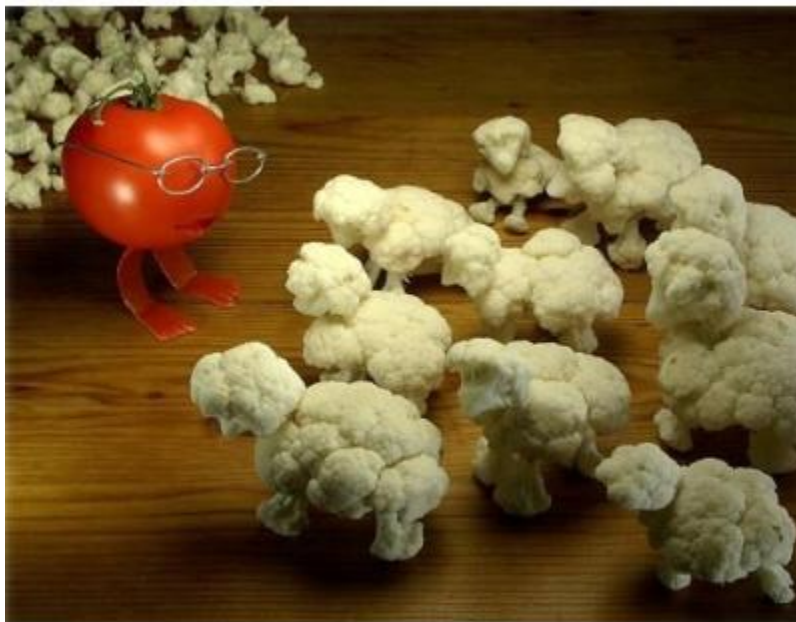


Follow the customers

Analysis of internal and external logistical process of The Greenery BV BAR1



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Executive summary

This report contains the task assignment, tasks execution methods and outcomes related to the thesis of N. Schouten. The thesis forms the last stage before graduation of the study International Agribusiness and Trade at university of applied sciences Van Hall Larenstein in Wageningen.

The report is build according to the following structure. Chapter 1 and 2 form the introduction of the project and the background environment in which the project was executed.

In chapter 3 the assignment is discussed. This chapter forms the basis of the following chapters in which the used methods, results and conclusions are discussed.

The report ends with a discussion of the used methods and outcomes.

In short the assignment was the analysis of the internal and external processes. The Greenery BV location Barendrecht 1 gathered data with regards to loading windows and loading times of customers and transportation companies. This data had to be assessed and based on the assessments proposals had to be written. These proposals where written as such that the follow percentages of the customers and transportation companies improved. The goal was to come to a workable loading window for both the customer as well as the warehouse.

This process of adjusting and readjusting the loading windows proved to be an ongoing process which keeps needing attention. The conclusion of the report is that keeping track of the progress of the follow up percentages is essential for a smooth internal flow of the goods distributed. The tracking and analyzing of the data gathered is an ongoing process which should not stop once this project is finished.

1. Introduction

The company in which the project is executed is The Greenery BV. The Greenery BV is one of the largest fruit and vegetable trade companies in Europe. The Greenery BV trades, packs, stores and transports fruit and vegetable for customers throughout the whole of Europe. The customers of The Greenery BV belong to the largest retailers in Europe. The project is executed in the distribution office of location Barendrecht 1. Barendrecht 1 is a storage location where a number of products are distributed to several customers. Within the area of Barendrecht 1 is also the small packaging department situated. The small packaging department packages products customer specific. For example four apples on one plate.

From the distribution office the incoming and outgoing product flows are controlled. The distribution office assigns docks to the truck drivers who come to the office. Another task of the distribution office is the documentation of all good flows from the location Barendrecht 1.

The direct involved managers in this project are P. van 't Woudt, process manager of Barendrecht 1 and G. Kaya, team manager back office of the distribution office. The name of the project is internally Qualitative and Quantitative investigation of the loading process at Barendrecht 1. The project forms a bridge between the current used logistical system and the new to be implemented SAP system. The new SAP system will be implemented in March 2011. The current system and follow up is not that consistent. Before the SAP system will be implemented the current problems with the follow up on the loading schedules should be tackled.

Within the distribution office for several months attention is paid to reports which concerning the loading schedules and follow up. These reports are produced on a daily basis to get an insight in the behaviour of customers towards the given loading times. Until this moment a proper analysis of the data was not possible. The project aims at an analysis of the data gathered in an earlier stage. The end result of this project should lead to a number of recommendations which can be used to improve the companies performances.

The implementation of the SAP system forces the company to better control over the loading schedules. In the SAP system certain times are set for order picking and preparation of goods via the small packaging department. If customers arrive too early goods are not ready yet. If customers arrive too late the dock can not be assigned to another customer.

After the implementation of the SAP system the project will continue for another number of months. In this time the results after SAP implementation are also analysed as is the data that is already gathered.

1.1 Goal

The goal of this project is the analysis of the loading times and the follow up towards customers and transportation companies. The problem definition related to this goal is: How is the current analysis done and how can this analysis be improved for future use

2. Background

The thesis environment is The Greenery BV location Barendrecht 1 (BAR1).

The Greenery BV is a leading European fruit, vegetable and mushroom sales company founded by the cooperation called Coforta. The Greenery BV has a leading position on the European fruit and vegetable market. Main retail company obtain their products from The Greenery BV. The Greenery BV was formed after the merger of nine Dutch fruit, vegetable and mushroom auctions. This merger took place in 1996. After the merger The Greenery BV started to expand in two ways. The first way was via autonomic growth. Over the years The Greenery BV focused more and more on the sales of products to European retailers. Main European and Dutch retailers are in the customer group of The Greenery BV. They purchase at least a part of their fruits, vegetable and mushrooms via The Greenery BV. One of the companies of The Greenery BV is the supplier of a major Dutch retail chain concerning their fresh product supply chain.

The second way of growth was via the acquisition of other companies. The Greenery BV acquired a number of different companies mainly to become a major player in most parts of the fruit and vegetable markets. To The Greenery BV belong a fruit and vegetable company, fruit and vegetable trade companies with specific target market and two transportation companies.

Over the last year the cooperation Coforta of which The Greenery BV is one of the main parts had a total turnover of 1.8 billion Euros. The profit over the same period was 4.8 million Euros. The turnover is generated via the own companies belonging to the Coforta cooperation and via shares in other companies. Besides the own companies Coforta there is a number of companies in which Coforta invested. For example Hessing, a fruit and vegetable cutting, storage and transportation company and EPS a pool system for pallets and boxes.

Location BAR1 is one of the locations of The Greenery BV in Barendrecht. Each of these locations has its own specialization. One location, Hage is specialized in the purchase of import produce. Another location, Hollander specializes in offering the total fresh produce logistics to a nationwide retail chain.

The location BAR1 focuses on all products sourced from the Netherlands. From the location BAR1 products like tomatoes, sweet pepper and cabbage are transported to two different types of companies. The first type of customer that is served from location BAR1 are Dutch and Belgium retail companies. From the site retailers obtain for example their tomatoes, cabbage, cucumbers, sweet peppers, apples and pears.

The second type of company are the auction customers. In the process this side is called operations. The operations customers purchase their produce via internet, commissioners or orders. On average the operations customers purchase smaller quantities as the retail customers. To ship all products The Greenery BV location Barendrecht 1 has 30 loading docks available.

Inside the building of BAR1 another subsidiary of The Greenery BV can be found. This entity is called CROPTOP. CROPTOP packs fruits and vegetables into consumer specified packaging. Mainly bulk is brought in, CROPTOP arranges the repackaging into consumer ready packs if necessary with labeling, coding and pricing already done.

The combination of the two companies under one roof allows The Greenery BV to offer one stop shopping to its customers. Packed products like cabbages, onions and beans can be loaded from the same location as bulk products like apples, pears and tomatoes.

Within the logistical process of location BAR1 (BAR1) The Greenery BV collects data to report on a number of figures used to control all the process. Data on working hours, use of the forklifts, handled pallets per hour and also follow up percentages of transportation companies are registered. The follow up percentage of the customers is based on the loading windows discussed with the customers and transportation companies together with the actual loading time on a particular day.

The loading windows were initially set by The Greenery BV BAR1. After their initial set the loading windows were discussed with the transportation companies and the customers. After the discussions the loading windows were adapted. With the adapted loading windows at hand the collected data is analyzed and improvements are proposed.

3. Assignment

The assignment given from The Greenery BV is a qualitative and quantitative research of the loading process on location Barendrecht 1. On location BAR1 two different logistical processes are carried out. The first process is the retail process. The second logistical process is the auction process.

Given the two different processes and the assignment to examine both processes a number of sub questions was defined to split the main question into several smaller pieces. The defined sub questions are:

- How to use the different it-systems used in the logistical processes.
- Which information, concerning follow up percentages can be retrieved from the current reports.
- What data is necessary to retrieve solid information from the reports.
- Is it possible to maintain the current layout of the reports to retrieve the follow up percentages.
- What is the desired follow up percentage to be reached within the scope of the research project.

The goal of the research is the improvement of the logistical processes of location BAR1 of The Greenery BV. Via the collection of data and the analysis of the data improvement plans are offered to the company. These plans can be used to improve the follow up percentage of the transportation companies and on the same time keeping the loading times at the lowest possible level.

For the research data from the logistical programs and the reports already made are the main sources of information. The Greenery BV obtains a lot of information from its logistical systems, in this research the information is analyzed and improvement plans are written based on the information.

The research question as formulated by The Greenery BV can be split into separate parts. The first part is the quantitative research of the loading process. The second part of the initial research question is the qualitative research of the loading process. In the report these distinctions will be made to describe the steps taken to bring the two parts together in one conclusion for the entire research question.

4. Methods

The initial assignment given from The Greenery BV was a qualitative and quantitative research of the loading process on location BAR1. The research was split in two parts. The first part was the qualitative research, the second part of the research was the quantitative research of the loading process.

Besides the distinction between the two parts of the research question also a distinction is made between the retail and operations loading processes. As said before The Greenery BV location BAR1 uses two different loading processes with their own logistical systems. At the retail side the logistical system called LIST was used. On the operations side two logistical systems are used. The main part of the products is sold via the HAS system a small part of the transports is handled via the DIS system. The LIST system, used to control the retail transports, was replaced with the SAP system halfway the assignment.

4.1 Qualitative

The qualitative research of the loading process focuses mainly on the follow up percentage of the transportation companies, the loading times of the transportation companies and the internal processes leading to a transport.

The first focus of the research was on the follow up percentages. The follow up percentages are the figure to build improvements around. With customers and transportation companies arrangements are made regarding loading windows. Every customer is assigned to a certain loading window or loading windows. The loading windows are timeframes of 0,5 hour in which a certain customer is expected for registration at the expedition office of BAR1. in the reports the customers and transportation have a 0,5 hour buffer, 15 minutes before opening and 15 minutes after closing of the window in which they are still considered on time.

The follow up percentage is measured on company level, so the results of all customers of BAR1 together as well as on a customer level. The figures are used multifunctional. At the one hand the own results are measured and monitored to check fluctuations in follow up percentage. The follow up percentages per customer are used to monitor the results per customer. The results per customer are used to define the customers which should be offered another loading window.

From the start of the analyses in February 2011 the follow up percentages are monitored on both levels. The analysis of the follow up percentages took a few months to get a clear and solid outcome which could be used to design proposals to over to the customers and transportation companies.

For the operations customers the analysis was brought a level further. These customers were not only assessed on their current results and follow up percentages. Also the follow up percentages and results from two months in the summer period were taken into account in the proposals.

After the collection of the data proposals where written to change a number of loading windows. These proposals where checked with the results of another week. After that a

number of customer and transportation companies was addressed via telephone to improve the loading times based on the collected data.

To address the customers not all at once and keeping actions on a reachable level also for the expedition office first a number of retail customers was contacted to change their loading windows.

After this first round of contacts the performances of the retail customers were checked again and tested with the improved loading windows. The results were very promising but after a few weeks the new logistical program SAP was introduced. In the start-up phase The Greenery BV experienced difficulties with the new system. Retail customers and their transportation companies react with taking their loading windows a bit wider. In this situation the follow-up percentages dropped.

After the initial start-up phase an improvement of the follow-up percentage could be seen. The follow-up percentages returned to their level they had reached before the SAP implementation and transportation companies and customers became more confident in The Greenery BV.

The second focus in the qualitative aspects of the research assignment is the focus on the loading times. The loading times do not handle about the loading windows but about the time a customer or transportation company needs to register itself at the expedition office and to leave again loaded. The loading time gives insight in the average time a transportation company uses one of the docks. It is a given thing that when the loading time is more than average it is mainly due to products that are not yet on the docks when a driver arrives.

The loading time figure became harder to measure after the implementation of the SAP system. Before the registration time was the same as the arrival time of the driver. In SAP the registration time is the time a loading list is printed for the driver to check the cargo. This means that it is possible to have a driver waiting for hours and his cargo not ready yet whilst when the loading list is printed after finishing the collection of all products the driver finishes loading within 10 minutes.

The third part of the qualitative research are the internal processes. From a research point of view the hardest part of the assignment. It was the hardest part because of the difficulties to find information. Especially data with regards to picking times are not registered and collected. In the SAP system these data is collected but in this system the possibilities to get data from the system into a workable sheet is the main setback. Results of the internal process are mainly obtained via observations and spoken information from the expedition office.

4.2 Quantitative

The quantitative aspects of the research are closely related to the follow up percentages who are part of the qualitative aspects. Part of the quantitative research is the collection of the data regarding follow up percentages per customer and transportation company. To get a reliable, useful figure regarding follow up percentages per customer. Actual loading figures divided over too early, too late and on time where collected and from this figures follow up percentages per customer and transportation company were derived.

In the daily operations respective retail reports this figures were already collected. In this research the collected information was transferred into useable datasheets.

The produced data sheets are for example used as theoretical backup towards customers in meetings and discussions about the performances of The Greenery BV location BAR1 as a supplier.

As said before The Greenery BV location BAR1's logistical process is divided over two types of different customers and/or transportation companies. The two types of customers are research wise treated in the same way. From both customer types the same kind of data is available for processing. For both customer types a distinction is made between the overall follow-up percentage and the follow up percentage of individual customers. The main difference in analysing the data was made in the possibility to analyse individual transportation companies on the retail side.

The retail customers use solid logistical partners to transport their products. At the retail side not only the customers where analysed but also their respective transportation companies. Especially in the case of retail customers, who only give their transportation company a transport order, the contact is mainly via the transportation company instead of the customer. This given fact was transferred into separate analyses of the follow-up percentages of the different customer.

The main process in this research was: collection of data, analysis of data, proposal of potential improvements, allowed to contacted customers and transportation companies, follow up on results after implementing improvements.

This process could be continued permanently. Although it is not a goal to keep changing loading times week after week.

5. Results

Over the course of the research a large amount of data is gathered and a lot of graphs and diagrams are made to analyse the data. The graphs and diagrams are also used to obtain a better overview over the evolution of the follow up percentages and achievements of BAR1. The initial goal of the management of BAR1 was to reach a follow up percentage at the retail as well as operations side of on average 75%.

The results of the research in this report will also be presented in diagrams and graphs. Every graph has its own explanation and conclusions.

5.1 Retail

5.1.1 Before SAP implementation

Naam	Transporteur	Totaal	Te vroeg	Te laat	Op tijd	% te vroeg	% te laat	% op tijd
Klant 1	Transporteur 1	81	20	14	47	24,7%	17,3%	58,0%
Klant 2	Transporteur 2	133	11	5	117	8,3%	3,8%	88,0%
Klant 3	Transporteur 3	149	19	36	94	12,8%	24,2%	63,1%
Klant 4	Transporteur 4	75	7	27	41	9,3%	36,0%	54,7%
Klant 5 vestiging 1	Transporteur 5	77	17		60	22,1%	0,0%	77,9%
Klant 5 vestiging 2	Transporteur 5	14	2		12	14,3%	0,0%	85,7%
Klant 6	Transporteur 6	156	19	33	104	12,2%	21,2%	66,7%
Klant 7 vestiging 1	Transporteur 7	99	20	27	52	20,2%	27,3%	52,5%
Klant 7 vestiging 2	Transporteur 7	371	51	79	241	13,7%	21,3%	65,0%
Klant 8 vestiging 1	Transporteur 1	570	90	231	249	15,8%	40,5%	43,7%
Klant 8 vestiging 2	Transporteur 1	692	128	238	326	18,5%	34,4%	47,1%
Klant 8 vestiging 3	Transporteur 1	19	1	9	9	5,3%	47,4%	47,4%
Klant 9	Transporteur 8	91	5	33	53	5,5%	36,3%	58,2%
Klant 10	Transporteur 9	152	76	6	70	50,0%	3,9%	46,1%
Klant 19	Transporteur 3	71	6	42	23	8,5%	59,2%	32,4%
Klant 11	Transporteur 1	64	3	5	56	4,7%	7,8%	87,5%
Klant 12	Transporteur 3	90	39	29	22	43,3%	32,2%	24,4%
Klant 13	Transporteur 10	401	171	47	183	42,6%	11,7%	45,6%
Klant 14	Transporteur 11	101	2	44	55	2,0%	43,6%	54,5%
Klant 15	Transporteur 12	123	24	10	89	19,5%	8,1%	72,4%
Klant 16 vestiging 1	Transporteur 13	26	1	18	7	3,8%	69,2%	26,9%
Klant 16 vestiging 2	Transporteur 13	56	8	35	13	14,3%	62,5%	23,2%
Klant 17	Transporteur 14	31		24	7	0,0%	77,4%	22,6%
Klant 18	Transporteur 15	48	6	19	23	12,5%	39,6%	47,9%

Table 1: Follow-up percentage before SAP implementation

Table 1 is an example of the overviews produced after collection of the data and analysis of the figures. The above printed graph is the situation just before the introduction of the new logistical system SAP.

The collection of the data focused mainly on the collection of numbers of transportations and the division between assigning too late, too early or on time. A follow up percentage, so times on time divided by total loadings of 75% is considered reasonable. All customers and transportation underneath this 75% level are divided again into two groups. Group one is doubtful this group holds every customer with a follow up

percentage between 50 and 75%. The second group can be considered weak and holds every customer with a follow up percentage below 50%. The proposed actions focused on customers in the doubtful as well as weak group.

The proposed improvements to the loading windows were based on the results of follow up percentages combined with the division among too late and too early. For example customer 12 arrived in 43,3% too early and in 32,2% too late. It is hard to propose another loading window while the customer is not following a rhythm at all. The proposal with regards to customer 12 is to contact them as a reminder to their loading window and asking them to take the loading window into account when planning the transportations. Another type of example is customer 17. This customer arrived in 77,4% too late, 22,6% on time and 0% too early. Based on the average difference between expected arrival time and actual arriving time a proposal was made to replace the loading window of this customer from 14:00 to 15:00. With the loading window replaced by 1 hour the results of this customer where to be expected better after implementing the new loading window. The proposals were implemented just before the introduction of the SAP system. Clear results of the follow up percentages are lacking although a small rise in the average follow up percentage could be seen after the letters were send. The development of the follow up percentages over time can be found in figure 1.

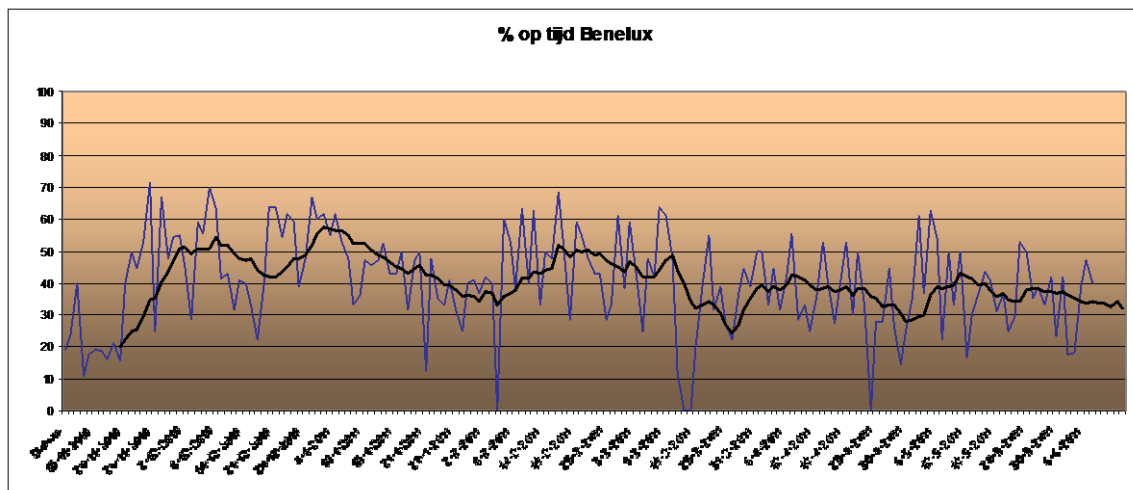


Figure 1: development of follow-up percentage over time

5.1.2 After SAP implementation

Naam	Transporteur	te vroeg	te laat	op tijd	som	% vroeg	% laat	% tijd
Klant 9	Transporteur 8	1	4	22	27	3,7%	14,8%	81,5%
Klant 5 vestiging 1	Transporteur 5	4	4	23	31	12,9%	12,9%	74,2%
Klant 6	Transporteur 6	4	10	39	53	7,5%	18,9%	73,6%
Klant 20	Transporteur 9	0	11	21	32	0,0%	34,4%	65,6%
Klant 14	Transporteur 11	0	16	23	39	0,0%	41,0%	59,0%
Klant 2	Transporteur 2	0	18	25	43	0,0%	41,9%	58,1%
Klant 8 vestiging 2	Transporteur 9	18	16	43	77	23,4%	20,8%	55,8%
Klant 13	Transporteur 10	38	60	114	212	17,9%	28,3%	53,8%
Klant 15	Transporteur 12	10	21	32	63	15,9%	33,3%	50,8%

Klant 7	Transporteur 9	0	37	35	72	0,0%	51,4%	48,6%
Klant 8 vestiging 1	Transporteur 9	46	33	74	153	30,1%	21,6%	48,4%
Klant 1	Transporteur 1	2	13	14	29	6,9%	44,8%	48,3%
Klant 19	Transporteur 3	2	14	14	30	6,7%	46,7%	46,7%
Klant 4	Transporteur 4	8	6	12	26	30,8%	23,1%	46,2%
Klant 3	Transporteur 3	3	31	26	60	5,0%	51,7%	43,3%
Klant 16 vestiging 1	Transporteur 13	9	4	6	19	47,4%	21,1%	31,6%
Klant 17	Transporteur 14	1	11	5	17	5,9%	64,7%	29,4%
Klant 16 vestiging 2	Transporteur 13	7	10	6	23	30,4%	43,5%	26,1%
Klant 10	Transporteur 9	2	18	7	27	7,4%	66,7%	25,9%
Klant 18	Transporteur 15	2	16	5	23	8,7%	69,6%	21,7%
Klant 12	Transporteur 3	0	18	3	21	0,0%	85,7%	14,3%

Table 2: Follow-up percentages after SAP implementation

Table 2 shows the follow up percentages results from the first full month after implementation of the SAP system. The figures are collected over the month April 2011. After the implementation The Greenery BV had a real struggle to get the goods out every day at a reasonable time. As almost usual in the case of an implementation of such a scale the so called children diseases showed up after putting the system live. The challenges during the initial implementation phase resulted in longer waiting times for transportation companies and a lot of problems with product availability. Transportation companies reacted by widening their loading times and planning their trucks in such a way that the trucks arrived later in the hope to be able to load directly.

Although this phase of very careful transportation companies is not completely over yet already improvements can be seen in follow up percentages can be seen. Transportation companies and customers are getting their trust in BAR1 back. For a better overview and more reliable figures graph... should be made the coming two months to be able to give a conclusion solid enough to take actions again towards customers and transportation companies with regards to their follow up percentages.

Together with the implementation of the SAP system at BAR1 retail at the customer side also a change took place. This change was on the level of the transportation companies. Before transportation company 1 was the most used transportation company used by customers of BAR1. At this moment the role of the most used transportation company is taken over by transportation company 9. Transportation company 1 has only one account left for loading at BAR1. The change in the transportation companies is in this case not only a change of the faces of the drivers. It is more than that because transportation company 9 is a part of The Greenery BV.

5.1.3 Actions

The action proposals actual are to be divided into three different types of actions. The first type is complimenting a transportation company or a customer with its reached follow up percentage. Only transportation company 2 and customer 2 got a compliment for their way of working. The transportation company sends an e-mail every day to ask permission for that evenings loading schedule.

The second type of reaction is sending a letter to remind the transportation companies and customers about their loading window. This option is used most of the time. Sometimes it

was used because the customer did not want to change its loading window, in other occasions it was used because the customer was loading too late as well as too early. The third occasion to use the letter was with customers with a rather reasonable follow up percentage, somewhere around 60%, and the only goal was to try to get them to follow their loading window even more.

The third type of reaction was used only with customers with a very low follow up percentage. In this option the customers are contacted by phone to change their loading window in a more appropriate loading window to that customer. This option was mainly useful to clients who organise their own transportation. Customers with control over their transportation are more able to change their loading window because they plan the trucks themselves. Customers who use an external transportation company depend on the planners of that transportation company to get to BAR1 within their loading window.

On the operations side of BAR1 the same types of actions are used with that difference that option one, sending a compliment, was not used at the operations side.

5.2 Operations

The operations process of BAR1 is as a logistical process as such more complex as the retail process. In the retail process large customers often ordering full truck loads. The picking process is almost half of the occasions a matter of picking a full pallet. On the other side there is the operations process. Relative small customers who often order only a few boxes of a certain product. It is not unusual to find a operations customers having order only two pallets with on every pallet only ten boxes.

Although the process is more complex the operations side could be investigated in the same way used at the retail side.

Just like at the retail side all transportations are registered in a logistical management program called DIS. The data gathered by the system is transferred into an excel-sheet and send overnight to a number of stakeholders. Just like from the retail side also from the operations side a day to day report about follow up percentages and loading times is made. Data from these sheets is used to fill two overview sheets. The choice was made to make two different sheets for two different periods of the year.

The first sheet was made for two months from June and August 2010. The second sheet was made from the data of January and February 2011. The choice to divided this analyses over two different periods has everything to do with changes in number of sold products that can be seen over the year. BAR1 focus is on products sourced from the Netherlands or products that can be considered Dutch because the product is mainly sourced from Holland except some months in winter when no produce from the Netherlands is available. For example tomatoes, green beans and red peppers.

The winter period is known for its lack of trade. Not that much fruits and vegetables are sold compared to summer and especially the “Dutch” products: tomatoes, cucumber and red pepper are typical products for use when the sun is warm.

By putting both periods, summer and winter, next to one another the goal was to filter customers that both in high as low season score low follow up percentages.

As can be seen from Table 3 on the next page the follow up percentages of the summer are staying behind on the winter period. This is on normal circumstances against all

expectations and logic but BAR1 was just starting up with monitoring loading windows and discussing them with customers. The actual fine tuning of the loading windows took place from October 2010. All months before customers and BAR1 were still searching to find a correct way of implementing the loading windows.

To make the comparison again and more worthwhile another analysis should be made after summer 2011. Both analyses summer and winter are then made with the loading window program fully working and in place.

Zomer (juni & augustus)

Naam	Totaal	% op tijd	Beoordeling
BRESSER M.J.	19	100,0%	
MOOY W.DE	13	92,3%	
PIJNENBURG JAN	11	90,9%	
DUIFHUIZEN H.J.	38	78,9%	
POSTUMA FA. VOF	32	78,1%	
MOOY IMPORT CEN	28	75,0%	
BALLEGUYEN G&F	37	73,0%	
VOS J.P.	10	70,0%	
MINASS BV	16	62,5%	
GELDER GR&FR	15	60,0%	
SMEERDYK GR&FR	25	56,0%	
DOOREN C.W.	11	54,5%	
GEEST INTERN.	43	53,5%	
MOOIJ AMSTERDAM	19	52,6%	
VLIET FRESH FD.	29	51,7%	
VERSLAND	24	50,0%	
VALEN BV	15	46,7%	
SPIJK K VD & ZN	22	45,5%	
HOLDIJK GR&FR	18	44,4%	
KOORNSTRA & CO.	27	44,4%	
HOOGSTEDER BV	42	42,9%	
SPIJK K.	40	42,5%	
PRONK M.J.	12	41,7%	
RAVENSWAAIJ BV	42	40,5%	
CRUIJSSSEN J.	22	36,4%	
DIJK JAN	17	35,3%	
HEEMSKERK BR.	30	33,3%	
OSKAM J.	30	33,3%	
STAAK RINY	18	33,3%	
DIJK WILLEM	53	32,1%	
SIERE BV	13	30,8%	
BOUWMAN GEBR.	10	30,0%	
HOLLAND FOOD	30	30,0%	
WAL L. TER	40	30,0%	
BE FRESH	20	30,0%	
HEEMSKERK GEBR.	27	29,6%	
SOLLEVELD BV	38	26,3%	
GANSEMAN VOF	19	26,3%	
MEEDER J.A.	43	25,6%	
BAKKER & LEENH.	32	25,0%	
VERGEER VOF	21	23,8%	
APOTHEKER	43	23,3%	
HOOGENDOORN	13	23,1%	
BLOM & ZN.	22	22,7%	
SCHRIJVERSHOF	25	20,0%	
TUINDERIJ VERS	30	20,0%	
PLUIMERT J.	10	20,0%	

Winter (januari & februari)

Naam	Totaal	% op tijd	Beoordeling
Duifhuizen	176	100,0%	
Winter de VOF	11	100,0%	
Pijnenburg Jan	23	100,0%	
Vries BV	43	97,7%	
Holdijk Groente & Fruit	75	97,3%	
Winter de	34	97,1%	
Geest Intern.	65	96,9%	
Gelder Groente & Fruit	44	95,5%	
Bresser	85	95,3%	
Postuma, Fa. VOF	37	94,6%	
Ravenswaaij BV	179	92,7%	
Vermaas Hans	10	90,0%	
Gemert Gebr.	59	89,8%	
Mooy import centrum	18	88,9%	
Vliet Fresh FD.	78	88,5%	
Siere BV	69	85,5%	
Heemskerk Br.	111	83,8%	
Valen BV	18	83,3%	
Koornstra & Co.	43	81,4%	
Bralts Groente & Fruit	10	80,0%	
Meesters Groente & Fruit	94	79,8%	
Mooij Amsterdam	19	78,9%	
Heemskerk Gebr.	78	76,9%	
Crujsssen, J.	67	74,6%	
Solleveld BV	133	74,4%	
Dijk Willem	78	74,4%	
Wal, L. ter	85	74,1%	
Ballegoyen G&F	125	72,8%	
Bakker en Leenheer	83	71,1%	
Ruiten van	131	71,0%	
Aarle BV	23	69,6%	
Meeder, J.A.	98	69,4%	
Smeerdyk Groente & Fruit	51	68,6%	
Vergeer VOF	70	68,6%	
Schrijvershof	26	65,4%	
Beekers	13	61,5%	
Greengoods	18	61,1%	
Gelder L.	89	60,7%	
Spijk, K. vd& zn	76	60,5%	
Hoogendoorn	10	60,0%	
Ganseman VOF	15	60,0%	
Dielissen J&PM	27	59,3%	
Koevoet Groente & Fruit	27	55,6%	
Staay BV	33	54,5%	
Heemskerk BV.	114	54,4%	
Sunda	35	54,3%	
Goesten, Harrie	135	54,1%	

JAGER HOLLAND	21	19,0%		Langfruit BV	45	53,3%	
SJOUWERMAN FA	21	19,0%		Oskam J.	75	53,3%	
WINTER DE VOF	11	18,2%		Waal Zuidvrucht	32	53,1%	
HESSING	34	17,6%		Versland	21	52,4%	
GELDER L.	29	17,2%		Ceneha BV	67	52,2%	
LEM GROOTHANDEL	12	16,7%		Impex Heemskerk	49	51,0%	
ADMIDEX BV	19	15,8%		Blom & Zn.	207	50,2%	
VRIES BV	13	15,4%		Mooy, C.	78	47,4%	
VERSUNIE	34	14,7%		Laar Fruit BV	110	47,3%	
HEEMSKERK BV	14	14,3%		Dooren, C.W.	53	47,2%	
GOESTEN HARRIE	36	13,9%		Spijk, K.	130	46,2%	
MEY VAN DER	36	13,9%		Lukassen, G.H.	73	45,2%	
ROVEG FRUIT	22	13,6%		Minass BV	36	44,4%	
E.F.P. INTERN.	15	13,3%		Alexport	30	43,3%	
MOOY BREDA	15	13,3%		Sjouwerman Fa	49	42,9%	
LUKASSEN G.H.	24	12,5%		Groot C.	19	42,1%	
RUITEN VAN	24	12,5%		Staak Riny	19	42,1%	
WALDERVEEN HENK	16	12,5%		Trade packing	19	42,1%	
STAAY BV	16	12,5%		Apotheker	417	42,0%	
BIE DE	27	11,1%		Vitaal Europe	22	40,9%	
VALSTAR HOLL.	18	11,1%		Walderveen Henk	109	39,4%	
WAGENAAR J.H.	18	11,1%		Wel Rotterdam	24	37,5%	
DENIZ FRUIT BV	28	10,7%		Lens Firma	19	36,8%	
MEESTERS GR.&FR	30	10,0%		Hoofdman-Roodza	11	36,4%	
LAAR FRUIT	21	9,5%		Bakker A.G.F	72	36,1%	
NOORT T.	53	9,4%		Maas, L. & zn.	166	34,3%	
SNOEI N	22	9,1%		Jover BV	68	33,8%	
HAANEX BV	11	9,1%		Holland Food	32	31,3%	
IMPEX HEEMSKERK	22	9,1%		Beentjes Piet	69	30,4%	
JOVER BV	34	8,8%		Joosen J.	20	30,0%	
SUNDA	12	8,3%		Adimex BV	17	29,4%	
AARLE BV	24	8,3%		Kraay, J.	89	29,2%	
BOEKEL A.N.	13	7,7%		Zijderveld AGF	14	28,6%	
RUSTENBURG	13	7,7%		Rijn trading	35	28,6%	
TRADE PACKAGING	15	6,7%		de Bie	25	28,0%	
LIEFTING FA	15	6,7%		AGF Holland	26	26,9%	
GREENGOODS II	15	6,7%		Visser P&G	45	26,7%	
MAAS L. & ZN.	32	6,3%		Lem groothandel BV	19	26,3%	
GROOT C.	18	5,6%		Vos, J.P.	44	20,5%	
KRAAY J.	19	5,3%		Graaf A.	56	19,6%	
RIJN TRADING	20	5,0%		Robin en Kees	93	19,4%	
KRAAIJEVELD G&F	21	4,8%		Rustenburg Arie	27	18,5%	
BEENTJES PIET	22	4,5%		Deniz fruit	103	18,4%	
BAKKER A.G.F.	29	3,4%		Versunie	77	18,2%	
DOLDERSUM M.	21	0,0%		Mey van der	13	15,4%	
DONTJE'S BV	15	0,0%		Bruin E.	28	14,3%	
GRAAF A.	17	0,0%		Jager Holland	17	11,8%	
HEUFF FRUITBR..	13	0,0%		Wagenaar	19	10,5%	
MOOY C.	11	0,0%		Noort, T.	48	10,4%	
SMETS & ZN, P.	37	0,0%		Gebr. Bouwman	49	10,2%	

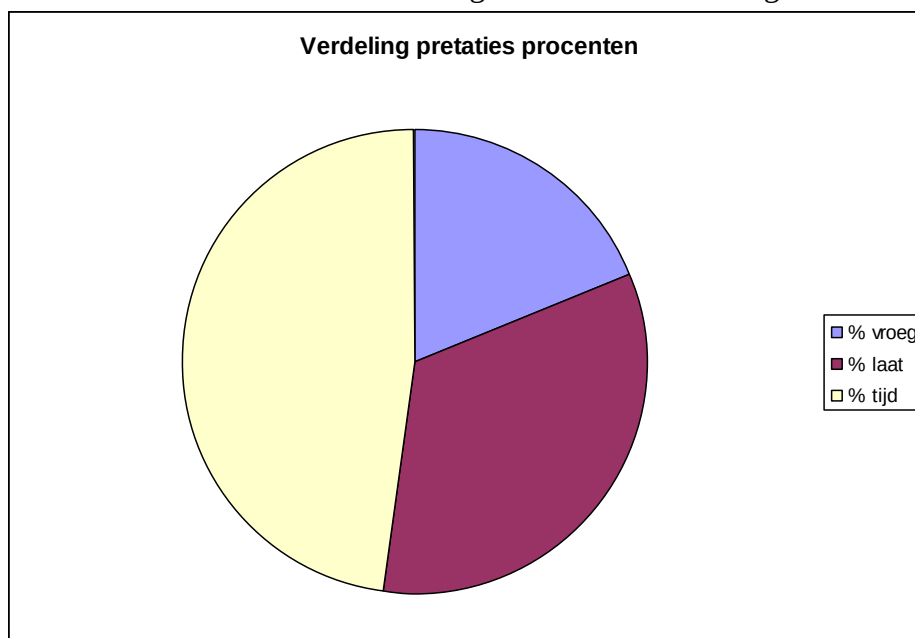
VISSER P&G	19	0,0%		Zoutewelle exp.	10	10,0%	
KOEVOETS GR&FR	14	0,0%		Smets, P. & zn.	118	8,5%	
MIRIAM GR&FR	11	0,0%		Liefting Fa.	12	8,3%	
DOORN A'DAM	19	0,0%		Snœi N.	54	5,6%	
LUYENDIJK P.J.	12	0,0%		Oord Kees	19	5,3%	
AGF-HOLLAND	12	0,0%		Hoogsteder BV	24	0,0%	
APOLLO FRUIT	16	0,0%		Kraaijeveld G&F	10	0,0%	
				Doorn Amsterdam	11	0,0%	
				Doldersum, M.	26	0,0%	
				Dontje's BV	49	0,0%	
				Smit Firma	34	0,0%	

Table 3: Comparison between summer and winter follow up percentages

Table 3 shows the follow up percentage per customers measured over two different periods of time. The chosen periods are summer 2010: June and August and winter 2011: January and February. The reason to choose two different periods and times is already given in the introduction to this graph.

To get the graph together a distinction had to be made between the customers. As can be seen from the graph a customer like Duifhuizen is registered 176 times over a period of two months whilst a customer like Zoutewelle exp. is only registered 10 times over the same period. To leave out the customers really too small to give any conclusion to their figures, one loading means already a difference in the follow up percentage of more then 10%, all customers with less then 10 loadings measured over the two months are left out the graph.

Figure 2 gives an overview of the average division of percentages divided over too late, too early and on time. This overview shows even more than figure 1 the necessity for actions. More then 50% of all loadings is besides the loading windows.



Figuur 2: Average division of loadings over too late, too early and on time (in %)

The results of the operations customers are used like the results of the retail customers used to design a set of proposals around that resulted in a list of customers who were contacted about the loading window and their follow up percentages, average deviation and average loading times. One customer got his loading window changed by 4 hours because his standard deviation was over 4 hours. Still after implementing the new loading windows this customer is on average too late but his standard deviation decreased from over 4 hours to just 1 hour.

As said before operations customers are generally the smaller customers who purchase small amounts of different products. For some customers, mostly geographically located close to one another combine their transportation efforts. One transportation company loads two, three or even more customers. Via these constructions the customers minimize their logistical costs on the one hand and ensuring their transportations on the other hand. Some of these groups of customers are known and are registered and analysed in a different data sheet. Other groups are not known or form couples for the occasion. Customer 1 has to load 4 pallets and his neighbour customer 2 has ordered a total of 8 pallets. Customer 1 has an appointment with an account manager in Barendrecht and as to go anyway. He might offer his neighbour to bring his pallets also. If both customers have a different loading window and BAR1 is not aware of this change for a day in the reports customer 2 might be considered as way to early whilst he actually is working on a transportation as efficient as possible.

For this unforeseen combinations, also within the known groups the one day is not like the next, no measurements can be taken in the system. For the moment these deviations have to be taken and improvements are not to be expected within a reasonable amount of time.

5.2.3 Actions

Unlike the proposals based on retail customers the proposals towards operations customers are far more brought and directed to one certain type of company, for example customers with an average deviation from their loading window of 2:00 hours. Working with this variable delivered a list of 20 customers all with an average deviation to their loading window from at least 2:00 hours.

With a list like in the given example customers are contacted and new loading windows are arranged. After a view months customers who still have an average deviation to their loading window of 2:00 hours are contacted again and again new arrangements are made. The process of adjusting the loading windows continues also beyond the scope of the project. Once in a while the customers are assessed again and proposals for improvement have to be written.

This project was the start of a process of assessing customers and arranging better fitting loading windows with them. This process will continue after the finishing of the project at the end of June.

6. Conclusion

During contact moments with customers from the retail as well as operations side the customers and transportation companies showed their attention for the topic loading windows. And most customers are willing to work towards improvements on their loading windows.

For most customers and transportation companies clear and reliable appointments make their planning tasks easier and trucks can be used far more efficient. In times with margins under pressure and a focus in all chains of the logistical process on efficiency improvements clear appointments that are met is an important tool to use resources as efficient as important. This goes as well for the transportations companies, customers as BAR1.

The introduction of the new logistical system led to a decrease in follow up percentages. Over time when SAP got more known and most issues got tackled the follow up percentages got back on track. On the other hand the actual loading times increased after SAP implementation and also this figure got over time back to its original figure of around 0:30.

The analysis of the follow up percentage is an ongoing process in which the first steps are made. With the improved loading windows customers and transportation companies are kept under close watch. Proposals for improvement are discussed on a weekly basis and if necessary actions are taken towards the involved customers and transportation companies.

As an answer to the research question can be stated that the analysis and investigation of the internal and external logistical processes is an ongoing process. An ongoing process that needs monitoring because improvements in logistical efficiency are directly related to cost efficiency and the efficient use of the trucks from transportation companies and customers.

7. Discussion

As in almost every research and investigation also this assignment encountered difficulties that influenced the outcomes of the analysis and the proposed improvements. The first set back is the importance of some customers. Some customers are more equal than others. For one customers account managers are determined to send that last box for which the order came in on the departure time of the truck with that same truck, result: a much longer loading time because the logistical system places the order on the next loading moment. A picking task that has to be given a priority and a driver that is waiting for one too late ordered box.

This first example of a difficulty is an external difficulty. Although most real difficulties for the outcomes are internal.

The first example of an internal difficulty resulting in less reliable outcomes are the customers who asked to change their loading window for one time. If this information is not passed on to the person responsible to produce the reports, the normal case, in the report the original loading window is used. Although the customer did everything to inform BAR1 about his plans and asks permission he is still registered as being late. For the improvement proposal this is a major set back because the proposals are based on the collected, not correct data. It did not happen in the first round of contacting customers but it might happen in the future when more customers are contacted. The chance to contact a customer following perfectly the rules increases. Contacting a customer who acts actual perfect is not a desired situation.

A second example of difficulties encountered during the research is the data of the internal processes. It is unknown how far the picking process in occasions delays the loading process. Drivers are only allowed inside when their load is finished. On the SAP side drivers are only registered from that moment onwards. It might happen that a driver was perfectly on time but was not allowed because the internal process was not yet finished. The driver is only registered when he is allowed. Then the internal process is responsible for a driver that is registered as too late. Because the possibilities to trace back an entire order towards the moment of finishing the picking is not so clear in the SAP system this problems can not be tackled yet. The solution currently worked on is putting an additional button in the expedition screen used on the moment the driver arrives instead of pushing one button on the moment the driver gets its loading list. In the ongoing process of monitoring the follow up percentages the internal picking process is with a new button put aside. The results of this new working procedure are not to be expected before July.

As said before the logistical process at the operations side is a complex process much of it carried out by people with experience. A lot of the appointments made with customers are by mouth and are only known by a very few people directly involved. The fact that a certain customers comes on Thursday and Friday in a different time window as the other days of the week. This knowledge is not transferred to others and in the DIS system there is no possibility to put two or more loading times on one account. The situation with a lot of knowledge in the head of the involved people makes the results of the operations

reports less reliable. Progress on this subject is made when the involved expedition office employee started to share the information with the researcher. Another major step will be the introduction of the SAP system on that side of the logistical process. This introduction is to be expected for the end of 2011 beginning of 2012.

Terminology

Follow up percentage = percentage of the total number of loading over a certain period the customer/transportation company was on time at the expedition office of BAR1

Retail = the major Dutch retail chains that are supplied via The Greenery BV with their fruits and vegetables. Smaller or bigger parts of their supply is shipped via BAR1.

Operations = all customers that purchase their products via the auction process. Although the real auction sales with a big clock and a lot of purchasers in one room is not used anymore. These customers still purchase their goods on the morning they collect them.

Loading times = time it takes a customer or transportation company to get a load from the collection area in front of the dock to his/her truck.

Reports = a number of reports is made to control the progress of the follow up percentages, internal results and inventory changes.

Annex 1: Plan of Action

Background

The company in which the project is executed is The Greenery BV. The Greenery BV is one of the largest fruit and vegetable trade companies in Europe. The Greenery BV trades, packs, stores and transports fruit and vegetable for customers throughout the hole of Europe. The customers of The Greenery BV belong to the largest retailers in Europe. The project is executed in the distribution office of location Barendrecht 1. Barendrecht 1 is a storage location where a number of products are distributed to several customers. Within the area of Barendrecht 1 is also the small packaging department situated. The small packaging department packages products customer specific. For example four apples on one plate.

From the distribution office the incoming and outgoing product flows are controlled. The distribution office assigns docks to the truck drivers who come to the office. Another task of the distribution office is the documentation of all good flows from the location Barendrecht 1.

The direct involved managers in this project are P. van 't Woudt, process manager of Barendrecht 1 and G. Kaya, team manager back office of the distribution office. The name of the project is internally Qualitative and Quantitative investigation of the loading process at Barendrecht 1. The project forms a bridge between the current used logistical system and the new to be implemented SAP system. The new SAP system will be implemented in March 2011. The current system and follow up is not that consistent. Before the SAP system will be implemented the current problems with the follow up on the loading schedules should be tackled.

Within the distribution office for several months attention is paid to reports which concerning the loading schedules and follow up. These reports are produced on a daily basis to get an insight in the behaviour of customers towards the given loading times. Until this moment a proper analysis of the data was not possible. The project aims at an analysis of the data gathered in an earlier stage. The end result of this project should lead to a number of recommendations which can be used to improve the companies performances.

The implementation of the SAP system forces the company to better control over the loading schedules. In the SAP system certain times are set for order picking and preparation of goods via the small packaging department. If customers arrive too early goods are not ready yet. If customers arrive too late the dock can not be assigned to another customer.

After the implementation of the SAP system the project will continue for another number of months. In this time the results after SAP implementation are also analysed as is the data that is already gathered.

Goal

The goal of this project is the analysis of the loading times and the follow up towards customers and transportation companies. The problem definition related to this goal is: How is the current analysis done and how can this analysis be improved for future use?

Project assignment

The name of the project is: Qualitative and quantitative investigation of the loading process on location Barendrecht 1.

The assignment is given from The Greenery BV represented by P. van 't Woudt. P. van 't Woudt is the direct manager of the assignment executor.

The executor of the assignment is N. Schouten. Who as part of his thesis executes the research and project.

The expected end result is a report with regard to the quantitative and qualitative aspects of the loading process at location Barendrecht 1.

In the project period several analysis will be made and handed in as project products.

Project activities

The following list gives a as complete as possible overview of the activities necessary to execute the project and to write a report as solid as possible. The activities are as far as possible aligned in a chronological order.

- Reading the available information
- Getting experience in the used systems
- First analysis of the available data
- Develop customer lists
- Analysis of the customer lists
- First report based on the analysis
- Recommendation of follow up measurements
- Gathering results of follow up measurements
- Analysis of follow up measurements

After SAP implementation

- Data collection from the SAP system
 - Analysis of the SAP data
 - Report
-
- Writing of the end report

Project boundaries

To prevent differences of insight about the length and the width of the project in this chapter the width and length of the project are given.

The project assignment is a qualitative and quantitative research regarding the loading process at location Barendrecht 1. Within the boundaries of the project the following tasks are defined:

- Investigate the follow up percentage of retail customers
- Investigate the follow up percentage of operations customers
- Analysis of the data with regard to the follow up percentages
- In between reports on the results with regard to the follow up percentages
- Analysis of the loading process at location Barendrecht 1

- Keeping the incident lists up to date is also part of the project
- Analysis of the incidents given in the incident lists
- In this project literature with regard to loading processes and logistical systems will be used.

Mile stones

Mile stones are the products belonging to the project which will be delivered during the time span of the project. In this project the mile stones consist of: reports and analyses of the gathered data.

The expected mile stones are:

- A first analysis of all available data
- Recommendations with regard to simplifying the loading time reports
- Recommendations with regard to actions towards retail customers with respect to their loading times.
- Analysis of the results of the proposed actions.

Products

The initial product which is linked to the loading processes at Barendrecht 1. Qualitative as well as Quantitative the loading process will be analysed and propositions for improvements are brought in.

In between several mile stones will be produced. The mile stones will keep the project on track, traceable and transparent.

Quality

A proper quality of the end product is necessary to keep the product useable and implementable in the loading processes at Barendrecht 1. To improve the quality of the end product the mile stones are used. The mile stones form the basis of the initial end result. The mile stones are discussed and improved over time. This way of working should lead to a useable and implementable document for the loading processes at location Barendrecht 1.

Planning

The placement period and as such also the project period cover a period of 20 weeks. In dates this means the period between January 31`and June 25 2011. To be able to attend the thesis discussions at the end of June. The placement report has to be handed in 7 weeks before the end of the placement period. In this case this means that the placement report has to be handed in on May 13.

Week	Dates	Activities
		First analysis
		Making plan of action
5	31-01-2011/04-02-2011	Making loading time reports
6	08-02-2011/11-02-2011	Analysis internal processes
7	14-02-2011/18-02-2011	Continued analysis of the available data
8	21-02-2011/25-02-2011	First proposed improvements loading processes
9	28-02-2011/04-03-2011	

10	07-03-2011/11-03-2011	First proposed improvements internal registration processes
11	14-03-2011/18-03-2011	
12	21-03-2011/25-03-2011	
13	28-03-2011/01-04-2011	
14	04-04-2011/08-04-2011	
15	11-04-2011/15-04-2011	
16	18-04-2011/22-04-2011	
17	25-04-2011/29-04-2011	
18	02-05-2011/06-05-2011	Hand in placement report VHL
19	09-05-2011/13-05-2011	
20	16-05-2011/20-05-2011	
21	23-05-2011/27-05-2011	
22	30-05-2011/03-06-2011	Hand in end report The Greenery BV
23	06-06-2011/10-06-2011	
24	13-06-2011/17-06-2011	
25	20-06-2011/24-06-2011	

Annex 2: Logbook Thesis

Date	Time	Tasks
18-01-2011	13:00-17:00	Tour through the building First time meeting colleagues Start with incident list Meeting student worker/colleague
21-01-2011	8:15-16:15	Continue with incident list Introduced in loading schemes Reading information about the company Getting to know the company
28-01-2011	8:30-16:15	Reading about the company Practicing with the loading scheme Discussing the assignment Getting to know the company
31-01-2011	12:00-16:15	Creating excel sheets retail
01-02-2011	8:30-16:30	Analyses of the retail data Start with plan of action
02-02-2011	8:30-16:00	Creating excel sheets operations
03-02-2011	8:30-16:10	Analyses of the operations data Continue with plan of action
04-02-2011	8:30-16:10	Hand in plan of action Hand in first analyses of the retail data
07-02-2011	8:30-16:10	Continuing with the operations data Updating incident scheme Updating retail data sheet
08-02-2011	8:30-16:05	Reading theory about logistics (ERP) Updating incident scheme
09-02-2011	8:30-16:05	Updating incident scheme Scaling pro and cons different potential actions Defining most promising potential action
10-02-2011	8:20- 16:05	Updating incident scheme Preparing afternoon's meeting Afternoon's meeting rescheduled until Monday Attending meeting transportation office
11-02-2011	8:20-16:05	Updating incident scheme Preparing Monday's meeting Discussing outcomes with other student Reading theory on SCM
14-02-2011	8:30 – 16:10	Updating incident scheme Preparing meeting Meeting with B. Kouwenhoven and P. van 't Woudt Further actions discussed
15-02-2011	8:20 – 16:10	Working on discussed actions Getting to know Microsoft Visio

		Updating incident scheme Weekly office meeting
16-02-2011	8:30 – 16:05	Updating incident scheme Getting to know Microsoft Visio Working on discussed actions Sending outcomes to P. van 't Woudt Discussing meeting outcomes with D. van der Lee
17-02-2011	8:20 – 16:10	Updating incident scheme New meeting scheduled Preparing new meeting Updating available data focused on tomorrow's meeting
18-02-2011	8:20-16:00	Meeting about BAS Benelux results Preparing follow up actions Benelux Updating incident scheme
21-02-2011	8:20-16:05	Preparing follow up actions Benelux Start with follow up actions Operations Updating incident scheme
22-02-2011	9:00-16:10	Updating data files operations and Benelux Starting creating data files operations summer results
23-02-2011	8:25-16:10	Updating incident scheme Filling data files operations Creating data files summer results Updating analyses files Benelux
24-02-2011	8:20-16:30	Filling data files operations Updating incident scheme
25-02-2011	8:20 – 16:00	Contacting transportation companies updated time frames Updating transportation schemes Benelux Updating incident schemes
28-2-2011	8:20 – 17:10	Preparing operations meeting Updating incident scheme Start up pallet overview Printing newsletter Contacting SCM follow up transportation companies
01-3-2011	8:20-16:10	Updating incident scheme Continuing filling pallet overview Contacting SCM follow up transportation companies Writing letter to transportation companies, first draft
02-3-2011	8:20-16:00	Updating incident scheme Finishing pallet overview Finishing letter to transportation companies, final draft Updating logbook
03-3-2011	8:20-16:05	Sending letter for transportation companies to SCM for comments Improving pallets overview Updating incident scheme Sending incident scheme

04-3-2011	8:20-16:00	Approval from SCM to send the letters to the transportation companies Updating logbook Sending letters to transportation companies Discussing follow up percentages outcomes
07-3-2011	8:20-16:00	Updating incident schemes Filling reports Discussing operations results
08-3-2011	11:30-16:10	Filling reports Preparing meeting 09-3-2011 Start operations proposal
09-3-2011	8:20-16:10	Filling reports Meeting SAP reporting Continue operations proposal Discussing following steps Telephonic contact operations customer
10-3-2011	8:20-16:30	Continue operations proposal Changing basic data Filling reports
11-3-2011	7:50-16:00	Filling reports Updating logbook Supportive work SAP implementation Updating incident scheme Finishing operations proposal
14-3-2011	8:15-16:05	Updating logbook Updating incident scheme Filling time charts Operations Sending operations proposal
15-3-2011	8:15-16:00	Updating incident scheme Updating proposal Operations
16-3-2011	8:15-16:10	Preparing inventory management tasks Preparing Operations proposal Retail follow up percentages analysis
17-3-2011	6:30-14:55	Inventory management SAP training
18-3-2011	6:30-14:55	Inventory management SAP training
21-3-2011	6:20-15:00	Inventory management
22-3-2011	6:25-15:00	Inventory management
23-3-2011	6:25-15:00	Inventory management
24-3-2011	6:30-15:00	Inventory management
25-3-2011	6:30-14:45	Inventory management
28-3-2011	6:30-15:00	Inventory management Updating operations proposal Preparing meeting SAP retail procedure Updating address list operations
29-3-2011	8:00-16:00	Updating operations proposal Search for SAP retail data

		Preparing meeting about inviting transportation companies to the Greenery Analysis retail follow up percentages
30-3-2011	13:00-17:00	Continued search for SAP retail data
31-3-2011	8:20-16:00	Discussing found SAP retail data Updating logbook Preparing meeting about found SAP retail data
1-4-2011	8:20-16:00	Updating logbook Continued search for retail data Analysis of retail data Building retail daily reports from 17-3-2011 until 31-3-2011.
4-4-2011	6:30-14:30	Updating retail follow up database Analysis operations data Preparing retail follow up database meeting Retail follow up database meeting Finishing retail follow up database set up Sending operations proposal
5-4-2011	6:30-14:15	Inventory management Proposal operations; updating transportation windows Analysis transportation window problems yesterday evening Discussing conclusion analysis
6-4-2011	6:30-14:30	Updating logbook Updating main analysis and overview file Analysis yesterday's transportation window results Inventory management analysis
7-4-2011	8:15-17:15	Central introduction day the Greenery Bleiswijk
8-4-2011	6:30-14:15	Inventory management Update proposal overview scheme Discussing location report Training filling location report Discussing loading time follow up reports
11-4-2011	5:50-13:45	Updating logbook Analysis inventory management figures Analysis weekly results follow up percentages
12-4-2011	7:00-14:30	Discussing inventory management figures Discussing follow up percentages Benelux/Operations Inventory management SAP instruction followed Location report Visit job agency
13-4-2011	6:25-14:30	Updating logbook Putting data sheets on local network drive Location report Updating inventory management figure data sheets

		Reporting follow up percentages Operations Reporting follow up percentages Benelux
14-4-2011	12:30-17:00	Location report Report follow up percentages Operations Report follow up percentages Benelux Start up task report SAP
15-4-2011	7:15-15:00	Defining needed monitors task reports SAP Updating inventory management report Defining difficulties in task reports SAP Analysing Benelux customers with changed loading times Updating logbook Testing data collection possibilities task reports SAP Start location report Hand over location report to D. van der Lee
18-04-2011	6:15-14:30	Location report Analysis of Saturday's transportation Report follow up percentages Benelux Update logbook Data analysis
19-04-2011	8:00-15:45	Location report Report follow up percentages Benelux Report follow up percentages Operations Preparing meeting follow up percentages Operations Inventory management analysis
20-04-2011	6:15-14:30	Location report Report follow up percentages Benelux Report follow up percentages Operations Preparing meeting follow up percentages Operations Meeting follow up percentages and proposal Operations (rescheduled from yesterday) Inventory management analysis
21-04-2011	6:15-15:00	Location report Report follow up percentage Benelux Report follow up percentage Operations Updating operations proposal Inventory management analysis
22-04-2011	6:15-14:00	Location report Report follow up percentage Benelux Report follow up percentage Operations Inventory management analysis Data analysis
25-04-2011	6:15-14:30	Preparing contact operations Data analysis Transportation analysis SAP
26-04-2011	6:15-14:30	Preparing telephone contact operations customers Transportation analysis SAP

		Inventory management Delivery scheme report
27-04-2011	6:15-14:30	Telephonic contact operations customers Preparing letter to operations customers Inventory management Delivery scheme report
28-04-2011	6:15-14:30	Telephonic contact operations customers Updating letter to operations customers Inventory management Delivery scheme report
29-04-2011	6:15-14:00	Hand over reports to colleague Sending letter to operations customers Inventory management Delivery scheme report
02-05-2011		Holiday
03-05-2011		Holiday
04-05-2011		Holiday
05-05-2011		Holiday
06-05-2011		Holiday
09-05-2011	7:30-15:30	Reading e-mail Check reactions of operations customers on letter Inventory management Delivery scheme report Transportation analysis SAP Send Coforta report update Data analysis
10-05-2011	6:30-14:30	Discussing reactions of operations customers Inventory management Delivery scheme report Updating HAS system with reactions of customers Updating follow up percentage forms Data analysis SAP Data analysis
11-05-2011	6:15-14:30	Inventory management Delivery scheme report Preparing data set to be used by G. Kaya in meeting with transportation company. Data analysis operations customers
12-05-2011	8:00-16:00	Inventory management Delivery scheme report Data analysis operations customers Data analysis SAP
13-05-2011	8:30-16:00	Conclusions first week after letter to operations customers Data analysis operation customers Inventory management Delivery scheme report

		Data analysis SAP transportations
16-05-2011	6:30-16:00	Meeting about operations and SAP follow up results Preparing overview SAP loading times/BAS times Preparing data set delivery problems Inventory management Delivery scheme report Coforta report update
17-05-2011	6:15-14:30	Inventory management Delivery scheme report Start with taking over actions with regards to the location reports Writing thesis report
18-05-2011	7:15-15:00	Inventory management Delivery scheme report Updating logbook Discussing pallet numbers Writing thesis report
19-05-2011	8:00-16:00	Inventory management Delivery scheme update Writing thesis report Proposing improvements in retail follow up reports Taking over actions with regards to location reports Discussing new tasks with location manager and senior controller
20-05-2011	8:00-16:00	Inventory management Delivery scheme update Writing thesis report Proposals loading windows operations customers
23-05-2011	8:00-16:00	Start up administration tasks Preparing daily reports Discussing follow up percentages Discussing inventory management Writing thesis report
24-05-2011	8:00-16:00	Daily administration tasks discussed Inventory management Delivery scheme report Writing thesis report
25-05-2011	8:00-16:00	Hand in first draft thesis report Inventory management Delivery scheme report Analysis gathered data Discussing proposal operations
26-05-2011	8:00-16:00	Preparing packing material inventory management Introduction in clothing ordering procedure Inventory management Delivery scheme update

27-05-2011	9:00-20:00	Packing material inventory management Inventory management Delivery scheme update Team board discussion expedition
28-05-2011	13:00-17:00	Expedition office meeting
30-05-2011	8:00-16:00	Getting to know new logistical dashboard Inventory management Delivery scheme update Inventory management meeting Follow up percentages meeting
31-05-2011	8:00-16:00	Work on new logistical dashboard Inventory management Delivery scheme update
01-06-2011	8:00-16:00	New logistical dashboard Preparing clothing order Inventory management Writing article, plan of consult and thesis report
03-06-2011	8:00-16:00	Packing material inventory management Inventory management Delivery scheme update Ordering new whiteboard
06-06-2011	8:00-16:00	Inventory management Delivery scheme update Start with contacting operations customers based on proposal Writing thesis report
07-06-2011	8:00-16:00	Inventory management Delivery scheme update Writing article, plan of consults Discussing new logistical dashboard
08-06-2011	8:00-16:00	Writing thesis report, article and plan of consult Updating new logistical dashboard
09-06-2011	9:00-18:30	Packing material inventory management Finishing article and plan of consult Writing thesis report