew to see a friendly aircraft. The British installed a transmitter on their aircraft that when it received the radar signal from the ground it would begin broadcasting a return signal which could be identified as friendly by ground radar operators. (RFID-Journal, 2015)

3.2.2 Why is RFID relevant today

RFID uses a similar concept as what the history of RFID shows, where an originating transmitter sends a signal out and it is either reflected back to the originating transmitter in a passive way or the reflected energy activates a transmission back to the originating transmitter. The first is what can be considered as a passive method and the latter as an active method.

RFID tags fall into two general categories, active and passive, depending on their source of electrical power. Active RFID tags contain their own power source, usually an on-board battery. Passive tags obtain power from the signal of an external reader. RFID readers also come in active and passive varieties, depending on the type of tag they read. Just as bar-codes have helped in item identification, RFID provides similar capability, with the primary difference being that the reader does not have to have line-of-sight to achieve a successful read of the object.

3.2.3 Where you can find RFID today

RFID can be found in many applications in the world around us today. RFID tags and readers have been developed for high speed reading where bar-code technology would not be successful. RFID has been proven on vehicles traveling at more than 100 km per hour where the RFID tags were successfully read. This has opened the possibility of electronic number plates for motor vehicles and also tags for high speed railway cars.

RFID tags have been developed for environments where line-of-sight would not be possible and so makes RFID a suitable technology. An example is where RFID tags are inserted into product packaging to aid in the speedy identification of products in the supply chain. Walmart mandated in 2003 that all cases and pallets be RFID-tagged within eighteen months with their top 100 suppliers and this has been a major driving force in the adoption of RFID technology in the supply chain.

Walmart in the United States adopted RFID to improve their distribution efficiencies. The journal Supply Chain Management described the result of a study on RFID with Walmart as "*RFID is the most recent prolific technology that provides supply chain collaboration and visibility*" (Mohsen Attaran, 2007).

Even modern passports have RFID capability these days and that RFID capability has the potential to streamline check in procedures for airlines in the countries that make use of RFID technology. RFID has been around in various forms since the '70s and with the interest in improving efficiencies across many fields is where RFID has helped some these efficiencies to come into being. Using the tried and tested technology of radio linked with affordable electronics, the simple identification of people and things has become a reality for industry. The costs of RFID technology are steadily decreasing and so the varied benefits that the technology offers can be enjoyed by many organizations.

3.2.6 RFID in the hospitality and medical industries

In the last 10 years RFID has found its way into many organizations, places and operations. RFID can be found in supply chain organizations where the technology provides a way of autonomously managing what happens in the supply chain. RFID can be found in the hospitality and medical industries where both people and items are tracked to provide visibility as well as time savings.

As this thesis concerns itself with the customer service process, this chapter is all about how RFID is used in the hospitality and medical industries to add value to the customer service process. Wherever there is a need to monitor the movement of either people or items RFID can be found. Organizations, whether hotels or

hospitals, who have implemented RFID systems for themselves, have done so to ease the management of tracking high value items such as staff uniforms or patients in hospitals. A decade ago the cost of RFID technology was still reasonably pricey so it was only really feasible to use the technology on high value items. Today RFID technology is far more affordable and so the benefits which it offers can be achieved on items which were previously not even considered.

3.2.7 RFID Case Studies

The following case studies introduce companies who have successfully implemented RFID in their operations.

3.2.7.1 St. Olavs Hospital

A case study with a university hospital in Norway, St Olavs Hospital in Trondheim, reports on how the hospital uses RFID tags for improvements in its logistics operations and achieves savings of several million Kroner in its garment and laundry operations. (Hyintech, 2011.)

The hospital has 1200 beds over its large site and subsequently was faced with a large laundry challenge that the use of RFID tags helped to solve and also save the hospital money. St Olavs Hospital saves between 15-18 million Kroner in operational costs due to more efficient data collection for logistics management. Initial findings show that the staffs are happy with the new RFID system because it is quicker and easier to use than what was previously used (Hyintech, 2011).

3.2.7.2 St. Vincent's Hospital

Each year St. Vincent's Hospital, which has 334 beds, serves 17 000 in-patients and 125 000 out-patients. Managing this volume of patients is achieved by up to date knowledge of available resources. In 2004 the hospital calculated that they had lost approximately $20 million through lack of up-to-date resource availability information. If the resources were not available patients had to be referred to another hospital in the Ascension Health Corp, which St. Vincent's Hospital is part of. (RFID Journal, 2004).

A strategy was developed to improve patient's visibility, eliminate slow admissions and discharges, and reduce the time waiting for care to be administered. To achieve this, up-to-date knowledge of where patients were, as well as real-time knowledge of doctor's orders and tests was required. RFID was a technology that was chosen to help with patient visibility and a system was developed that made use of this technology and large flat screen monitors at nurse stations to provide up-to-date information so that nursing staff could quickly see available resources. (RFID Journal, 2004).

Image 9. St. Vincent's Hospital

The project cost $1.7 million, including the PCs, software, RFID tags, interrogators, installation and integration. The benefits achieved were that the number of patients discharged by mid-day, which is a key hospital efficiency measurement, went up from about 20 percent to about 40 percent. Another result is that fewer patients are being turned away because of a lack of resources. Patients being diverted to other hospitals dropped by 25 percent in the critical-care unit and 60 percent in the medical-surgical beds area. (RFID Journal, 2004).

3.2.7.3 Jacobi Medical Centre

The Jacobi Medical Centre, which serves approximately 1 million people in New York, decided to extend their IT systems to areas where manual processes were still in operation. These manual processes needed improvement and could become more efficient. The technology which was chosen to be used was an RFID solution

that changed the way that nurses and doctors interacted with patients at their bedsides. (RFID Journal, 2005.)

The manual processes that needed to be improved was the hand writing of patient data at the bedside, which then had to be entered into the existing IT system after the bedside visit, effectively doubling the amount of work required by the staff. A technology solution was developed with a system integrator, and the solution makes use of passive RFID bracelets, tablet computers integrated with the data of a patient's medical file. In the initial trial doctors and nursing staff used RFID readers installed in tablet computers to read the patient's bracelet to automatically identify the patient and present their medical file. After the two month trial the doctors and nursing staffs refused to hand back the devices simply because trial was so successful. (RFID Journal, 2005.)

The trial system saved one hour per nurse per shift and effectively created two to three hours of spare capacity in every shift for patient care. The financial value of the time savings, once the system was rolled out, was approximately $1 million. The patients befitted in that they got more time with doctors and nurses and they also got better faster, and were happier. (RFID Journal, 2005.)

3.2.7.4 Odawa Casino Resort (OCR)

The Odawa Casino Resort upgraded its uniform system inventory software, with UHF-RFID technology to be able to automate the inventory tracking and control of many uniforms worn by the staffs on the property. The uniform system which was initially installed in 2007 made use of barcode labels, attached to each uniform, which were scanned to provide real-time tracking of inventory. To improve the performance of the system RFID technology was adopted to automate the inventory tracking of uniforms and reduce the time required to identify individual uniform items. (Hospitality Investments, 2015.)

The upgrade helped to tighten the loss control and reduce costs in a non-revenue producing department. Melissa Richards, Director of Human Resources for OCR says that "Since our Wardrobe Department does not generate revenue and uniforms are often lost traveling to and from the laundry, tight inventory control is

essential" (Hospitality Investments, 2015.). Richards also said that the cost savings are important because they can include the resort's commitment to add to the growth and development of services to both the surrounding Northern Michigan communities and the tribal community. (Hospitality Investments, 2015.)

3.2.8 What are the benefits of RFID

In the next section I cover the benefits that can be expected from RFID in business.

3.2.8.1 Asset tracking

RFID is a tool that can help to provide information on the assets of laundry, whether the laundry is being washed, folded, packaged or transported. Admittedly the case studies above were mostly about expensive assets such as staff uniforms being tagged with RFID capability, but with the significant decrease in the prices of tags has made the previously pricey technology now affordable to track inexpensive items like sheets.

"The cost of point of entry is a lot less expensive today than it was two or three years ago," said Daryl Kuna, vice president of sales of the RFID manufacturing company Datamars. The life of an asset is determined by the owner, but knowing how frequently a laundry asset has been washed can either extend the life or decrease the serviceable life of the laundry asset.

3.2.8.2 Laundry losses

Linen textile items that are tagged with a RFID tag can help the user with the counting of the item, where the counting is simple, fast and accurate. One of the problems hotels experience with laundry is the theft or misplacement of high end laundry items, and this is an area that RFID can help to resolve. Another area that hotels struggle with is the accounting for laundry between themselves and their laundry service provider. For hotels who own their own laundry, this can be a costly area that requires improvement.

Because each individual item with an RFID tag can be scanned, when either leaving or arriving at a laundry service provider, the technology makes it clear what has been scanned or not, so there shouldn't be any question about when an item

has been scanned. The result is that a manager can quickly see what has been delivered or not.

3.2.8.3 Regulations

The medical industry follows certain regulations that determine how many times an item can be washed before it is discarded. By being able to individually identify laundry items with RFID, a hospital has the ability to report on how they are following these regulations with ease. By having the original purchase date of an asset, the usage history of the asset and the anticipated life of an asset can ensure that the owner is able to meet required regulations without trouble.

3.2.8.4 Process efficiencies

For a laundry service provider, being able to identify when a linen textile item enters the laundry process, measuring how quickly it has taken in each phase of the laundry process, and finally when it has finished the process enables the laundry service provider to be able to generate performance metrics that can aid in identifying areas of excellence or areas that could require improvement in their operations. For a laundry service provider, such as CompanyX, who has multiple laundry plants in their organization, RFID can provide the ability to empirically measure performance across various laundry plants. This can help the organization to reward excellence and prioritize process improvements where needed.

Both hospitals as well as hotels do enjoy the benefits of RFID technology. Admittedly the usage is slightly different between those industries, but it is the same RFID technology that is used, whether it is the tracking of patients or the laundering of textile items. The technology provides various benefits, which are measurable and tangible for the organizations that use RFID. From asset management, meeting regulations, to process efficiencies, RFID can play a part in the hospitality or medical industries. An article by Esther Marr in the Association for Linen Management Journal (ALM Journal online, 2014) says that "*While converting to an RDIF system requires an initial financial and time investment for a facility's management staff and employees, research shows it's a worthy decision to make.*"

4. Research Methodology

4.1 Research Methodology

The research approach used in this thesis is inductive. As Cooper writes in Business Research Methods 12e, with the inductive method of research you draw a conclusion from one or more particular facts found in the data that research generates. (Cooper et al 2014, p68) The quantitative methodology is used to answer research questions such as what, where, how often or how much. It is achieved through questionnaires that in most cases have pre-determined answers as well as through survey. (Malhotra, 2005, 43)

The research method used in this thesis is quantitative as the research needs to discover how many respondents experience quality issues with the service process. The initial primary data was gathered from an interview with a customer of CompanyX. This interview was to qualify whether or not they experienced troubles with their laundry supply. This led to discussions with CompanyX. CompanyX decided that further research on their customers was needed. These investigations would identify how many of their customers have similar troubles. A customer survey was used to gather additional primary data from 70 customers.

The research approach used is Applied research, which is a Descriptive Study (Cooper et al 2014, p21), and attempted to discover how the customers experience the Service Process of CompanyX. The research aimed to generate dependable primary data that can aid CompanyX with possible efficiency improvements. The data was gathered in a scientific method which ensured a systematic and empirically based procedure for gathering data.

The strategy of research was to follow the scientific method of the Research Process as described in Business Research Methods (Cooper et al 2012, p14). The research process used the following approach: Clarify the research question, Research design strategy, Data collection and preparation, Data analysis and interpretation and then Research reporting. **Research design strategy**
The research will identify how many respondents experience the troubles that initial research identified. The survey would be both quantitative as well as qualitative because the survey should uncover how many customers experience quality

problems. The target population for the survey would be the customers of the company as suggested by company management.

Initially the language that the respondent wishes to use for the survey is selected. The survey is presented in either Finnish or English languages. Next are the two foundation questions, the first is “What level of customer is completing the survey” eg: managerial, housekeeping staff, etc. The second is “How many beds does the respondent’s unit comprise of”. Once the initial foundation questions have been completed the further eleven qualitative questions can be addressed.

The way the research is presented should be easily accessible, and also simple to understand and complete. With this in mind a web based survey would be the simplest to take, administer and complete. The survey tool ESurveyCreator.com was selected as the mechanism for administering the survey. The customers were advised via an e-mail from CompanyX about the survey.

The questions are compiled then validated with management to ensure that they would provide relevant data once completed. The survey tool (eSurveyCreator.com) was updated with the questions, and then validated by management to ensure accuracy. Any required modifications were made and once management was satisfied with the result, the customers were advised by e-mail about the survey.
The survey questions can be seen in Appendix 9.

4.1.1 Data Collection and preparation

A time frame of 1 month was used for the survey and once the month had passed, the data was available on eSurveyCreator.com. The target population for the survey was 70 customers, which were selected by CompanyX management to take part in the survey.

4.1.2 Data Analysis

The capabilities of eSurveyCreator.com provide an easy way to analyse the result of the survey questions. The analysis of the data is done to provide a simple overview of the results from the survey. The research findings are found in Chapter 5.

4.1.3 Research Reporting

Once the data analysis has been completed, as can be seen in Chapter 5, recommendations are be made to aid management in deciding which route to pursue. These recommendations can be seen in Chapter 6.

4.2 Reliability and Validity

Crowther explains validity as the extent to which the data collection method measures what it is supposed or expected to measure. Then he goes on to say that failure for ensuring valid research could lead to collection of data that is meaningless or misleading to the research effort. (Crowther & Lancaster 2005,80)

The survey was carried out among CompanyX's customers to investigate the level of customer satisfaction with the service process. That this data was collected from the customers means that the information was an accurate indication of what the customers' experience, and is reliable. The results are considered reliable also because the sample used for this survey was considerably large enough, and represented a wide scale of the customers.

5 Research Findings

5.1 Customer Survey Findings

After initial research with one customer of CompanyX, further research showed that the troubles which the one customer experienced are not limited to only that customer. There were 22 respondents to the customer survey which is 31.4% of the target population of 70 recipients. The respondents who experience troubles are more than 27% the total target population of 70 recipients. The survey findings below show that the troubles experienced are found in at least 85% of the respondents of the survey.

The following table outlines the areas where customers experience problems:

Area of concern	% of survey respondents
Defective items found in with the clean laundry delivery	85 %
Moderate to Lots of time spent on laundry management	80 %
Physically counting laundry from Occasionally to Daily	85 %

Table 1. Areas of concern

What follows are the results as provided by eSurveyCreator with associated commentary by the author.

Position of respondent

1. What position do you hold in your unit? *

Number of participants: 22

15 (68.2%): Management

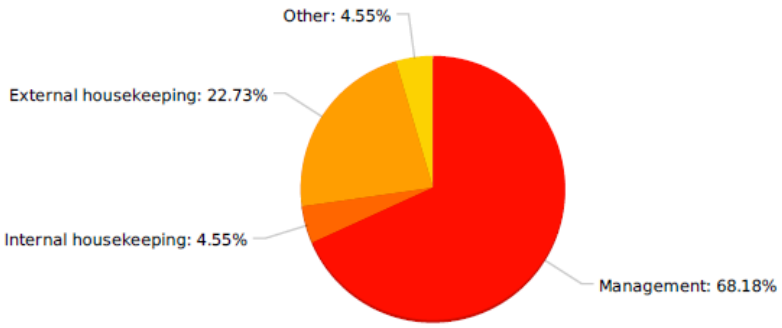
1 (4.5%): Internal housekeeping

5 (22.7%): External housekeeping

1 (4.5%): Other

Answer(s) from the additional field:

- housekeeping manager laivalla



For this research, both management as well as external housekeeping make up 90% of the respondents. As stated previously, Goodman (2009, 22) maintained that by delivering products or services to meet the customer needs is a way to ensure customer satisfaction, and so the respondents of the survey are the customers who could decide on the level of customer satisfaction.

How many beds

2. In your estimation how many beds does your unit have? *

Number of participants: 22

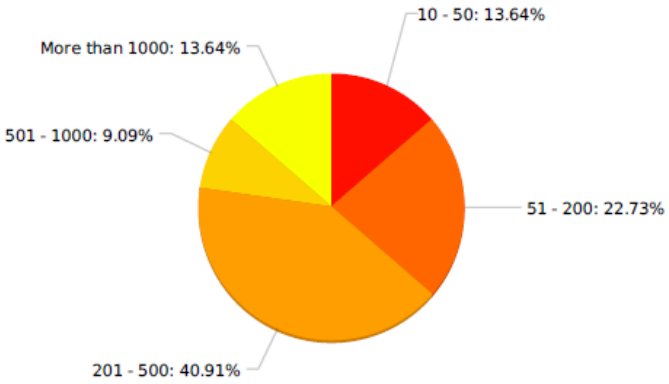
3 (13.6%): 10 - 50

5 (22.7%): 51 - 200

9 (40.9%): 201 - 500

2 (9.1%): 501 - 1000

3 (13.6%): More than 1000



The question of how many beds does your unit have showed a fairly wide spread selection of respondents with 13.6% having between 10 and 50 beds and 22,7% having between 51 and 200 beds. The next grouping shows that 40.9% of respondents have between 201 and 500 beds and next grouping shows that only 9.1% of respondents have between 501 and 1000 beds in their unit. Finally the group with the more than 1000 beds acounted for 13.6% of the respondents.

How important

3. How important is the management of laundry between your unit and Comforta?

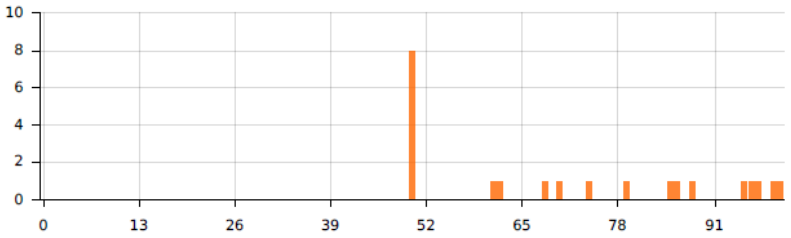
Number of participants: 22

0 = Not important
100 = Very important

Arithmetic average: 70.91

Mean absolute deviation: 17.26

Standard deviation: 19.52



Question 3 shows that respondents do find the issue of management of laundry between their unit and CompanyX to be important. That customer's rate management of laundry between themselves and CompanyX as important is an area where attention should be paid. Meeting the customer expectations of high levels of service excellence would help customers to experience peace of mind with the service that they receive.

Physically count laundry

4. How often do you physically count laundry and the need for laundry?

Number of participants: 22

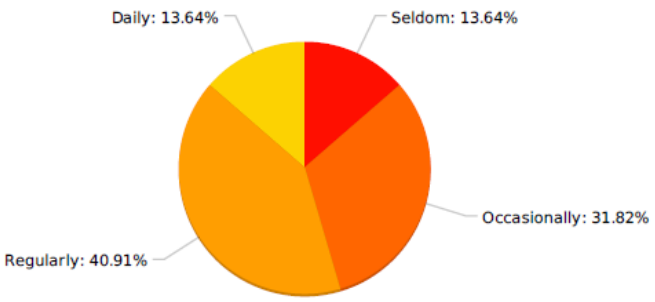
- (0.0%): Never

3 (13.6%): Seldom

7 (31.8%): Occasionally

9 (40.9%): Regularly

3 (13.6%): Daily



The question of physically counting laundry reveals that more than half the respondents count laundry regularly. Here is an area where technology could add value to customer perceptions, by saving them time and providing accuracy in counting laundry. As discussed in 3.1.5 Benefits of Quality Service, this can help by providing a competitive advantage to a business.

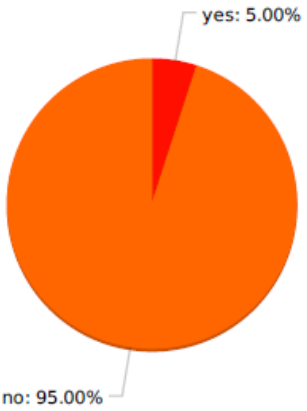
Soiled laundry counted

5. Is soiled laundry counted before being returned to Comforta?

   Number of participants: 20

   1 (5.0%): yes

   19 (95.0%): no



Question 5 checks to see if the soiled laundry is counted before being returned to CompanyX and the result shows that most do not count soiled laundry before it is returned. From the result you can deduce that clean laundry is what matters most and that soiled laundry has served its purpose and so no further action needs to be taken with it.

How much time

6. Please estimate how much time your unit uses for laundry management

   Number of participants: 20

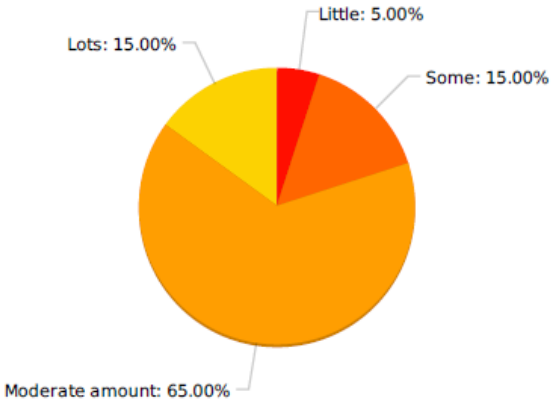
   - (0.0%): None

   1 (5.0%): Little

   3 (15.0%): Some

   13 (65.0%): Moderate amount

   3 (15.0%): Lots



Question 6 shows that 80% of the respondents spend at least a moderate amount of time on the task of laundry management. This is an area where technology could add value to the customer by reducing the amount of time required for the management of laundry task.

How much paperwork

7. Estimate how much laundry paperwork happens in your unit

Number of participants: 20

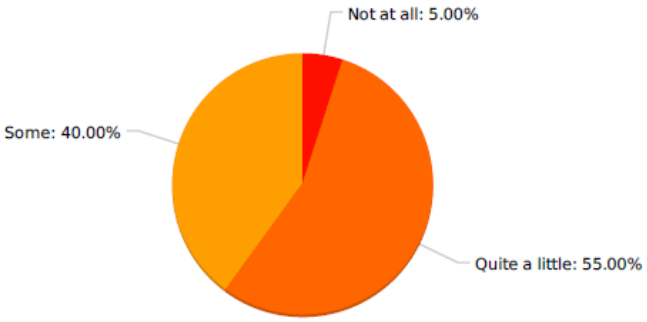
1 (5.0%): Not at all

11 (55.0%): Quite a little

8 (40.0%): Some

- (0.0%): Quite a lot

- (0.0%): Lots



Question 7 shows that only Quite a little or Some paperwork related to laundry is done in the respondent's unit. This shows how the existing electronic mechanisms for laundry paperwork from CompanyX, have had a positive effect.

Defective items

8. Do you receive defective items in with the clean laundry delivery?

Number of participants: 20

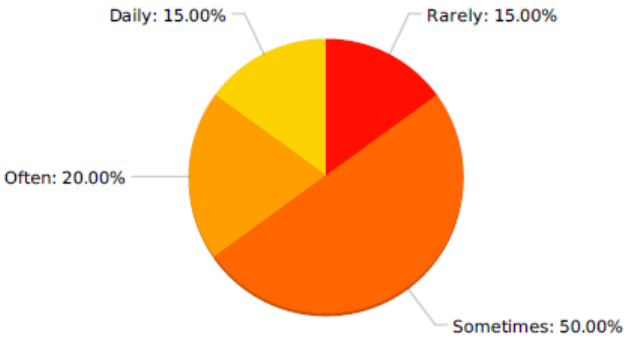
- (0.0%): Never

3 (15.0%): Rarely

10 (50.0%): Sometimes

4 (20.0%): Often

3 (15.0%): Daily



Question 8 shows how many respondents receive defective laundry items in with clean laundry deliveries. Here we see that 85% of respondents do experience this

trouble. As discussed in Chapter 3 customer satisfaction is important yet ephemeral, but customer satisfaction is influenced by different factors such as; service quality and product quality and price as well as personal factors that include customers' attitude and their emotional state. (Zeithaml & Bitner, 1996,124)

What is apparent from the survey data is that irrespective of the hotel size of the customer, many are experiencing similar problems with the service they receive and the survey results show a product quality problem that should be addressed. The concerning result is that there are no respondents who don't experience the trouble of finding defective items in with clean laundry deliveries.

How much laundry

9. How much laundry does your unit have?

Number of participants: 20

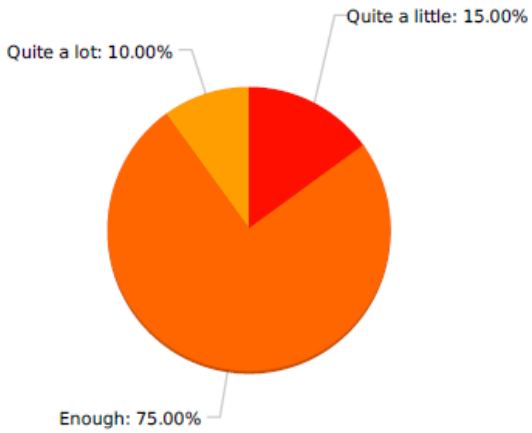
- (0.0%): Too little

3 (15.0%): Quite a little

15 (75.0%): Enough

2 (10.0%): Quite a lot

- (0.0%): Too much



Question 9 shows that 75% of the respondents indicated that they have enough laundry for their needs. The other 25% of respondents indicated that they either have an excess or a shortage of laundry.

From this you can deduce that customer have procedures which are suitable for their operations and are well thought through and managed.

Run out of laundry

10. Do you ever run out of laundry? *

Number of participants: 20

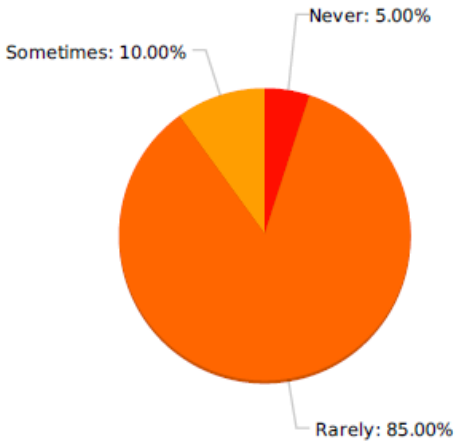
1 (5.0%): Never

17 (85.0%): Rarely

2 (10.0%): Sometimes

- (0.0%): Often

- (0.0%): Daily



Question 10 shows that very few respondents ever run out of laundry. Only one respondent said that they never run out of laundry, but 85% showed that they rarely run out of laundry. Only 10% said that they sometimes run out of laundry.

The overall idea that this result shows is that the customers plan their laundry use well and seldom experience laundry shortages.

Management of laundry

11. Do you find management of laundry difficult?

Number of participants: 20

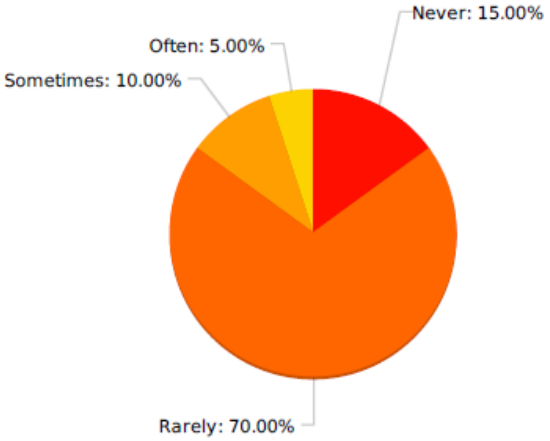
3 (15.0%): Never

14 (70.0%): Rarely

2 (10.0%): Sometimes

1 (5.0%): Often

- (0.0%): Daily



Question 11 shows that 85% of respondents rarely or never experience difficulties in managing their laundry. The remaining 15% of respondents are split between

10% who sometimes find management of laundry difficult and 5% who often find the management of laundry difficult.

Laundry management problems

12. In which way would you choose to tell Comforta about laundry management problems?

Number of participants: 19

5 (26.3%): In meetings

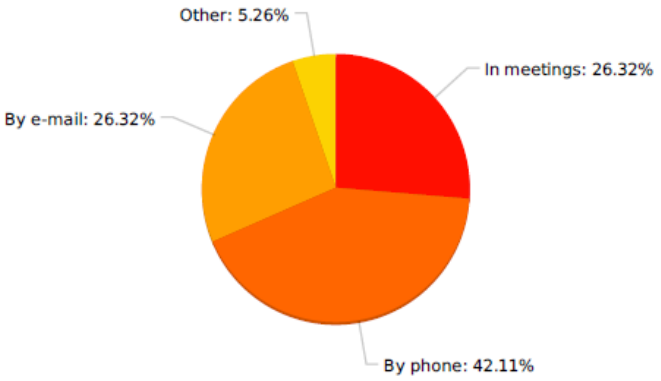
8 (42.1%): By phone

5 (26.3%): By e-mail

1 (5.3%): Other

Answer(s) from the additional field:

- sekä kirjallisesti että tapaamisilla



Question 12 shows that 68.4% of communication about laundry problems are either discussed in meetings or over the phone. The remaining 31% of respondents make use of e-mail or some other mechanism to communicate the laundry management problems to CompanyX. As mentioned in 3.1.6 Customer Satisfaction, having a way to communicate about problems is a sure way to enhance customer satisfaction.

Feedback to CompanyX

13. In which way would you choose to give feedback to Comforta?

Number of participants: 19

8 (42.1%): In meetings

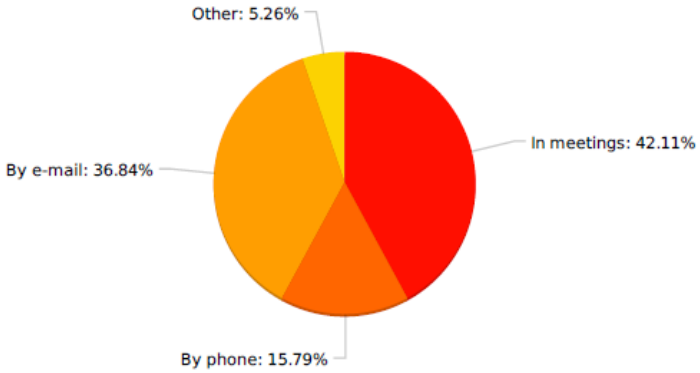
3 (15.8%): By phone

7 (36.8%): By e-mail

1 (5.3%): Other

Answer(s) from the additional field:

- sekä kirjallisesti että tapaamisilla



Question 13 indicates that meetings and e-mail are the preferred ways of giving feedback to CompanyX. As what Armstrong & Kotler (2015) say about "*Customer retention is perhaps the best measure of quality"* providing feedback mechanisms for customers can only benefit the company.

Whether customer driven feedback such as in meetings or via phone is important, this is an area where technology can add value. Feedback whether via the internet or automated with RFID technology can create simple ways of strengthening customer relationships.

The Finnish survey results can be seen in Appendix 8.7

Taking into consideration the results of the customer survey, areas where technology could be used to add value are explained in chapter 6.

6. CONCLUSION

6.1 Research questions answered

How many responding customers experience troubles with the services provided by CompanyX?

The service that CompanyX provides is to rent clean linen textiles, delivered to the customer (CompanyX 2015). Question 8 of the survey showed that 85% of respondents receive defective linen textile items in with their clean linen textile deliveries. The 85% is made up of 50% of respondents who receive defective items sometimes, 20% of respondents who receive defective items often and 15% of respondents who receive defective items daily.

This is a clear indication where improvements in service delivery could boost the level of customer satisfaction.

How significant to responding customers are the troubles they experience?

At least 80% of respondents said that they spent a moderate or a lot of time on laundry management. The 80% of respondents is of made up of 65% of respondents who spend a moderate amount of time on laundry management and the other 15% is made up of respondents who spend lots of time on laundry management. Question 3 of the survey shows that the respondents' rate the management of laundry at level of importance of 70%. When question 6 of the survey is linked with question 3 of the survey one can conclude that laundry management is important and that having to spend a lot of time on it would make any troubles which are experienced a significant concern.

How can technology add further efficiencies to the Laundry and Hospitality industries?

6.2 presents a way in which technology can be used to measure Customer Service in a way that can help to enhance efficiencies. 6.3 deals with how technology can add value to the Laundry and Hospitality industries through enhanced laundry management.

6.2 Customer Service web based measurement

Using a web based method to provide an easy way for customers to rate the service level of CompanyX and post feedback of any troubles experienced, if a customer wanted to. As stated previously, Goodman maintained that "*Customers will be satisfied if the product or service is above demands or expectation.*" Goodman (2009, 22). This could help increase the level of customer dialogue when required, and aid in measuring customer satisfaction. It could be as simple as a service level graphic measured in stars for service eg:

Image 10. Star rating tool example

A customer service measurement can also serve as an early warning of pending customer troubles.

RFID tagging of laundry

RFID tagging of laundry items could help to point out where troubles originate in the laundry process and provide an easy way for customers to respond to problem laundry items. The RFID tagging could help CompanyX use service delivery metrics, which tagged laundry could provide, in the product offerings eg: Service Level Agreements where levels of service are defined, measured and audited.

Image 11. RFID laundry tag example

Benefits of RFID tagging

RFID tagged of laundry could provide the following benefits:

- Accurate laundry counting.

  By simply running the RFID reader over the laundry it gets counted, accurately.

- Accurate usage record of laundry.

  The company would know what has happened to a laundry item such as washed, dispatched to customer, received by customer, counted by customer, and many other actions that happen to the laundry. Laundry has a life span and that life span is generally defined by the amount of times it has been washed. The company would know when to replace laundry based on accurate washing history. Usage history information would also help the company to be certain of complying with possible regulations as far as laundry usage is concerned.

- Speedy counting.

  By moving the laundry past a reader the laundry gets counted, and offers a quick way of counting items. Laundry can be counted while it is still in a stack of laundry, without needing to touch each individual laundry item, which could mean less effort of staff to count laundry.

- Laundry and Roller Cage.

  By linking data of a laundry item to the roller cage that it is delivered in would provide the company with an accurate picture of the usage data of both the roller cages as well as the laundry.

- Problem identification.

  The tagged laundry could help in tracing the origin of laundry process problems to identify the source of the trouble and provide management with accurate details of where problems originate.

RFID pilot project

The first step of RFID tagging of laundry begins with management defining what needs to be measured from the laundry pool. RFID can be investigated so it is certain that a test would address those needs and others too. To investigate the

feasibility of RFID on the laundry pool, a pilot project can be run on a defined number of textile items at one of the laundry plants eg: Turku to explore the potential benefits that could be achieved.

The following are some of the issues that could be considered for a pilot project of RFID tagging of linen textile items:

- Describe the processes involved in the RFID tracking of linen textile items. What happens where and by whom etc. This can help to define the metrics that tagged laundry could provide.

- Link linen textile information to some asset related information to be able to track age and usage data for the item.

- Link the packing of tagged laundry to Roller Cages with the existing RFID capability on the roller cages.

- Decide what RFID tags to use. Tagsys, Fujitsu, etc.

- Decide what hardware is required. Readers, PC / Tablets, etc.

- Build a beta product with company requirements foremost in the design.

- Work with hotels to introduce them to the benefits that RFID tagged laundry offers to them. This could be speedy and accurate counting of linen textile items.

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APPENDIX

CompanyX Customer Survey – English, pg. 1, 2

Comforta Customer Survey

Bitte wählen Sie eine Sprache aus. / Veuillez s'il vous plaît choisir une langue. / Please choose a language. / Selezionare una lingua. / Lütfen bir dil seçin. / Por favor, seleccione un idioma. / Por favor escolha um idioma. / Kies een taal. / Välj ett språk. / Vennligst velg et språk. / Vælg sprog. / Valitse kieli. / الرجاء اختيار لغتك.

- (●) English
- ( ) Suomi

Page 1

This survey is part of a thesis commissioned by Comforta Oy. The objective is to explore the current state of the Comforta service process.

laundry

By the word Laundry we mean any of the following:

- Sheets
- Pillow cases
- Towels
- Robes
- Bath mats

This survey is short and should take no more than 5 minutes of your time.

Page 2

What position do you hold in your unit? *

- ( ) Management
- ( ) Internal housekeeping
- ( ) External housekeeping
- ( ) Other

In your estimation how many beds does your unit have? *

- ( ) 10 - 50
- ( ) 51 - 200
- ( ) 201 - 500
- ( ) 501 - 1000
- ( ) More than 1000

CompanyX Customer Survey – English, pg. 3, 4

Page 3

How important is the management of laundry between your unit and Comforta?

Not important ——— Very important

How often do you physically count laundry and the need for laundry?

- ○ Never
- ○ Seldom
- ○ Occasionally
- ○ Regularly
- ○ Daily

Page 4

Is soiled laundry counted before being returned to Comforta?

- ○ yes
- ○ no

Please estimate how much time your unit uses for laundry management

- ○ None
- ○ Little
- ○ Some
- ○ Moderate amount
- ○ Lots

Estimate how much laundry paperwork happens in your unit

- ○ Not at all
- ○ Quite a little
- ○ Some
- ○ Quite a lot
- ○ Lots

Do you receive soiled laundry in with the clean laundry delivery?

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Daily

CompanyX Customer Survey – English, pg. 5, 6

Page 5

How much laundry does your unit have?

- ○ Too little
- ○ Quite a little
- ○ Enough
- ○ Quite a lot
- ○ Too much

Do you ever run out of laundry? *

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Daily

Do you find management of laundry difficult?

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Often
- ○ Daily

Page 6

In which way would you choose to tell Comforta about laundry management problems?

- ○ In meetings
- ○ By phone
- ○ By e-mail
- ○ Some other way

In which way would you choose to give feedback to Comforta?

- ○ In meetings
- ○ By phone
- ○ By e-mail
- ○ Some other way

You have completed the survey. Thank you very much for your participation.

You can now close the window.

CompanyX Customer Survey – Finnish, pg. 1, 2

Comforta kyselytutkimus

Bitte wählen Sie eine Sprache aus. / Veuillez s'il vous plaît choisir une langue. / Please choose a language. / Selezionare una lingua. / Lütfen bir dil seçin. / Por favor, seleccione un idioma. / Por favor escolha um idioma. / Kies een taal. / Välj ett språk. / Vennligst velg et språk. / Vælg sprog. / Valitse kieli. / الرجاء اختيار لغتك.

- ○ English
- ◉ Suomi

Sivu 1

Tämä kyselytutkimus on osa Comfortan toimeksiantona tehtävää opinnäytetyötä. Sen tarkoitus on tutkia Comfortan palveluprosessin nykytilaa.

tekstiilituotteet

Sana "tekstiilituotteet" käsittää:

-lakanat
-tyynyliinat
-pyyhkeet
-kylpytakit
-kylpyhuonematot

Kysely on lyhyt; vastaamiseen ei kulu viittä minuuttia kauempaa.

Sivu 2

Mikä on asemanne yksikössänne? *

- ○ hallinto (yksikön johto)
- ○ sisäinen (hotellin oma) kerroshoidon henkilöstö
- ○ ulkoinen (siivouslike) kerroshoidon henkilöstö
- ○ muu

Arvioi, kuinka monta vuodetta yksikössänne on? *

- ○ 10 - 50
- ○ 51 - 200
- ○ 201 - 500
- ○ 501 - 1000
- ○ yli tuhat

CompanyX Customer Survey – Finnish, pg. 3, 4

Sivu 3

Miten tärkeänä koet tekstiilien hallinnoinnin yksikkösi ja Comfortan välillä?

ei lainkaan tärkeää — erittäin tärkeää

Miten usein fyysisesti laskette tekstiilituotteita ja niiden tarvetta?

- en koskaan
- harvoin
- toisinaan
- usein
- päivittäin

Sivu 4

Lasketaanko käytetyt tekstiilituotteet ennen niiden lähettämistä Comfortaan?

- kyllä
- ei

Arvioi, kuinka paljon aikaa yksikössänne käytetään tekstiilien käsittelyyn.

- ei lainkaan
- melko vähän
- jonkin verran
- melko paljon
- paljon

Arvioi kuinka paljon yksikössänne tehdään tekstiilihuoltoon liittyvää paperityötä.

- ei lainkaan
- melko vähän
- jonkin verran
- melko paljon
- paljon

Vastaanotatteko käytettyjä laatuvirheellisiä tekstiilejä puhtaiden joukossa?

- en koskaan
- harvoin
- toisinaan
- usein
- päivittäin

CompanyX Customer Survey – Finnish, pg. 5, 6

Sivu 5

Kuinka paljon yksikössänne on tekstiilituotteita varastoituna?

- liian vähän
- melko vähän
- riittävästi
- melko paljon
- liikaa

Loppuvatko tekstiilituotteet yksikössänne kesken? *

- en koskaan
- harvoin
- toisinaan
- usein
- päivittäin

Onko tekstiilituotteiden hallinnointi sinusta vaikeaa?

- en koskaan
- harvoin
- toisinaan
- usein
- päivittäin

Sivu 6

Millä tavoin haluaisitte kertoa Comfortalle tekstiilihuoltoon liittyvistä ongelmista?

- tapaamisissa
- puhelimella
- sähköpostilla
- jokin muu tapa

Millä tavoin haluaisitte antaa palautetta Comfortalle heidän palvelutasostaan?

- tapaamisissa
- puhelimella
- sähköpostilla
- jokin muu tapa

Kysely on suoritettu loppuun. Kiitos osallistumisestasi.

Voit nyt sulkea ikkunan.

CompanyX Customer Survey Result – Finnish

1. Mikä on asemanne yksikössänne? *

Number of participants: 22

15 (68.2%): hallinto (yksikön johto)

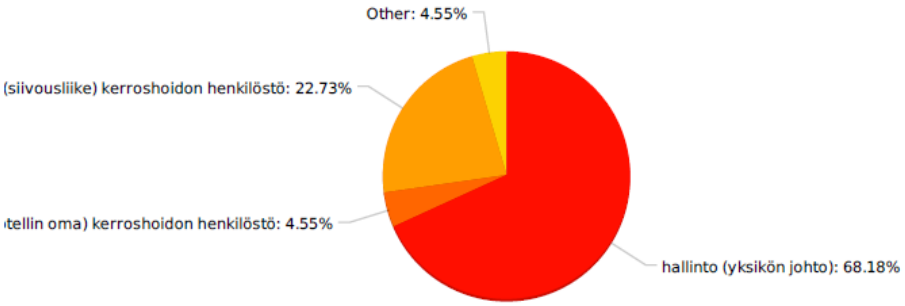
1 (4.5%): sisäinen (hotellin oma) kerroshoidon henkilöstö

5 (22.7%): ulkoinen (siivousliike) kerroshoidon henkilöstö

1 (4.5%): Other

Answer(s) from the additional field:

- housekeeping manager laivalla



2. Arvioi, kuinka monta vuodetta yksikössänne on? *

Number of participants: 22

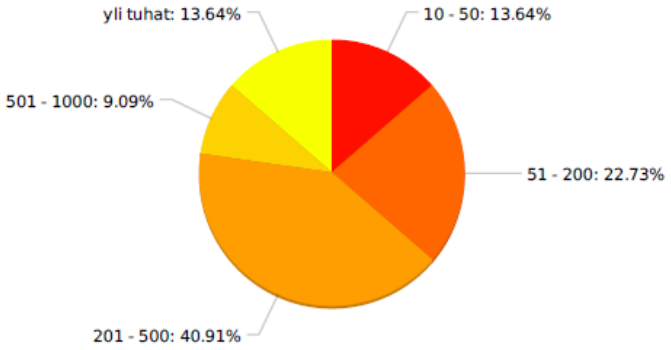
3 (13.6%): 10 - 50

5 (22.7%): 51 - 200

9 (40.9%): 201 - 500

2 (9.1%): 501 - 1000

3 (13.6%): yli tuhat



3. Miten tärkeänä koet tekstiilien hallinnoinnin yksikkösi ja Comfortan välillä?

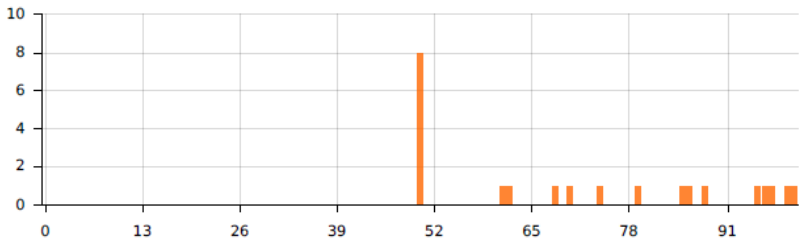
Number of participants: 22

0 = ei lainkaan tärkeää
100 = erittäin tärkeää

Arithmetic average: 70.91

Mean absolute deviation: 17.26

Standard deviation: 19.52



4. Miten usein fyysisesti laskette tekstiilituotteita ja niiden tarvetta?

Number of participants: 22

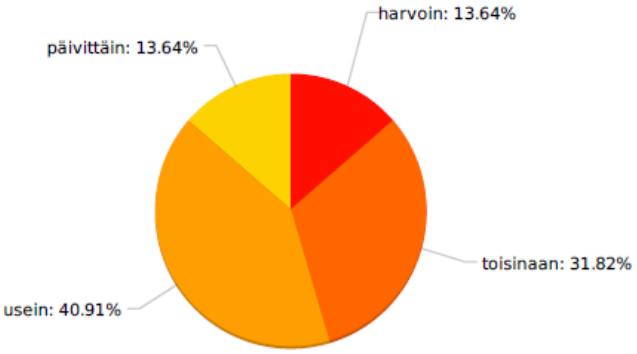
- (0.0%): en koskaan

3 (13.6%): harvoin

7 (31.8%): toisinaan

9 (40.9%): usein

3 (13.6%): päivittäin

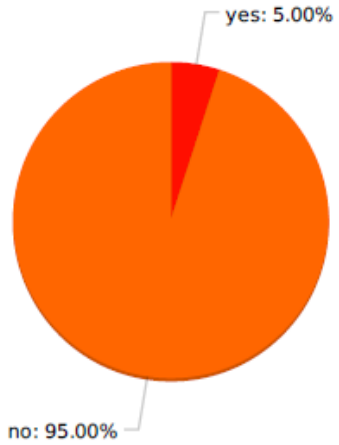


5. Lasketaanko käytetyt tekstiilituotteet ennen niiden lähettämistä Comfortaan?

Number of participants: 20

1 (5.0%): yes

19 (95.0%): no



6. Arvioi, kuinka paljon aikaa yksikössänne käytetään tekstiilien käsittelyyn.

Number of participants: 20

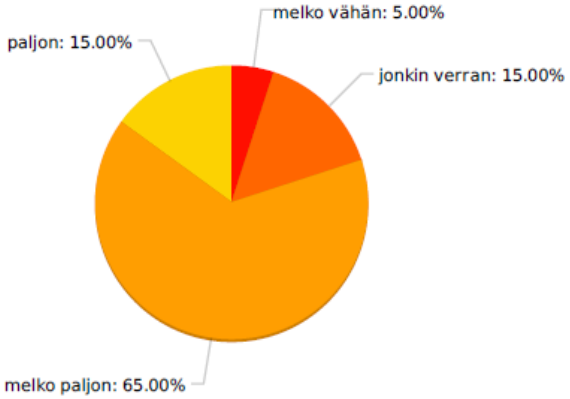
- (0.0%): ei lainkaan

1 (5.0%): melko vähän

3 (15.0%): jonkin verran

13 (65.0%): melko paljon

3 (15.0%): paljon



7. Arvioi kuinka paljon yksikössänne tehdään tekstiilihuoltoon liittyvää paperityötä.

Number of participants: 20

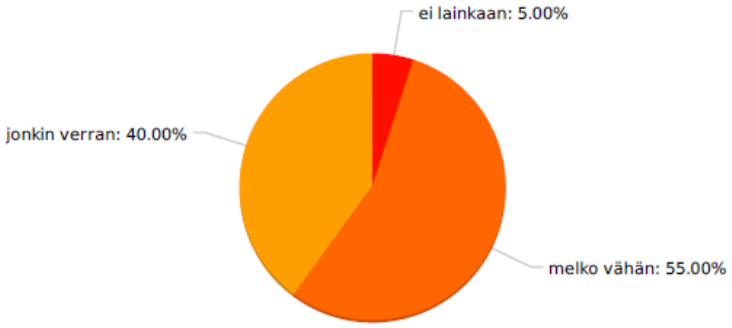
1 (5.0%): ei lainkaan

11 (55.0%): melko vähän

8 (40.0%): jonkin verran

- (0.0%): melko paljon

- (0.0%): paljon



8. Vastaanotatteko laatuvirheellisiä tekstiilejä puhtaiden joukossa?

Number of participants: 20

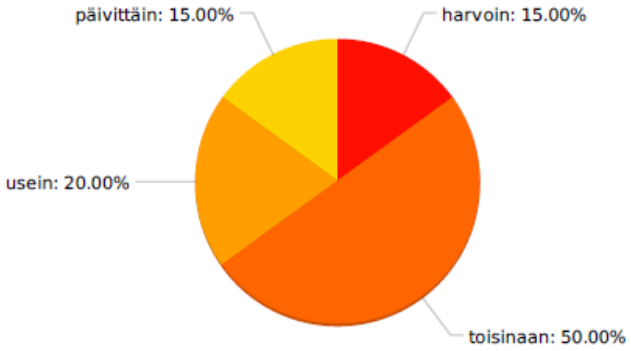
- (0.0%): en koskaan

3 (15.0%): harvoin

10 (50.0%): toisinaan

4 (20.0%): usein

3 (15.0%): päivittäin



9. Kuinka paljon yksikössänne on tekstiilituotteita varastoituna?

Number of participants: 20

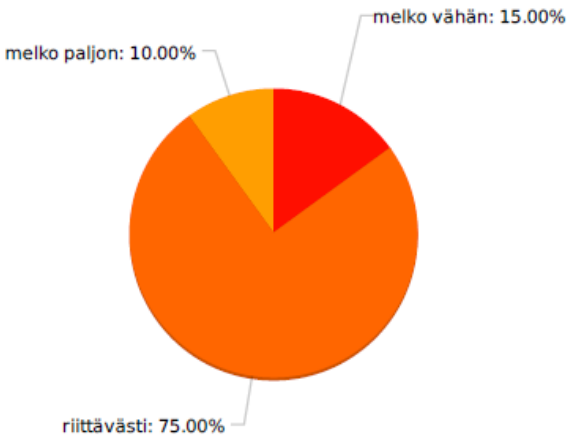
- (0.0%): liian vähän

3 (15.0%): melko vähän

15 (75.0%): riittävästi

2 (10.0%): melko paljon

- (0.0%): liikaa



10. Loppuvatko tekstiilituotteet yksikössänne kesken? *

Number of participants: 20

1 (5.0%): en koskaan

17 (85.0%): harvoin

2 (10.0%): toisinaan

- (0.0%): usein

- (0.0%): päivittäin

11. Onko tekstiilituotteiden hallinnointi sinusta vaikeaa?

Number of participants: 20

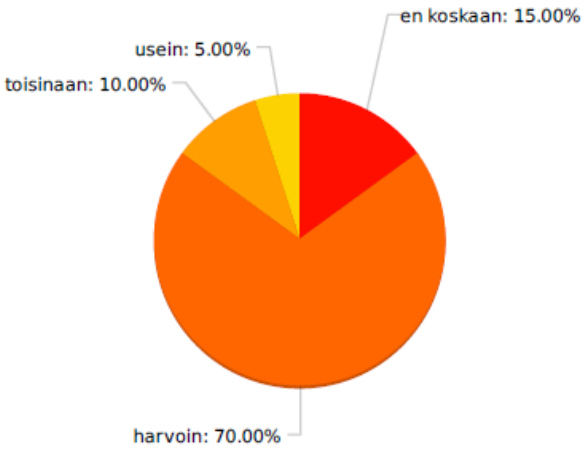
3 (15.0%): en koskaan

14 (70.0%): harvoin

2 (10.0%): toisinaan

1 (5.0%): usein

- (0.0%): päivittäin



12. Millä tavoin haluaisitte kertoa Comfortalle tekstiilihuoltoon liittyvistä ongelmista?

Number of participants: 19

5 (26.3%): tapaamisissa

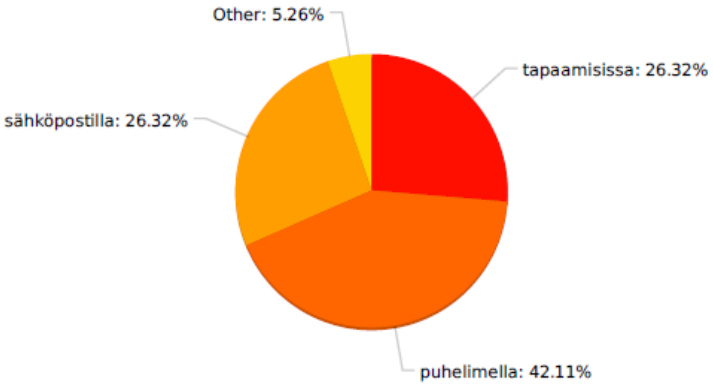
8 (42.1%): puhelimella

5 (26.3%): sähköpostilla

1 (5.3%): Other

Answer(s) from the additional field:

- sekä kirjallisesti että tapaamisilla



13. Millä tavoin haluaisitte antaa palautetta Comfortalle heidän palvelutasostaan?

Number of participants: 19

8 (42.1%): tapaamisissa

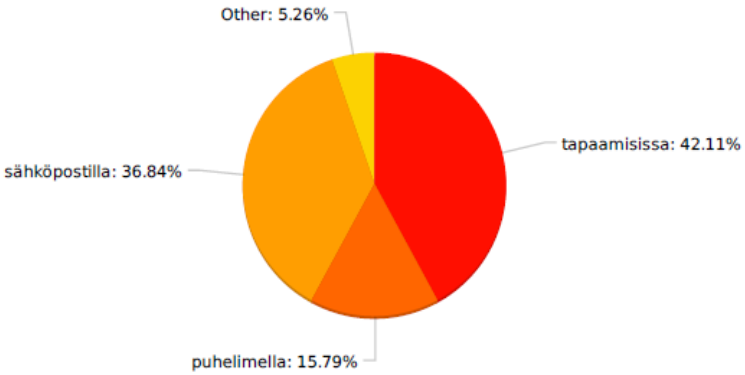
3 (15.8%): puhelimella

7 (36.8%): sähköpostilla

1 (5.3%): Other

Answer(s) from the additional field:

- sekä kirjallisesti että tapaamisilla



Glossary

Gold Standard: Exceptionally high standard.

Hardware: Describes the material composing a computer.

RFID: Radio Frequency Identification.

Software: Is a non-material part of a computer. It is a production of the mind in written form which allows for controlling the hardware part of computers.

Tag: a label attached to someone or something for the purpose of identification or to give other information.