

# Vaess

dutch food engineers

## OPTIMIZATION OF THE ORDER-TO- CASH PROCESS

PROJECT PLAN

By Nikki Blankenvoorde  
S2233819



**Bachelor thesis**

Optimization of the order-to-cash process

**Author**

Nikki Blankenvoorde

S2233819

Industrial Engineering and Management

University of Twente

**Educational institution**

University of Twente

Drienerlolaan 5

7522 NB Enschede

The Netherlands

**University supervisor**

Dr. G. Sedrakyan

Faculty BMS, IEBIS

**Second supervisor**

Dr. R. Guizzardi-Silva Souza

Faculty BMS, IEBIS

**Hosting company**

Vaess – Dutch Food Engineers

Munsterstraat 22

7418 EV Deventer

The Netherlands

**Company supervisor**

Mr. Nabben

Director Finance

## Preface

Dear Reader,

Before you lies the bachelor thesis “Optimization of the order-to-cash process” which concludes my Bachelor’s program in Industrial Engineering & Management at the University of Twente. The corresponding research has been conducted at Vaess – Dutch Food Engineers in Deventer in the period of February to July 2022.

Vaess provided me this opportunity and valuable experience for which I am grateful. I want to thank all the employees of Vaess for their help during this research. Special thanks to my company supervisor, Giel Nabben and my colleague Bart Schotman for the great guidance. They introduced me to the company and her employees, and they were always able to answer my questions or to give feedback on my progress.

I also want to thank my first university supervisor Gayane Sedrakyan. She was always available to answer my questions and she provided me with valuable feedback to improve my thesis. Lastly, I would like to thank my second supervisor Renata Guizzardi-Silva Souza for the time and feedback.

I hope you enjoy reading my thesis.

Nikki Blankenvoorde

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## Management summary

This report is about the research conducted at Vaess as the final assignment of the program Industrial Engineering and Management at the University of Twente. Vaess is a company specialized in developing products that add value to your food. Their solutions are based on a building block principle. A successful product has the right balance between texture, juiciness, taste, mouthfeel, binding and fat perception. Vaess is able to develop total concepts, but they will only supply the building blocks where they add value. A customer can combine all of their tools or pick and mix the blocks that they miss in their recipe.

In the past few years, the company has grown enormously in terms of sales. The expectations are that this growth will continue in the upcoming years. A prerequisite for this continuing growth is that the internal processes are stable, reproducible, and standardized (as far as possible), which was definitely not the case. Therefore, it was important to gain more insights into the internal processes and to check if those were still optimal and future-proof, so the main research question for this thesis was:

*What would be the most optimal way(s) to improve the order-to-cash process, in order to stabilize/standardize the way of working for the company?*

This research has been conducted in seven phases. First, it was needed to define the problems. To gain more insight into the different processes within the company, interviews have been conducted. Based on the outcomes, a flowchart has been created, which shows all the processes within the company. It appeared that there are a lot of processes, some with more inefficiencies than others. The processes/problems that have been selected for this specific research were:

- No existent process regarding the accounts receivable insurance
- No dunning process
- Master data is not always complete
- No insights into achieving delivery time

A gap analysis has been executed, to figure out how the desired process should look like and what was needed to reach such a process. For the accounts receivable insurance, the first step was to make sure that all the master data regarding the limits was correct. After that, two new processes had to be created. The first process was about determining the credit limit for new debtors and the second process was related to monitoring credit limit of existing customers. The new process has already been implemented within the company.

Regarding the dunning, there was not really a process, which was strange, because dunning is an important part for your liquidity. To figure out how the process should look like, literature research has been conducted, besides some brainstorm sessions with employees of the financial department. All of this, resulted into the following process:

- 5 days overdue: send a dunning mail
- 10 days overdue: call to make an agreement about when the debtor will pay their outstanding bill(s)
- 1 day after the agreed day: send the relevant account manager a mail with the status and ask him/her to call their contact person at the company

This process has already been implemented into the company and the average number of days after exceeding payment term for paying an invoice decreased for 47% of the debtors.

The master data of a lot of debtors was incomplete, which caused inefficiencies in multiple processes within the company. A new process had to be created for this, which has mostly been based on data from interviews and discussions with employees. Before the new process could be implemented, it was important to make sure that all the master data of the current debtors was correct. After this, the process had to ensure that no new debtors will be created, if not all the data was complete. This process has also been implemented within the company.

Lastly, regarding the KPI delivery time. Vaess promises their customers to deliver make-to-order products within 10 working days, but they did not know if they lived up to this promise. While looking at the data, it appeared that last year, with 76,08% of the make-to-order products, Vaess was not able to comply to this delivery term. With the dashboard that has been created, Vaess can get more insights into the deliveries and into the KPI on-time delivery, which will hopefully help in the future to decrease the number of make-to-order products that were delivered too late.

## Table of contents

|  |    |
|--|----|
| Preface .....                                  | 3  |
| Management summary.....                        | 4  |
| Table of contents .....                        | 6  |
| 1. Introduction .....                          | 8  |
| 1.1 Vaess – Dutch Food Engineers .....         | 8  |
| 1.2 Problem description.....                   | 8  |
| 1.2.1 Current situation .....                  | 8  |
| 1.2.2 Problem analysis .....                   | 9  |
| 1.2.3 Norm and reality .....                   | 12 |
| 1.2.4 Problem solving approach.....            | 12 |
| 1.2.5 Deliverables.....                        | 13 |
| 1.2.6 Scope.....                               | 13 |
| 1.3 Research design .....                      | 13 |
| 1.3.1 Research questions and design .....      | 13 |
| 1.3.2 Validity and reliability .....           | 15 |
| 2. Literature .....                            | 17 |
| 2.1 Business process analysis techniques ..... | 17 |
| 2.2 Process management notation .....          | 18 |
| 2.3 Process optimization methods.....          | 20 |
| 3. Current situation.....                      | 22 |
| 3.1 Interviews .....                           | 22 |
| 3.2 Flowchart .....                            | 23 |
| 4. Bottlenecks .....                           | 25 |
| 4.1 Shortcomings in the current process .....  | 25 |
| 5. The desired process .....                   | 27 |
| 5.1 Accounts receivable insurance.....         | 27 |
| 5.1.1 Implementation .....                     | 28 |
| 5.2 Dunning process.....                       | 28 |
| 5.2.1 Implementation .....                     | 30 |
| 5.3 Master data.....                           | 30 |
| 5.3.1 Implementation .....                     | 31 |
| 5.4 KPI delivery time .....                    | 32 |
| 5.4.1 Implementation .....                     | 32 |
| 5.5 Other possible improvements.....           | 32 |
| 5.5.1 Pallet information .....                 | 32 |

|   |    |
|---|----|
| 5.5.2 Printing documents .....                          | 32 |
| 5.5.3 Transportation of orders .....                    | 33 |
| 5.5.4 ERP system .....                                  | 33 |
| 5.5.5 Price lists .....                                 | 34 |
| 6. Conclusions .....                                    | 35 |
| 6.1 Conclusion .....                                    | 35 |
| 6.2 Recommendations and further research .....          | 37 |
| 6.3 Limitations .....                                   | 38 |
| References .....  | 39 |
| Appendix A: Interview transcriptions .....              | 41 |
| Appendix B: Credit limit overview .....                 | 48 |
| Appendix C: Credit limit document (for employees) ..... | 52 |
| Request for credit limit .....                          | 53 |
| Monitoring credit limits .....                          | 54 |
| Appendix D: KPI dashboard .....                         | 56 |

## 1. Introduction

This chapter introduces the research. Firstly, an introduction about the company is given. After that, a definition of the problem, experienced by the management of Vaess, will be formulated. Then all the different problems will be reproduced into a problem cluster. From the problem cluster, the core problem will be identified. Lastly, a description of the gap between norm and reality will be given.

### 1.1 Vaess – Dutch Food Engineers

Vaessen-Schoemaker was founded in 1946 by Hubert Vaessen and his son-in-law Paul Schoemaker. They started as a company focusing on meat and sausages, and they have diversified into different industries like vegan cheese, bakery, fish and of course plant based products. Their building blocks and solutions are all based on a limited number of technology platforms that can be applied in the industries mentioned above. This focused approach, their creativity and their culture, have made them perhaps one of the world's most innovative food companies.

Vaess places a high priority on supporting their customers. Their Food Technology Centers are available for injection and tumbling tests, alginate or bakery co-extrusion and bakery or plant-based innovation sessions. Vaess also provides on-site support. In their Technology Centers they test innovations on semi-industrial scale, and tailor their solutions to meet specific requirements from customers. They develop functional ingredients, concepts, knowledge and the right products that enable their customers to stand out from the crowd.

They are passionate about food and adding value to a product. Their solutions are based on a building block principle. A successful product has the right balance between texture, juiciness, taste, mouthfeel, binding and fat perception.

Vaess is able to develop total concepts, but they will only supply the building blocks where they add value. A customer can combine all of their tools or pick and mix the blocks that they miss in their recipe. This allows customers to quickly create high-quality concepts that fit their product profile and are new to the market (About Vaess, sd).



Figure 1: Vaess - Dutch Food Engineers

## 1.2 Problem description

### 1.2.1 Current situation

The company has grown enormously in terms of sales during the past few years, and it is expected that this growth will continue in the upcoming years. A prerequisite for this continuing growth is that the internal processes are stable, reproducible, and standardized (as far as possible). Right now, this is not the case. Employees are experiencing a chaotic, uncomfortable and stressful work environment. Accordingly, the demand to map all the internal processes has grown. Besides this, they are wondering if the current method of working is still optimal and future-proof.



### 1.2.2 Problem analysis

The problem cluster can be found in figure 2.

The problem cluster consists of the following components:

1. Unstable processes
2. Employees not trained properly to use the bagging line
3. Labor shortage
4. Bagging line not adjusted in a correct way
5. Unreliability of supply driven by external market factors
6. Delay in production due to inefficient processes
7. Price list in Exact<sup>1</sup> does not always contain up-to-date prices
8. Invoices sent with deviating price from the current price
9. Planning tries to hold extra stock, because of raw material shortages
10. No deliberation between planning and warehouse about placing of raw materials in own warehouse or in external warehouse
11. Pallets are placed in aisles and between scaffoldings because a lack of space
12. Warehouse usage is far from efficient
13. Processes not sufficiently digitalized, because they are error prone
14. Order-to-cash process takes too much time, e.g., delivery time takes longer than promised for 78% of the orders
15. Unreliable logistics such as transporter who do not show up
16. Lack of space in warehouse
17. Master data of new debtors is not always up to date

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<sup>1</sup> Exact is an ERP system that is used by Vaess, to keep track of all the processes within the company

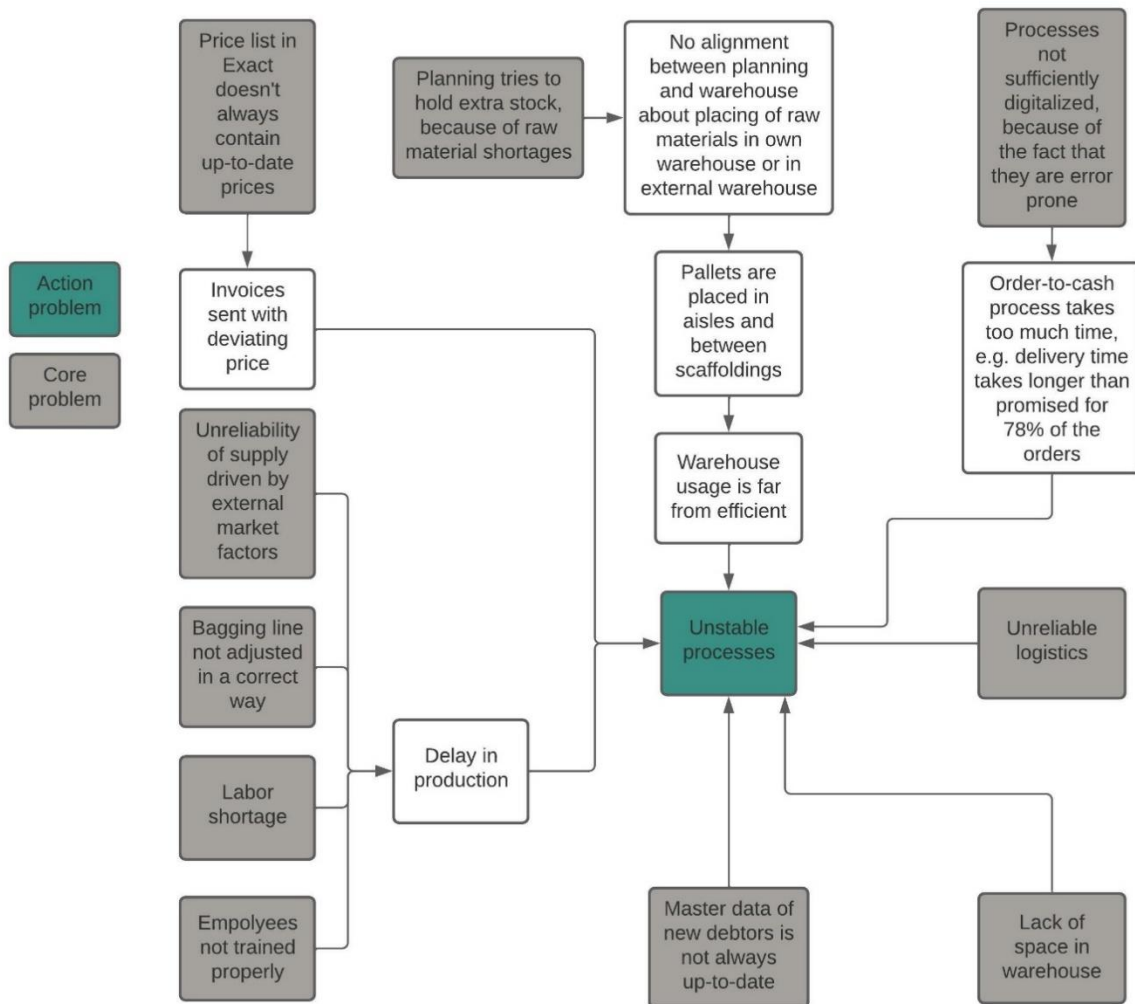


Figure 2: Problem cluster

The action problem 'unstable processes' is caused by multiple core problems. However, it is important to select the core problem(s) that will be dealt with during the research, this will be done according to the criteria of Heerkens (Winden, 2017).

- **Employees not trained properly**  
This is a serious core problem. However, the company is already working on this problem by giving extra training to their employees. Therefore, there will not be a focus on this core problem during this research.
- **Labor shortage**  
This problem cannot be influenced because it has to do with market shortages. The company is already trying to recruit new employees, but this is a time-consuming process. Because this cannot be influenced, this problem will be eliminated from the list.
- **Bagging line not adjusted in a correct way**  
The company bought a new bagging line a few months ago. Because of little experience and a lack of knowledge (where they are already working on), it makes sense that the machine is sometimes not as reliable as wished. However, the company is already working on this problem, therefore this problem will be eliminated.
- **Unreliability of supply driven by external market factors**

This core problem has multiple causes, for example illness, energy prices, transportation prices and market shortages. Those causes cannot be influenced and therefore this problem will be eliminated from the list.

- **Delay in production**

This core problem is caused by multiple factors, which can be seen in the problem cluster. However, all those causes are not within the scope for this research and therefore this problem will also be eliminated from the list.

- **Price list in Exact does not always contain up-to-date prices**

Sometimes, salespersons agree upon a new price with a customer. This agreement should be passed on to the ERP manager. However, this is often not happening, which is resulting into invoices that are sent with wrong prices. This is of course not optimal and therefore this problem should be taken into consideration during the research.

- **Invoices sent with deviating price**

This core problem is resulting from the core problem “price list in Exact does not always contain up-to-date prices”, which will be investigated during this research. As a result, this core problem will be influenced as well.

- **Planning tries to hold extra stock, because of raw material shortages**

Because of the current market situation, the planning department tries to order as much raw materials as possible, to make sure that the company does not have to deal with shortages. However, there is no deliberation with the logistics department about the available space in the warehouse and therefore the usage of both warehouses (intern and extern) is not efficient. Due to time restrictions, it is impossible to investigate all core problems and therefore this problem will be eliminated from the list.

- **No deliberation between planning and warehouse about placing of raw materials in own warehouse or in external warehouse**

This core problem is resulting from the core problem: “planning keeps ordering raw materials because of current market shortages” and it is outside the scope of this research.

- **Pallets are placed in aisles and between scaffoldings**

This core problem is resulting from the core problems: “planning keeps ordering raw materials because of current market shortages” and “no deliberation between planning and warehouse about placing of raw materials in own warehouse or in external warehouse” and therefore this is also outside the scope of this research.

- **Warehouse usage is far from efficient**

This core problem is resulting from the core problems: “planning keeps ordering raw materials because of current market shortages”, “no deliberation between planning and warehouse about placing of raw materials in own warehouse or in external warehouse” and “pallets are placed in aisles and between scaffoldings” and therefore this is also outside the scope of this research.

- **Processes not sufficiently digitalized, because of the fact that they are error prone**

Currently, almost all departments within the company are still working with a lot of paper. The result of this is that the order-to-cash process takes more time than necessary (for example because the papers are transported from department to department), and the way of working is not optimal. Therefore, this problem will be taken into consideration during the research.

- **Order-to-cash process takes too much time, e.g., delivery time takes longer than promised for 78% of the orders**

This core problem is resulting from the core problem: “processes not sufficiently digitalized”, which will be investigated during this research. Hopefully, this will have impact on this core problem as well.

- **Unreliable logistics**

The company that is taking care of all the transportation of finished goods, is not always reliable. Sometimes the delivery takes more time than agreed on. This problem could be taken into consideration, but due to time restrictions, it will not be investigated.

- **Lack of space in warehouse**

The company has grown enormously the last few years. Therefore, their warehouse became too small for their production. However, the company is already thinking about solutions. Therefore, this problem will not be investigated during this research

- **Master data of new debtors is not always up to date**

Currently, when there is a new debtor, it happens often that the salesman did not collect all the master data. This is inconvenient for the finance department because they must find out part of the master data by themselves, which takes time. This is a problem that can be influenced and therefore this problem will be taken into consideration during this research.

After eliminating some problems from the list with core problems, there are only a few left. During this research, there will be a focus on:

- Processes not sufficiently digitalized, because of the fact that they are error prone
- Price list in Exact does not always contain up-to-date prices
- Master data of new debtors is not always up to date

### 1.2.3 Norm and reality

The reality is that the internal processes are not stable, this is caused by different factors, for example the fact that the processes are not sufficiently digitalized, that the price lists in Exact does not always contain up-to-date prices and that the master data of new debtors is not always up to date. The wish of the company is that the processes will be stabilized, by taking steps towards a complete digital process, by price lists that will always contain the correct prices and that master data is always up to date.

### 1.2.4 Problem solving approach

To come up with recommendations for the core problems, it is important to define a problem-solving approach. This will be done, according to the Managerial Problem-Solving Method. The MPSM is based on several different problem-solving methods and consists out of seven phases (Winden, 2017).

The first phase of the MPSM is defining the problem. During this phase, it is important to figure out the problems and their causes. This will be done by making an inventory of all the problems that the company is facing related to the order-to-cash process. After that, a problem cluster will be set up, with which the core problem can be determined. Finally, the core problem will be expressed in variables and the difference between the norm and reality will be determined.

The second phase of the MPSM is formulating the approach. During this phase, literature research will be conducted. The current situation must be mapped, which will be done with a flowchart, which will provide more insights into the process steps. Also, the different theories related to process optimization will be investigated.

The third phase of the MPSM is analyzing the problem. In this phase, it is important to analyze the outcomes of the MPSM. The aim of the flowchart is to provide more insights into the processes, e.g.,

where things progress as expected and where processes are inefficient and can benefit from optimization. Also, some employees will be interviewed to get more understanding of the causes of the core problems.

The fourth phase of the MPSM includes formulating solutions. After all the research has been conducted, it is important to think of possible solutions. All possible solutions to the different core problems will be formulated in this phase.

The fifth phase of the MPSM involves choosing a solution. After considering the different alternative solutions, the most optimal solutions will be identified out of the list. This will be done by additionally having an input from employees.

The sixth phase of the MPSM includes implementing the solution. This phase is still a bit uncertain due to time limitations. If there is still time left after implementing the solution design, then the chosen solution will be implemented into a prototype to be tested in real-world circumstances.

The last phase of the MPSM is evaluating the solution. During this phase, it is important to evaluate the solutions. In this stage possibly some ideas for further potential research will arise.

### 1.2.5 Deliverables

At the end of the research, all the results will be delivered to the problem owner. The deliverables will consist of:

- A flow chart model of the current order-to-cash process
- A list of recommendations and improvement points
- An elaborate analysis of the improvement points
- Implementation plan for each improvement point
- Implementing improvement point(s) (dependent of the time whether this will be possible)
- A written report and a presentation about the research

### 1.2.6 Scope

The time available for the execution of this research is only 10 weeks and therefore time limitations must be formulated. One part of the research is setting up a process flowchart of the order-to-cash process. Afterward, bottlenecks will be examined and any improvements that could be made will be discussed. However, this will only be done based on existing data. Vaess is not keeping track of all timestamps within the process, which makes it challenging to apply automated process analytics techniques, this way also making consideration of automated process discovery out of the scope of the research. Another thing that is outside the scope of this research, includes improvements for the production part of the order-to-cash process.

## 1.3 Research design

### 1.3.1 Research questions and design

To come up with a solution for the core problems, it is important to define research questions first. The main research question will be:

*What would be the most optimal way(s) to improve the order-to-cash process, in order to stabilize/standardize the way of working for the company?*

However, during the problem-solving approach, some other research questions will arise. Those sub-questions, can be defined for each step of the problem-solving approach:



1. Define the problem
  - **What are the problems that the company is dealing with right now related to the order-to-cash process?**  
*This research question is essential for the research because the research can only start when the problems are known. The key variable of this research question includes "problems". The corresponding research methods will be interviews (Frey, 2000) with employees of all the different departments and observational research (Mann, 2003). Those research methods are descriptive and the data gathering methods will be qualitative. The data will be analyzed after the interviews and the observations, and the main problems will be reproduced into a problem cluster.*
  - **What is the desired situation of the order-to-cash process?**  
*To find an answer to the problem(s) that the company is dealing with, it is important to reveal their needs and wishes. The key variable of this research question is therefore desired situation. The corresponding research method is conducting interviews with the employees of Vaess. This research method will be descriptive and the data gathering method will be qualitative. The data will be summarized, to make sure that during the research, the needs and wishes of the employees can be taken into account.*
2. Formulating the approach
  - **What are the steps in the current order-to-cash process?**  
*This research question is necessary to map the current situation (to make sure that a comparison can be made with the current and the desired situation and the gap that is in between). The key variable of this research question is current order-to-cash process. The answer to this research question will be found by conducting interviews with employees of all the different departments within Vaess, therefore they are also the research population. The research method will be descriptive and the data gathering method will be qualitative. The data will be summarized and put into a flowchart (which is a type of visual analytics), to get a clear overview of the complete process.*
  - **What techniques are existent for process optimization?**  
*This research question is necessary to find out which process optimization theory suits the core problems the best. The key variable of this research question is process optimization technique. The answer to this research question will be found by using literature study methods (Snyder, 2019). Therefore, the research will be descriptive and the data gathering method will be qualitative. The different methods will be analyzed, to make sure that the most relevant one can be applied to the research.*
3. Analysing the problem
  - **What insights into the order-to-cash process can be obtained (e.g., from the process flowchart)?**  
*To get more insight into the process, a research method called process mining will be used (Fotedar, 2022). This will help to find bottlenecks and other problems within the process.*
4. Formulating solutions
  - **What are the possible solutions to the core problems?**  
*To answer this research question, prior knowledge will be used. The current and desired situation are already determined, but also the problems that are causing the gap. Right now, it is important to observe all the information and to come up with a list with possible solutions.*
5. Choosing a solution
  - **What are the advantages and disadvantages of all the different solutions?**

*After the list with possible solutions is formulated, it is important to figure out which one is the most optimal. Something that could help with this, is conducting interviews (Frey, 2000) with the employees of Vaess, who are also the research population. They can give more insights into what they, as experts, think of the different solutions and they can give feedback/improvements. This research will be descriptive and the data gathering method is qualitative. The data will be summarized.*

- **Which solution is optimal for the company?**

*All the data that is needed to answer this research question, is already there. Now it is time to scale and weight criteria, to be able to choose the most optimal solution.*

- **How can the solution be implemented into the process?**

*After choosing the most optimal solution, it is important to figure out how this solution can be implemented into the current order-to-cash process. If it is needed by then, some extra literature research (Snyder, 2019) (descriptive and qualitative research) or interviews (descriptive and qualitative research) can be conducted. After that, an implementation plan will be set up, that will help the company to implement the solution.*

6. Evaluating the solution

- **Did the process improve since the solution has been designed/implemented?**

*After implementing the chosen solution, it is important to evaluate if the solution was successful. The key variable of this research question is process improvement. The answer to this research question can be found by conducting interviews (Frey, 2000) with employees of all the different departments within Vaess, who also include the empirical/experimental population for this research. The research method will be descriptive and the data gathering method will be qualitative. The data will be summarized, to make sure that a conclusion, improvements and further research can be formulated.*

### 1.3.2 Validity and reliability

Every research can result into issues related to validity and reliability. To ensure the quality of the outcomes it is therefore important to reach higher reliability and validity by tracking variables that could have potential effects on these constructs. "Validity refers to whether a test measures what it aims to measure" (Galaczi, 2020). In this case, validity will be split up into internal validity and external validity.

"Internal validity is concerned with whether the research design and your measuring instruments have been properly formulated and constructed" (Windén, 2017). Unfortunately, some time restrictions had to be made for this research. For example, by not collecting new data and by not looking at the production process for any bottlenecks or improvements. Therefore, some assumptions must be made (for example assuming that the bottleneck of the order-to-cash process is not within the production part). Those assumptions are not contributing to the internal validity. Therefore, it is important to use as little assumptions as possible. Another threat to the internal validity in this research, is individual bias in interviews. Interviews are a huge source of information in this research. To prevent individual bias, it is important to interview multiple people and to evaluate their answers critically.

"External validity is about to what extent you can apply your research to other groups than your research population" (Windén, 2017). This research is very specific, because it is focusing on improvements of the order-to-cash process of Vaess. Other organizations, with similar processes, could benefit from the results, but it will not be completely applicable to them. Therefore, the external validity is low.

“Reliability is concerned with the stability of the research results; similar research conducted at a later date using the same method ought to yield the same results” (Winden, 2017). There is not just one way to approach the core problems. Despite that, there are possibly multiple solutions. To increase the reliability, it is important to apply the methods consistently and to standardize the conditions of the research (Middleton, 2022).

## 2. Literature

In this chapter, literature related to the research will be discussed. Firstly, different business process analysis techniques will be discussed. Afterwards process management notation used in this research, to map the process into a flowchart, will be outlined. Lastly, process optimization methods will be discussed, which are necessary to come up with solutions to the core problem.

### 2.1 Business process analysis techniques

“A process analysis is a systematic review of all steps and procedures followed to perform a given activity. It is a description of the way a particular task is done within an organization” (What is process analysis?, n.d.). Because there are some unsolved problems and inefficiencies within the company, it can be useful to view them through the prism of analysis of the complete business process in detail. There are lots of techniques to analyze a process, the five most recurring ones are (White, 2021):

1. **Gap analysis** – “This is a method of assessing the performance of a business unit to determine whether business requirements or objectives are being met and, if not, what steps should be taken to meet them. A gap analysis may also be referred to as a needs analysis, needs assessment or need-gap analysis” (Hanna, n.d.). While executing a gap analysis, the goal is to figure out the gap between “where we are” and “where we want to be”. This analysis is applicable to this research in terms of allowing to derive the relevance of the KPIs to be chosen. For example, related to the KPI on-time delivery, Vaess is promising their customer to deliver an order within 10 working days, but it is not known how often they live up to this promise. The first step is to figure out the KPI, but afterwards, it is important for the company to determine the gap. To determine, what the reason is for the average delivery time to be X (to be determined) instead of the desired situation of 10 working days (or below). A gap analysis would be ideal to figure out the problems and thereby to come up with solutions to decrease the delivery time to 10 working days (or less).
2. **Value-Added Analysis** – “This method weighs and labels whether any needs are met by each business process step. The technique acts as a broad sorting lens for activities to help your team cut or reduce the non-essentials” (White, 2021). All activities within a process fall into three different categories:
  - **“Real value-added (RVA) steps** meet an expectation or need of the customer
  - **Business value-added (BVA) steps** meet an expectation or need of the business
  - **Non-value-added (NVA) steps** do not meet customer or business needs, or meet needs that can be fulfilled even if the steps are removed” (White, 2021).

The value-added analysis is relevant in this research, as it deals with all the steps within the process which have been determined and visualized through a flowchart. For every step, there could be checked if it is an RVA, BVA or NVA. Afterwards, it is possible to evaluate if specific steps could be removed, which would result into a more efficient process. Due to time limitations, this analysis will not be used in this specific research, but it can be a direction for the company to execute in the future.

3. **Root Cause Analysis** – “Root cause analysis (RCA) is the process of discovering the root causes of problems in order to identify appropriate solutions. RCA assumes that it is much more effective to systematically prevent and solve for underlying issues rather than just treating ad hoc symptoms and putting out fires” (Root Cause Analysis Explained: Definition, Examples, and Methods, n.d.). A root cause analysis has three different goals, namely:

- “To discover the root cause of a problem or event
- To fully understand how to fix, compensate, or learn from any underlying issues within the root cause
- To apply what you learn from this analysis to systematically prevent future issues or to repeat successes” (Root Cause Analysis Explained: Definition, Examples, and Methods, n.d.).

The root cause analysis can be applied to figure out the root cause of a problem or event. Sometimes it is possible that there is more than one specific problem. In that case, multiple root cause analyses should be done. Due to time limitations, this is outside the scope of this research. It could be something to think about for the future.

- 4. Observational Analysis** – This is a method where you can analyze a process, by observing it in action on the floor. In this way, it will become clear if a process works as intended or not (A Complete Breakdown for Business Process Analysis, 2021).

One deliverable of this research is a flowchart that includes all the steps of the process. One of the optimal ways to figure out the different steps within a process, is to observe it in action on the floor. Due to time limitations, it is impossible to observe every department (which is also unnecessary, because for example the production department is excluded from this research). However, at some departments, the process will be analyzed in action (e.g., finance and customer sales).

- 5. Experience Examination Analysis** – “This method captures the process knowledge of longtime employees. Analysis of this sort can reveal critical connections between root causes and non-value added (NVA) activities. The impact of these often “invisible” factors may be visible only to the experienced staff since they have been affected by it for a decade or more. This technique aims to bring that visibility to the wider organization” (White, 2021).

This analysis could be useful, especially if the value-added analysis and root cause analysis would be executed before. The last two were not possible in the context of this research due to limitations of the timeframe intended for this research. However, this step can be a direction to execute in the future.

## 2.2 Process management notation

Business process model and notation (BPMN) is a flow chart method that models the steps of a planned business process from start to end, by visualizing a detailed sequence of business activities and information flows needed to complete a process (Lucidchart, sd). This is an important technique for mapping the order-to-cash process.

To graph a flow chart with BPMN, four groups of element types can be used:

1. Flow objects: events, activities, gateways
2. Connecting objects: sequence flow, message flow, association
3. Swimlanes: pool or lane
4. Artifacts: data object, group, annotation (Lucidchart, sd)

The individual types of elements and the usage of each element to define a business process are as follow:

- Events



An event is a trigger to start, modify or complete a process. The three different types of events are: start, intermediate and end. An event can be recognized as a circle (potentially containing other symbols) and they are shown in figure 3 (Lucidchart, sd).



Figure 3: Events (Lucidchart, sd)

- Activities

An activity is a task that is performed by a person or system. The four different types of activities are: task, transaction, event sub-process and call activity. Activities are represented as rounded rectangles, which are shown in figure 4 (Lucidchart, sd).

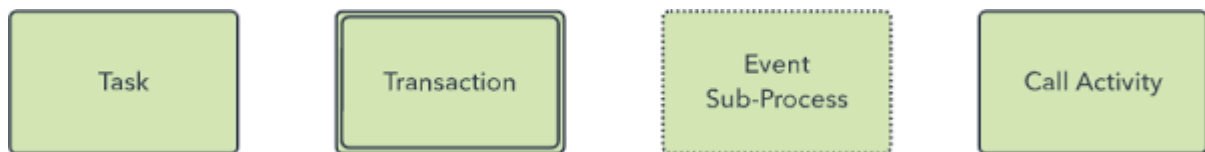


Figure 4: Activities (Lucidchart, sd)

- Gateways

A gateway is a decision point that can adjust the path based on conditions or events. The different types of gateways are exclusive, event based, parallel, inclusive, exclusive event based, complex and parallel event based. A gateway can be recognised as a diamond (potentially containing other symbols) as can be seen in figure 5 (Lucidchart, sd).



Figure 5: Gateways (Lucidchart, sd)

- Sequence flow

A sequence flow shows the order of activities to be performed. It is depicted as a solid line with an arrow, which is shown in figure 6 (Lucidchart, sd).



Figure 6: Sequence flow (Lucidchart, sd)

- Message flow

A message flow shows messages that flow across “pools”, or organization boundaries such as departments. It is not possible to connect events or activities within a pool with a message flow. It is

shown as a dashed line with a circle at the start and an arrow at the end, which can be seen in figure 7 (Lucidchart, sd).



Figure 7: Message flow (Lucidchart, sd)

- Association

An association join an artifact or text to an event, activity or gateway. It is represented with a dotted line, as shown in figure 8 (Lucidchart, sd).



Figure 8: Association (Lucidchart, sd)

- Pool and swimlane

A pool can be used to represent major participants in a process. A different pool may be in a different company or department, but each pool is involved in the process. Swimlanes are always located within a pool, and they show the activities and flow for a certain role or participant, defining who is accountable for what parts of the process (Lucidchart, sd). An example of a pool with different lanes is shown in figure 9.

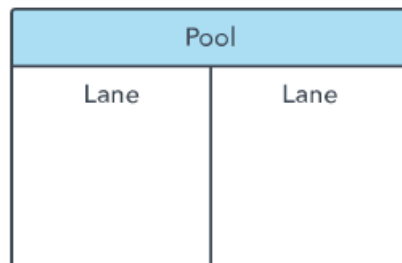


Figure 9: Pool with silanes (Lucidchart, sd)

- Artifacts

An artifact gives additional information that developers add to bring a necessary level of detail to the diagram. The different types of artifacts are data object (which shows what data is necessary for an activity), group (which shows a logical grouping of activities but does not change the diagram’s flow) and an annotation (which provides further explanation to a part of the diagram) (Lucidchart, sd). The symbols of these artifacts are shown in figure 10.



Figure 10: Artifacts (Lucidchart, sd)

### 2.3 Process optimization methods

The literature research made clear that there are multiple theories for process optimization. The most important and relevant ones (to this thesis) are discussed below.

One theory for process optimization is called Business Process Optimization (BPO). BPO can be used to select the right process designs and to apply the most appropriate optimization techniques. To achieve this, the following three steps must be executed:

1. **Data integration** – As processes are cross-functional, data pertaining to the process can be spread over many different data sources. Hence, as a first step, all possibly relevant data needs to be collected and integrated.
2. **Data analysis** – After the raw data has been collected, both the process model and the process data need to be analyzed. This analysis can range from the calculation of basic metrics (such as duration, cost or frequency) to the application of data mining techniques to discover “hidden” insights.
3. **Detection and implementation of improvements** – Based on the analysis results, deficiencies within the process are detected. These can, e.g., relate to the process execution. After assessing the deficiencies, appropriate techniques for addressing them are selected and applied to the process or its context (e.g., the resources executing the process)” (Schwarz, 2011).

Another theory for process optimization is Lean management. “Lean Manufacturing is a multidimensional production optimization approach that captures various management practices, aimed at waste reduction and improving operational effectiveness” (Adefemi Adeodu, 2021). It is widely used in many different industrial organizations. The theory is based on maximizing customer value while minimizing waste. Lean has five basic principles by (Sirova, 2018), namely:

1. **Value** – What creates value for your customer?
2. **Value stream** – Avoid waste: Identify those activities that create waste
3. **Flow** – Create flows that run as smoothly as possible – few stops
4. **According to needs** – Actions/flows are created based on the needs of your customers
5. **Continuous improvement** – Create a culture where all contributes to continuous improvement

Lastly, there is a theory called Six Sigma, which can also be used for process optimization. “Six Sigma improves the process performance (process yield) of the critical operational process, leading to better utilization of resources, decreases variations and maintains consistent quality of the process output” (SEVERIN, 2020). Relevant for this specific thesis assignment, is that Six Sigma is widely used in the food industry to decrease defects. Six Sigma has a stepwise procedure to achieve process optimization when a company is experiencing a problem as introduced by (Faifr, 2017), namely:

1. Definition of the process and problem
2. Measurement of process variables
3. Analysis of process deficiencies, finding causes of the problem
4. Identifying opportunities and improving process performance
5. Controlling proposed measures based on defined indicators

To conclude, there are multiple theories for process optimization, but the most important and known ones are Business Process Optimization, Lean Manufacturing and Six Sigma. All of them have different principles or ways of working. In general, they can all be used for every type of process. However, lean management is mostly used for industrial organizations and Six Sigma is often used in the food industry. Business Process Modelling is a more general theory, that can be used in almost every situation.

### 3. Current situation

In this chapter, the current situation (for the order-to-cash process) will be mapped using a flowchart technique. For that first interviews have been conducted to reveal information about all the steps within the process. After that, the different steps have been visualized in a flowchart.

#### 3.1 Interviews

To gather the information about the current order-to-cash process, interviews have been conducted. From every department within the company, one employee has been interviewed, resulting in 7 interviews in total. A distinction can be made between structured and unstructured interviews. "In structured interviews, questions are planned and created in advance. All candidates are asked the same questions in the same order" (Pollock, n.d.). Because every employee has different roles in the process, it was not possible to make use of a structured interview method. Therefore, informal interviews were opted for. For every department, some questions have been formulated in advance. The order of the questions was not determined in advance and most questions were formulated during the interviews as follow-up questions.

It was important to identify an employee from every department who has overview of all the process steps within that department. When possible, the manager of the department has been interviewed. If interviewing the manager was not possible, an employee with the most experiences on department processes was chosen. The relevant departments within the company for this research are:

- **Customer service**  
This department is responsible for inserting new orders in Exact. This means that they check if the product is in stock, otherwise they check when production is possible. They are also responsible to send the customer an order information and to arrange transport for the orders. From this department, an employee with many years of experience has been interviewed.
- **Planning**  
This department is responsible for the planning of all the production orders and for the purchasing of raw materials. They try to have a minimum stock level of every raw material at any time. However, due to the shortages in current market conditions, this is sometimes impossible. Therefore, when a new order comes in, they check if there are enough raw materials. If that is the case, they try to implement the order in the planning. If this is not the case, they firstly try to order the raw materials as soon as possible. However, if this takes too long, they ask the product development if it is possible to use other raw materials instead. From this department, the manager has been interviewed.
- **Production**  
The employees of the production department make sure that the end products that are ordered by the customers will be produced. They produce according to the production planning, that is made by another department. From this department, the manager has been interviewed.
- **Logistics**  
This department takes care of the incoming and outgoing goods. They place raw materials at the right place in the right warehouse and they pick the end products when an order will be transported to the customer. From this department, an employee with many years of experience has been interviewed.

- **Product development**  
This department is responsible for the development of new products. They will also be asked to check if other raw materials can be used for production in case there are not enough raw materials in stock. There has not been conducted an interview with an employee of this department, because of the significant small role in the process.
- **Finance**  
This department is responsible for the payment of raw materials, and they also must make sure that their customers pay the invoices. This department has only one employee, who has been interviewed.
- **Quality assurance / quality control**  
This department executes all the control analyses. From this department, an employee with many years of experience has been interviewed.

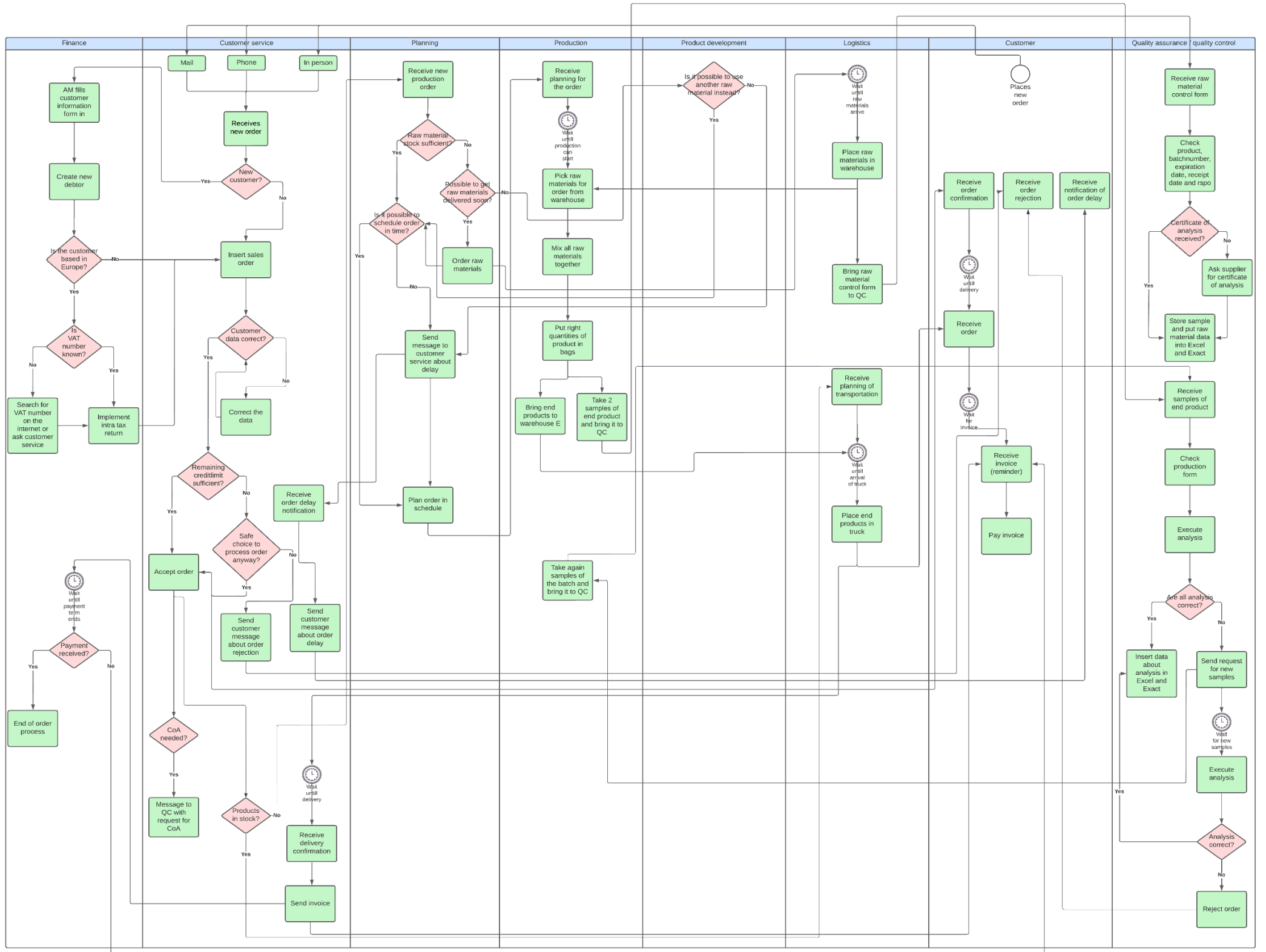
The transcriptions of all the different interviews can be found in Appendix A: Interview transcriptions.

### 3.2 Flowchart

The interviews have been conducted to gather information for creating an order-to-cash flowchart that depicts the current state. Before this could be achieved, it was necessary to analyze the information from the interviews. The different steps of the process within every department were listed. It was also necessary to check if the information from different employees were consistent with each other.

After completing the analysis, it was possible to map the complete order-to-cash process, with all the different steps included. The rationale for this is that with visual representation it can be easier to identify any issues/bottlenecks that are present in the current processes of the company. The created flowchart can be found in figure 11.





## 4. Bottlenecks

### 4.1 Shortcomings in the current process

The interviews that have been conducted, together with the flowchart that has been created, gave insights into shortcomings in the current process. However, there was another important factor in setting up this list. While working at the office, it was possible to discover multiple problems and bottlenecks within the process, just by listening and looking. The most important and appealing ones were:

- **No existent process regarding the accounts receivable insurance**  
Vaess has an accounts receivable insurance, which is “designed to protect your business from non-payment of commercial debt. That means that if a customer does not pay the company because they go bankrupt or insolvent, or if they simply do not pay on time, an accounts receivable insurance policy will pay the company up to the insured credit limit” (Accounts Receivable Insurance: How it Works, the Benefits and Costs). However, since the Customer Service Manager left, nobody is taking care of this process. This results in the fact that no one is monitoring the credit limits of the current debtors and for new debtors no credit limit is requested.
- **No dunning processes**  
While investigating the reliability of the different debtors, it appeared that more than half of the debtors (61,62%), do not live up to their payment term. After talking to some employees, it became clear that there is not really a dunning process. When the finance department has some time left, they send a dunning letter. However, they do not seem to be effective. Collecting money is extremely important and therefore it would be useful to set up an effective dunning process.
- **Master data is not always complete**  
Vaess is working with an ERP tool named Exact. When they succeed in recruiting new customers, a new debtor must be inserted in Exact. This process can be viewed in figure 12. The question is what the exact problem is in this process because it is happening frequently that master data is missing or not correct, which causes unnecessary problems. For example, that orders can be inserted, while their pallet information is unknown. When production is finished, the people do not know on which pallet they have to place the products. Therefore, the process takes more time than necessary, and it is resulting in chaos and stress for the employees.

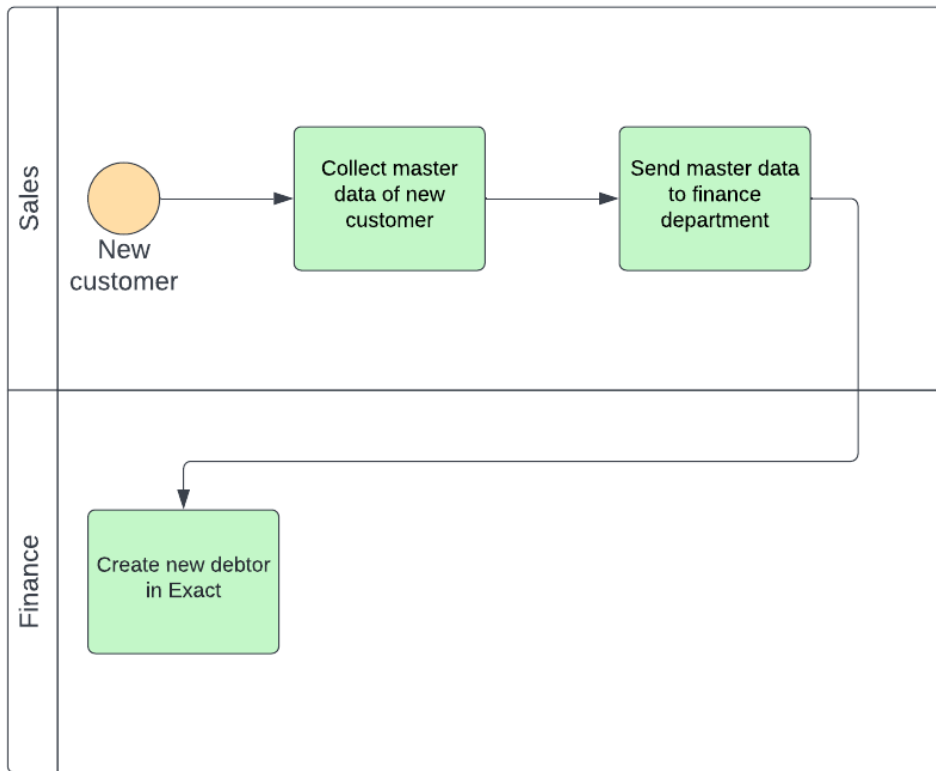


Figure 12: New debtor

- **No insights into achieving delivery time**  
 Vaess has two types of products, namely make-to-order and make-to-stock. For the make-to-order products, they promise their customers to deliver within 10 working days. However, it is unknown if they live up to this promise. No one is monitoring this.

## 5.The desired process

This chapter shows the recommendations for different parts of the order-to-cash process, to deal with the bottlenecks. All recommendations are based on brainstorm sessions with employees of different departments, on literature and on logical reasoning.

### 5.1 Accounts receivable insurance

To be able to propose recommendations for the process with respect to the accounts receivable insurance, it is important to gather some more information first. Most of this could be found in the insurance policy and in the ERP system (about the current credit limits).

One of the goals of the company was to decrease the premium for this insurance in order to decrease the costs. Unfortunately, this was not possible. The premium of the insurance works as follows:

| Category            | Clausula 1007.2 | Up to and including 30 days | Up to and including 60 days |
|---------------------|-----------------|-----------------------------|-----------------------------|
| Cat. 1 <sup>2</sup> |                 | 0,14%                       | 0,14%                       |
| Cat. 2 <sup>3</sup> | 0,14%           | 0,14%                       | 0,14%                       |
| Cat. 3 <sup>4</sup> | 0,14%           | 0,14%                       | 0,14%                       |
| Cat. 4 <sup>5</sup> |                 | 0,2%                        | 0,2%                        |

After calculating the premium for the current credit limits, the conclusion was that this amount was significantly lower than the premium that has been paid. It appeared that there was a minimum premium for the insurance and therefore it is not possible to decrease the premium by reviewing the credit limits of the debtors again.

The current credit limit file was not up to date anymore. It is however important that the credit limits are just on the right level for every debtor. When a debtor is not able to pay their outstanding bills, the insurance will pay it back with a maximum allowed credit limit. If the credit limit is significantly lower than the outstanding bills, the company still has the risk that they will not receive their money. Another problem was that the credit limits in Exact did not match the credit limits from the insurance.

Therefore, the master data had to be cleaned up. Firstly, the needed credit limit for every customer has been calculated, based on the sales of the past 15 months. Customers who had not placed an order for more than 15 months, were placed in a group and would get a credit limit of 1, which means that no orders can be inserted anymore for this group. If they would place a new order, this will be noted and then their credit limit can be rejudged.

Another group consists out of the debtors who already had a sufficient credit limit. Due to the minimum premium, it was not worth the effort to check if those limits should be decreased.

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<sup>2</sup> Netherlands

<sup>3</sup> Australia, Belgium, Canada, Denmark, Germany, Estonia, Finland, France, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, Norway, Austria, Slovakia, Spain, United States, United Kingdom, Sweden, Switzerland

<sup>4</sup> Bulgaria, China, Greece, Hungary, Iceland, Croatia, Lithuania, Malaysia, Mauritius, Mexico, Poland, Romania, Slovenia

<sup>5</sup> North Macedonia, Uganda

The next group consists out of the debtors with a needed credit limit below €20.000 and who belonged to the category self-assessment<sup>6</sup>. There is namely another rule within the insurance policy:

6. When the company is located in a country that belongs to self-assessment and when Creditsafe<sup>7</sup> gives a creditworthiness from €20.000 or higher, it is not necessary to request a credit limit, because the company is always insured up till €20.000.

The last group of debtors was the largest. There were different things that had to be done for this group. Firstly, higher credit limits needed to be requested at the insurer. In some cases, those were not accepted. Therefore, those debtors were evaluated to check if it was a justified risk to use the needed credit limit in Exact anyway.

After all the credit limits were requested, evaluated, and calculated, the next important step assumed that they were inserted into the ERP system. Therefore, an Excel document has been created. The document showed if the new limit was equal to the limit in Exact. If this was not the case, the limit had to be adjusted. The complete overview of the credit limits can be found in Appendix B: Credit limit overview.

In the ERP system, one cannot insert a new order directly, if that order results in exceeding of the credit limit. Therefore, it sometimes occurred that the credit limit was set to 0, to make sure that an order could be inserted. The problem was that setting the credit limit back to the original value did not occur afterwards. In this way, orders could be inserted, which were not covered by the insurance. To make sure that the credit limits will be monitored in the future, a credit limit document was made as part of this research. With this document, every employee will have a clear overview on what to do regarding the credit limits. There is also an explanation about how modified credit limits will be set back to the original value. The document can be found in Appendix C: Credit limit document (for employees).

The information that has been gathered about the payment behavior of debtors is also useful for the account managers. If a debtor pays significantly late, then this can for instance be an argument for an increase in price.

### 5.1.1 Implementation

The implementation of the improvement of the accounts receivable insurance went quite smooth, because the number of employees included in the process was small. All the employees that had to be included, worked on the financial department, so they knew the importance and relevance of the new process. First, there was no solution to setting back adjusted credit limits (to be able to insert a new order). However, soon it appeared that this is relevant, otherwise the data in the ERP system would not be up-to-date. Another change of plans appeared after reading the insurance policy, related to the self-assessment. The employees of the company itself were not known with this part of the policy. Fortunately, it saved time and money, because less credit limits had to be requested.

### 5.2 Dunning process

The dunning process appeared to be somewhat inefficient. Dunning mails are only sent when a specified time is left. After two dunning mails have been sent, the company does nothing to remind the debtor to pay their outstanding bills. Therefore, a new process has been created, in which not

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<sup>6</sup> Austria, Belgium, Switzerland, Germany, Denmark, Finland, France, United Kingdom, Ireland, Liechtenstein, Luxembourg, Norway, Sweden, Netherlands

<sup>7</sup> Creditsafe is a company which provides reports about the creditworthiness of other companies



only dunning mails will be sent, but also dunning calls. “Both are efficient ways for debt collection with their own advantages and disadvantages. Calling is in most cases more efficient, but also more time-consuming. Mailing takes only a few minutes, but it is also easy for a customer to ignore a message. To create an efficient process, it is best to combine both methods” (Phone Calls vs. Emails for Debt Collection: Which is Better?, 2017). The new process would look like:

- 5 days overdue: send a dunning mail
- 10 days overdue: call to make an agreement about when the debtor will pay their outstanding bill(s)
- 1 day after the agreed day: send the relevant account manager a mail with the status and ask him/her to call their contact person at the company

The reason for setting the number of overdue days on 5 before sending a dunning mail is quite simple. The company is always trying to keep good relationships with their customers, so therefore you do not want to send the dunning mail too fast. However, it is important for the liquidity of the company to receive the money soon. The same counts for the call about the overdue invoice. Together with the financial department, we had a discussion about this and we decided that 5 and 10 days were a good trade-off. This changes a bit for the last rule, about the mail to the account manager. If a customer already had 2 reminders to pay and still did not, then it is taking too long. Therefore, just after the day of the agreement, we want the account manager to contact the company again.

An overview of the overdue invoices can be exported out of Exact to Excel, an example can be seen in figure 13. In Excel, an employee will keep track of the actions that were executed for every invoice. This file will be monitored daily, which includes checking if customers live up to a promise made (for example if they told you to pay on a specific day) and checking if account managers did call their customer as was requested. You can also see the amount of dunning mails that have been sent (in the column named lay-out).

| 040 Vaessen-Schoemaker      |                                  |           |       |             |                  |                   |          |                  |                            |  |
|-----------------------------|----------------------------------|-----------|-------|-------------|------------------|-------------------|----------|------------------|----------------------------|--|
| Overdue invoices            |                                  |           |       |             |                  |                   |          |                  |                            |  |
| Date of reminder: 23-6-2022 |                                  |           |       |             |                  |                   |          |                  |                            |  |
| Naam                        | Debiteur                         | Onze ref. | Datum | Vervaldatum | Lay-out          | Openstaand bedrag | Ouderdom | Classificatie    | Niet afgestemde betalingen | Actie                                      |
| 6                           | Azur Seafood BV                  | 100       | 41881 | 15-4-2022   | 15-5-2022_NLBHV2 | 2.779,50          | 74       | Small Enterprise | 0,00                       | Invoice not sent, will pay 1 July          |
| 7                           | BACU Almere B.V                  | 115       | 41667 | 16-3-2022   | 15-5-2022_NLBHV2 | 1.665,08          | 104      | Small Enterprise | 0,00                       | Will pay this week, otherwise call Barbara |
| 8                           | Bawnbua Food NI Ltd              | 116       | 42052 | 18-5-2022   | 17-6-2022_ENBHV1 | 1.761,90          | 41       | Small Enterprise | 0,00                       | Already paid, not received yet             |
| 9                           | De Graaf Bakeries B.V.           | 110       | 41977 | 5-5-2022    | 19-6-2022_NLBHV1 | 457,80            | 54       | Small Enterprise | 0,00                       | Send second dunning mail                   |
| 10                          | De Graaf Bakeries B.V.           | 110       | 41967 | 4-5-2022    | 18-6-2022_NLBHV1 | 10.082,39         | 55       | Small Enterprise | 0,00                       | Send second dunning mail                   |
| 11                          | De Vleesfabriek B.V.             | 116       | 42005 | 11-5-2022   | 10-6-2022_NLBHV2 | 2.400,00          | 48       | Small Enterprise | 0,00                       | Ask Rick to call customer                  |
| 12                          | Duijnrans holding B.V            | 116       | 42038 | 17-5-2022   | 16-6-2022_NLBHV2 | 3.986,35          | 42       | Small Enterprise | 0,00                       | Ask Rick to call customer                  |
| 13                          | Forbak d.o.o                     | 111       | 41411 | 3-2-2022    | 4-4-2022_ENBHV2  | 8.241,20          | 145      | Small Enterprise | 0,00                       | Ask Jovan to call customer                 |
| 14                          | Hofkip BVBA                      | 102       | 42083 | 24-5-2022   | 23-6-2022        | 8.377,00          | 35       | Small Enterprise | 0,00                       | Already paid, not received yet             |
| 15                          | Imperial Meat Products V.O.F.    | 103       | 41737 | 24-3-2022   | 22-6-2022_NLBHV1 | 1.490,00          | 96       | Small Enterprise | 0,00                       | Ask Joris to call customer                 |
| 16                          | Imperial Meat Products V.O.F.    | 103       | 41572 | 1-3-2022    | 30-5-2022_NLBHV2 | 6.130,00          | 119      | Small Enterprise | 0,00                       | Ask Joris to call customer                 |
| 17                          | Lantmännen Unibake Mouscron S.A. | 110       | 42040 | 17-5-2022   | 16-6-2022_NLBHV1 | 31.161,60         | 42       | Small Enterprise | 0,00                       | Alies called, will pay week 26             |
| 18                          | Lantmännen Unibake Mouscron S.A. | 110       | 42069 | 20-5-2022   | 19-6-2022_NLBHV1 | 14.560,00         | 39       | Small Enterprise | 0,00                       | Alies called, will pay week 26             |
| 19                          | Lantmännen Unibake Mouscron S.A. | 110       | 42039 | 17-5-2022   | 16-6-2022_NLBHV1 | 21.736,00         | 42       | Small Enterprise | 0,00                       | Alies called, will pay week 26             |
| 20                          | Lantmännen Unibake Mouscron S.A. | 110       | 42041 | 17-5-2022   | 16-6-2022_NLBHV1 | 14.716,80         | 42       | Small Enterprise | 0,00                       | Alies called, will pay week 26             |
| 21                          | MasterMix BV                     | 116       | 42224 | 17-6-2022   | 17-6-2022        | 2.663,96          | 11       | Small Enterprise | 0,00                       | Send first dunning mail                    |
| 22                          | Vandemoortele Eeklo N.V.         | 112       | 41271 | 7-1-2022    | 8-3-2022_NLBHV2  | 23.528,34         | 172      | Small Enterprise | 0,00                       | Ask Alies to call customer                 |
| 23                          | Westvlees NV                     | 115       | 41928 | 26-4-2022   | 31-5-2022_NLBHV2 | 5.478,40          | 63       | Small Enterprise | 0,00                       | Are waiting for creditnote                 |
|                             |                                  |           |       |             |                  | <b>161.216,32</b> |          |                  |                            |  |

Figure 13

In case the process has not worked for a specific customer, the accounts receivables insurance will be contacted. The policy of the insurance says that if the age of the invoice is 180 days or older, the money will be deposited on the bank of Vaess by the insurer.

This process has been presented to the relevant employees within the company. The reactions on the process were varying. The employees of the financial department were quite enthusiastic about it, because they hoped that it would help to reduce the number of overdue invoices. The account

managers of the company were less enthusiastic, which was expected beforehand. They are always trying to strengthen the connection with every customer and calling because someone still did not pay an overdue invoice does not help for this. Based on the overall awareness of the need for a new process, a new process has been designed, introduced, and implemented within the company. After this, dunning mails/calls have been made a daily practice in the company.

### 5.2.1 Implementation

In the beginning, the process looked a bit different. The first process consisted only of sending dunning mails. Those turned out to be less efficient, so new methods needed to be searched. It appeared that calling is more efficient (Phone Calls vs. Emails for Debt Collection: Which is Better?, 2017), so this was added to the process. It arose that account managers were often not familiar with overdue invoices of their customers, so there has been decided to include them in the process. Also, because they have a strong connection with the customer, it could be that they have more influence. Including the account managers in the process, was the most difficult part of the implementation. They are often busy, and they do not always see the relevance of the outstanding invoices. It was sometimes needed to follow up with them with multiple loops to contact the customer about an invoice. However, now the process has been used for a while, it appears that this gets easier for employees, because they saw the effect of the dunning process on the payment behavior of customers. Besides that, the account managers are acting sooner, because they know that the question will be asked until the invoice is paid.

### 5.3 Master data

To make sure that the master data is always complete and correct, it is necessary to implement some extra control on creating new debtors in Exact. Firstly, it is important that the finance department only creates a new debtor in Exact when they receive a complete master data information form. When this does not happen, he should refuse to create a debtor in Exact. In this case, it cannot happen that part of the master data is missing. The result of this would be that the process takes less time and is therefore more efficient. The to be process for the master data can be seen in figure 14.

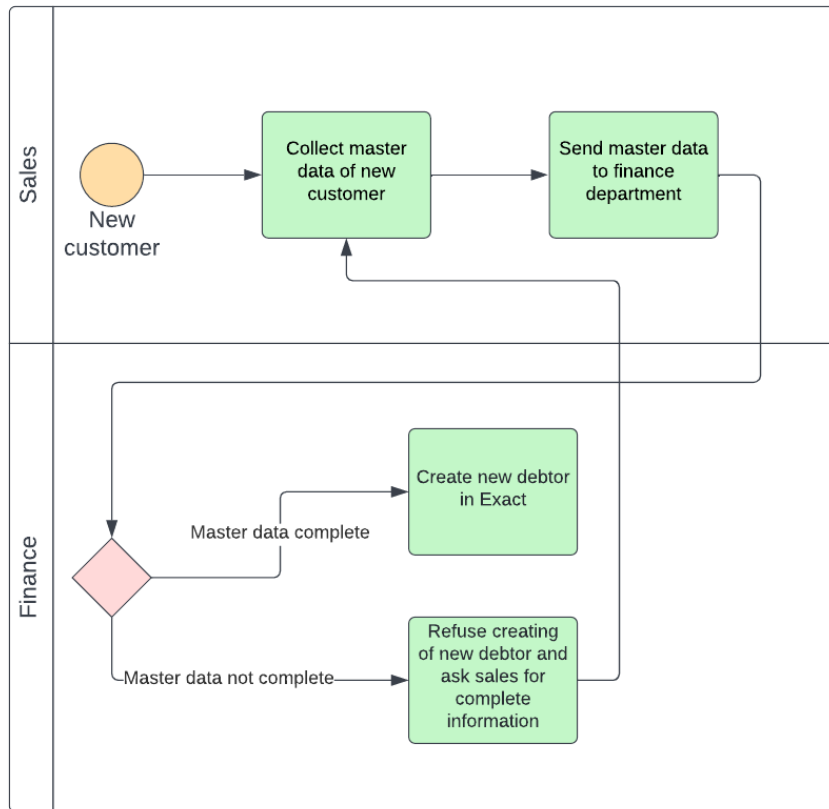


Figure 14: The desired process regarding master data of new debtors

This flowchart has been sent to the relevant employees and has been implemented directly within the company.

It was also important that the master data of the current debtors would be complete. This was for many debtors not the case (for example contact information or pallet information were often missing). Therefore, a report has been made, in which it became clear for which debtors' information was still missing. All missing information has been retrieved. Together with an Exact consultant, there has been thought of a way to implement this information by SQL. A code has been written, which can change one type of master data for all debtors at once. Therefore, it should not happen in the future that problems regarding master data will arise.

### 5.3.1 Implementation

The most difficult part of this implementation was related to convincing the employees of the company of the process, especially the employee who created new debtors in Exact. It was difficult for the employee to refuse creating a new debtor, when the form was not completely filled in, because he was not comfortable enough to refuse a request from an account manager. This went better after the new process has been used in practice and its effects became more observable, because of less questions about missing data. Another difficult aspect was related to the account managers. They had to make sure that their customer would fill in the new debtor form completely, so that all the necessary information was known to the company. They did not like nagging at the customer for information and not all account managers did this in the beginning. Until the other employee started to refuse creating a new debtor when information was missing. After that, they realised that they had no choice and now the execution of the process is smooth.

## 5.4 KPI delivery time

Vaess has two different types of products, namely make-to-order and make-to-stock. Their promise to their customer is to deliver make-to-order products within 10 working days. However, it is not certain if they can always keep the promised timeframes. Therefore, the delivery term of every single order in 2021 was calculated. It appeared that last year, with 76,08% of the make-to-order products, Vaess was not able to comply to this delivery term. With the graphs that were created, it is possible to get more insights into the deliveries and into the KPI on-time delivery. This on-time delivery performance “refers to the ratio of customer order lines shipped on or before the delivery date versus the total number of order lines. This KPI is important because it drives better collaboration with your customers, ensures reliability of delivery and most importantly customer loyalty” (On-Time Delivery (OTD) KPI: Your Most Important Metric In Operations, 2019). The overview of the graphs can be found in Appendix D: KPI dashboard.

### 5.4.1 Implementation

The implementation of this went quite smooth. No employees were included, which made it easier. The only difficult part was that sometimes important information was missing. However, with the existing information, there has been tried to create a dashboard which gains more insights.

## 5.5 Other possible improvements

During the research, other problems within the order-to-cash were also noted. Due to time limitations in the scope of this thesis, it was not possible to investigate them further. However, some recommendations for future can be made.

### 5.5.1 Pallet information

One of the relevant core problems for this research was completing the master data for all debtors, to make sure that this will not cause any problems for the customer support or the finance department. Partly, this has been achieved, by completing all the credit limit information of all debtors. However, for many debtors, the pallet information (preferred pallet size and material of a debtor) was also missing. The reason for this is that salesmen delivered incomplete master data information forms in the past (this will not happen anymore with the new process, which is explained in section 5.3). Therefore, account managers have been contacted to figure out the pallet preferences for every debtor. While retrieving this information, it became clear that some debtors do not have preference regarding pallet size and material. The most efficient solution would be to choose the cheapest option for the company. However, this is not known. There are two choices, namely wooden and plastic pallets. The wooden pallets (€10,50) are cheaper than the plastic pallets (€27,50), but the deposit for the wooden pallets (€1,50) is lower than the deposit for the plastic pallets (€3,50). The plastic pallets can also be re-used more often than the wooden pallets. Calculating which type of pallets is cheaper seems easy, but the problem is that there is no data about pallets. So, it is unknown how often you can re-use pallets and many pallets get lost in the process. Therefore, an improvement would be to keep track of the pallet data, to make sure that a calculation can be made. Then it is possible to have a standard pallet material (for debtors without preference or for debtors who do not fill in the pallet information on the customer form) which is most beneficial for Vaess, and which would save the company money.

### 5.5.2 Printing documents

Another notable aspect was the amount of paper that the Customer Sales department is using daily. For every new order, the following documents are printed:

- Order information (2x)

- Order confirmation (1x)
- Packing slip (2x)
- Invoice (1x)

However, while interviewing the employee of this department, it became clear that one packing slip and one invoice are not necessary (they print it for their administration purposes, which is unnecessary due to the Exact system which saves all documents automatically). It seems that it is also not needed to print the order confirmation. This confirmation must only be sent to the customer, the company itself does not need it on paper. This is already known to the employees, but they are used to this way of working. Therefore, it should be researched what are the effective ways for employees to learn another way of working. The second packing slip is necessary to print, because it needs to be pasted on the order. Whether or not the second order information is needed, is still questionable. The employees state that it is easy for them, to get insights into all the orders. But it is worth investigating if there is a more efficient way of gaining those insights. Firstly, because the current way of working is not durable (a lot of paper is used). Besides that, because it is not a modern nor efficient way of working.

The improvement in this case is that a significantly lower number of documents can be printed, which can be cost-effective. Despite the decrease of costs, it will result into a more sustainable order-to-cash process.

### 5.5.3 Transportation of orders

Another aspect that was found to sometimes result in problems, is transportation. First, Vaess has a lot of carriers, which has also some disadvantages. For example, it happens that some carriers do not deliver an order on the agreed day or time. This can then create trust issues for a debtor in Vaess. Therefore, it would be relevant to investigate how often carriers do not live up to their promise, which carriers those are, and what the price differences are between the carriers. Based on this information, it is possible to eliminate carriers who are not trustable. In this way, less problems with carriers will arise.

Keeping track of which carrier the company uses for which order will help to analyze the problem further. For every order, this information is recommended to be inserted into Exact. This way, it can be investigated if there is a relationship between not living up to the delivery time (which can be seen in the created dashboard) and the carrier.

Information about the carriers can also be used in price negotiations (for example, the company may inform the carrier that they cannot afford the increase in price because orders with the carrier were delivered later than the intended timeframe for 5% of the orders last year).

### 5.5.4 ERP system

Vaess is using Exact, which is an ERP system. However, during the research it appeared that Exact has its own limitations. Some examples are:

- It is not possible to add documents to an order in Exact (for example bill of loading). Therefore, they need to be printed and stored for every single order
- It is not possible to set restrictions for an order. Some products can be sold to debtors only if they order above a specific amount (for example only 1000 kg or more), because it is not profitable to sell less. It would be desirable to set a restriction, so that it is not possible to insert an order for less kilograms. Now, it happens sometimes that Customer Sales do insert such an order, because they are not aware of the restrictions

- When a new order has been placed, it is necessary to arrange transportation. Therefore, Customer Sales needs to know the number of pallets of that order. For them it would be suitable if Exact calculated this automatically, but this is not possible in the system. Therefore, they need to calculate it by hand for every order, which takes a lot of time

It is also recommended to investigate the different existing ERP systems in detail to potentially identify an ERP system with more options. That could result into an order-to-cash process which could take less time.

#### 5.5.5 Price lists

It appeared that there are often issues regarding the price lists. Vaess has price lists for every customer, and sometimes it could be possible that they sell the same product for a different price to different customers. However, those prices are changing often. This can have two reasons:

- The prices of raw materials used in a product increase
- The account manager set a different price in deliberation with the customer

Often, the new prices are not inserted into Exact. When a new order is then inserted, this is done according to the wrong price, or the employee gets an error message that it is not possible to insert the order because the cost price is higher than the sales price. Solving this takes a lot of time and results into satisfaction decrease for the relevant employees. Therefore, it is also recommended to investigate how this process can be arranged in a more efficient way. One idea could be to set a standard price for every product that does not differ per customer and that is calculated based on the cost price and a standard margin. In negotiations, account managers can give a discount on this standard price. For example, customer A gets a discount of 5% on the standard price of product X. In this way, it is easier to keep track of price changes. If the cost price increases, then you can automatically calculate the new standard price and with the standard discount percentages also the sales price. However, it needs to be further investigated if this is realistic.

## 6. Conclusions

This chapter outlines conclusive remarks. Afterwards, recommendations and directions for further research will be discussed. Finally, the limitations of this research will be explained.

### 6.1 Conclusion

The aim of this research was to create a more efficient order-to-cash process. The main research question was:

*“What would be the most optimal way(s) to improve the order-to-cash process, in order to stabilize/standardize the way of working for the company?”*

During this research, it was revealed that the processes within Vaess can be improved in multiple ways, due to the rapid growth of sales. The research focused on a few of these directions, due to timeframe limitations. The most important and unstable processes were chosen.

From the interviews with employees, it appeared that they were all experiencing problems with master data used for customer orders within the company. One of the core problems was therefore: Master data of (new) debtors is not always up to date. Often, significant parts of information were missing or not correct. This resulted in inefficiencies in multiple ways such as, among others making credit notes because invoices with wrong prices were sent due to price updates that were not up to date. Two steps that were needed included:

- Making sure that the data of current debtors will be complete / up to date / accurate
- Identifying a clear process that can ensure that data of new debtors will be always complete / up to date / accurate

The master data of current debtors has been completed with Excel files and SQL codes that export data in Excel to Exact. The new process has been created, with the help of input of employees. One important aspect was that every employee was aware of the new process, so that employees would feel safe to refer to colleagues if they did not comply to the process. Therefore, the new process has been explained and presented by a document made available to all the relevant employees.

Afterwards, it appeared that it takes some time for employees to adjust to the new process, but as can be seen in figure 15, the process did improve significantly.

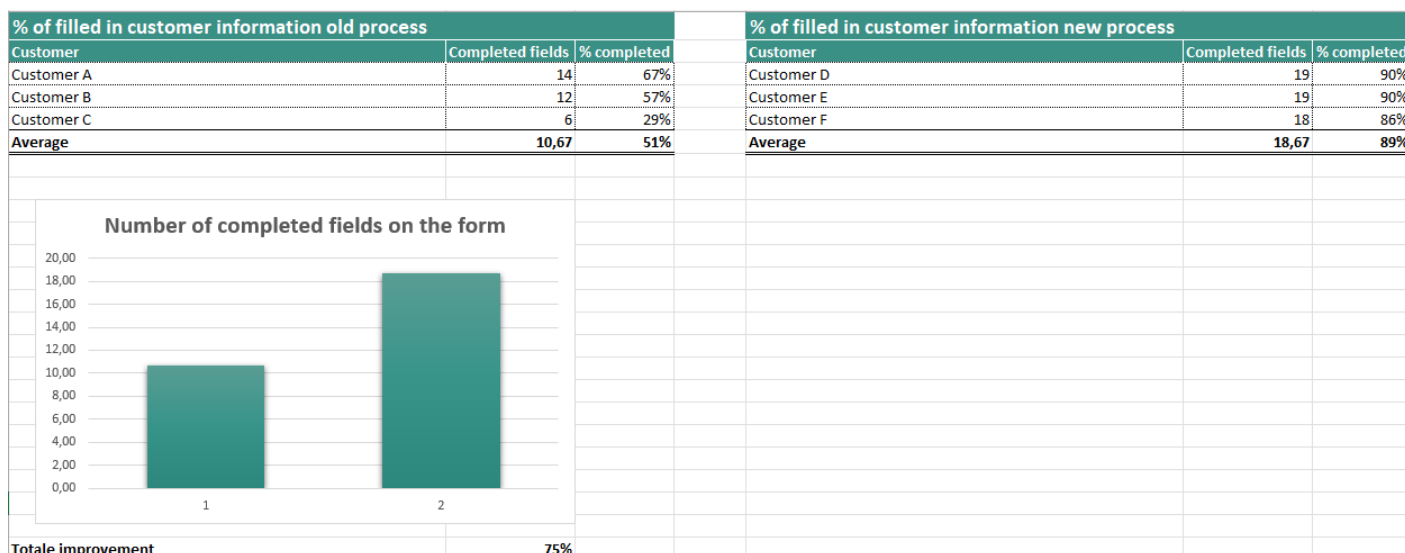


Figure 15



Another important aspect related to master data, was related to the accounts-receivable insurance. Employees stated that orders exceeded the credit limit frequently, and that they always decided to take the risk of non-payment by setting the credit limit in Exact to 0. This introduced risks to the cash collection process. The steps that were specified to be achieved included:

- Checking if the credit limit of current debtors is sufficient and requesting a higher limit at the insurance as needed
- Setting all the credit limits in Exact to the value that corresponds to the insurance
- Identifying a process that could monitor credit limits of current debtors and arrange a request of a credit limit for every new debtor

The necessary credit limits were all calculated according to the highest sales per month and the payment term for each debtor. Accordingly, the credit limits in Exact were changed using an SQL code. The new process has been designed, that seemed most logical which was also based on the input from the interviews. The new process has been explained in a document, which in addition is also sent to every relevant employee. After implementation, it appeared that the monitoring of credit limits has been improved significantly.

Vaess always promised their customers to deliver an order within 10 working days. After the rapid growth of sales, it was not clear if the company was still able to keep this promise for customers. It was important to gain more insights into current processes. The aim of the company was to reveal information about the timeframes they delivered every order and to observe how many orders were delivered late (according to this promise). A KPI dashboard has been created, in which one can paste order data, which shows graphs about “planning attainment”.

An inefficient process that appeared later in the research, was the dunning process. The number of overdue invoices was found to be significant for the company, as almost all customers were exceeding their payment term frequently. Literature research conducted in this work aimed to figure out the most efficient dunning process criteria in similar business setup. The findings of the literature research suggested that calling instead of mailing is more effective, however also appearing to be time consuming. Based on this, a new process has been created, which has been further explained (made available through written documentation) to relevant employees. After implementing this, the average number of days after exceeding payment term for paying an invoice decreased for 47% of the debtors. The calculation can be seen in figure 16. It can therefore be concluded that the new process is successful.

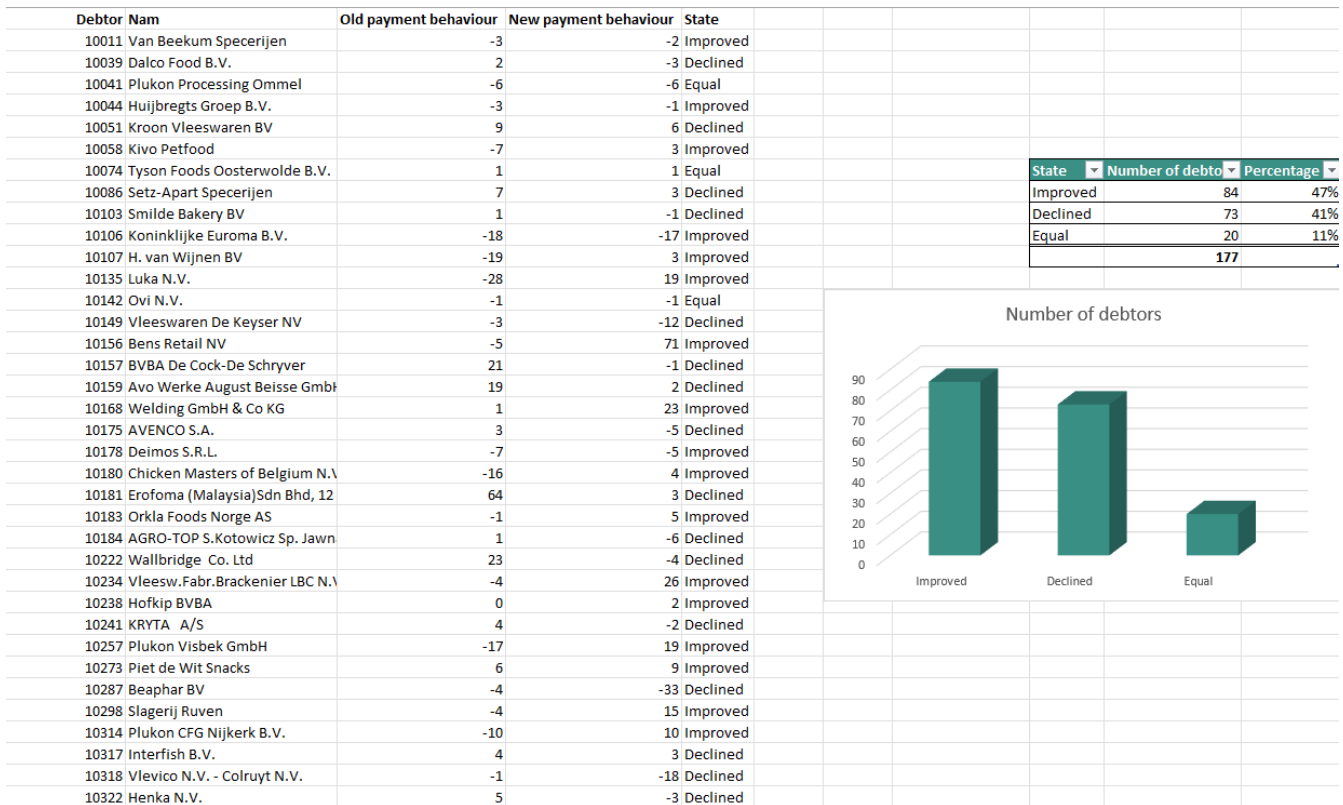


Figure 16

Luckily, most research questions have been answered. Only the question related to phase 5 of the problem-solving approach (choosing a solution) could not be all answered. That is because, in some cases, there were not multiple options to choose between. Before the research started, it was doubtful if the implementation of the solutions would be doable due to the time limitations. Luckily, the time was not a restriction in this part of the research and the solutions could be implemented during the research already.

The good thing about this research, is that it is applicable for multiple companies, even if they are not in the food snacks sector. Processes related to dunning, the accounts receivable insurance, master data or the KPI delivery time, are almost related to all (production) companies. Therefore, this research is widely applicable for the literature and for many companies (with maybe some personal adaptations).

## 6.2 Recommendations and further research

In summary, it can be concluded that certain improvements regarding a more efficient order-to-cash have been made. However, there is still a long way to go. Some processes that are still somewhat inefficient, that can be found in section 5.5. Recommendations are explained in this section; however, they need more research before they can be implemented. However, there are also some other recommendations.

Firstly, several processes have been proposed in the context of this research. All these processes proved to be successful when comparing pre-/post- outcomes. It was found that sometimes employees experiences difficulties to refer to colleagues, for example if they did not deliver complete customer information forms. Therefore, a recommended approach includes setting up face to face meetings with all the relevant employees. That is because:

- Face to face meetings are important for building strong relationships

- Face to face meetings are important for loyalty and trust
- Face to face meetings are more focused and productive
- Face to face meetings clearly communicate goals
- Face to face meetings helps make focusing easier (5 Reasons why face to face meetings are still important, 2020)

Probably, setting up meetings will result in better information exchange, e.g., understanding of each other's needs, and hopefully it will improve the process.

Another recommendation would be to identify ways how monitoring the KPI 'planning attainment' can be conducted live. Currently, one must paste data out of Exact in an Excel file. This is feasible, however in the perfect situation one will have a live dashboard in Sumatra, which updates the graphs and data constantly. Despite that, the KPI is not always a completely and correct representation of the reality. The KPI is based on the date of implementing the order in Exact, but not on the real order date. Sometimes, a customer calls or sends a text for a new order, which will be inserted up to several days after. To get a trustable KPI, Vaess is recommended to keep track of this date and use this date when calculating the delivery time.

Lastly, there is a recommendation related to the dunning process. There are multiple options for a dunning process, but only one has been implemented (the one that seemed best during a discussion with the financial department). In the future, it would be an option to test multiple ways of dunning and to see in practice which one is the best.

### 6.3 Limitations

Despite the improvements, there are also several limitations that need to be taken into account for further research. An important limitation is related to the interviews. In this research, unstructured interviews have been used. Those interviews have some disadvantages, for example:

- Low reliability (because each interview is unique, and it is difficult to repeat interviews)
- Low representativeness due to limited sample size
- Validity can be undermined (because the interviewer can be considered biased, or the researcher characteristics might influence the responses of respondents, or simply due to the small sample size)

It is recommended that structured interviews are used for future implementation/validation, however it has to be noted that this can also be challenging due to the different roles of the respondents within the organization.

Another limitation is related to the dunning process. The conclusion says that the average number of days after exceeding payment term for paying an invoice decreased for 47% of the debtors. It was not possible to ensure this claim for terms that are greater than the thesis duration. However, the company will continue with the process and they can check the results of it after the thesis as well.

Lastly, the availability of data was a significant limitation for this research, especially related to the KPI 'planning attainment'. The research was restricted to the limited available data, which was not sufficient for this KPI. The KPI would give a better representation of the reality, if more data would have been available.

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## Appendix A: Interview transcriptions

(I=Interviewer, E=Employee)

### **Interview 1: (sales department)**

I: Does your department have a direct role in the order-to-cash process?

E: No

### **Interview 2: (customer sales department)**

I: In what way can you receive a new order?

E: We can receive orders in different ways, namely: by phone, by mail or in person. Most orders come in by mail.

I: Do you insert a new order in the system directly or does this take a lot of time? Are there specific requirements for the time duration?

E: We try to insert a new order the same day as it came in, but otherwise as soon as possible. Sometimes we have orders with urgency, then it is different.

I: Do you have a specific system where regular customers can place an order?

E: No, we do not have a system.

I: Does creating a new debtor happen as a reaction on a new order? Or does this happen before? Do you always get complete information about the debtor?

E: This happens before in the ideal situation. When an account manager gets a new customer, he/she sends the customer information form to the finance department. This department creates a new debtor. When that has been done, the customer can place an order. Often, the customer information form is not complete.

I: The credit limit is not written down at the customer information form. Where in the process is the amount of the credit limit determined and how is this determined?

E: Nobody knows that. One employee took care of that process, but he left a few months ago. Now, nobody is taking care of it.

I: If there is not enough credit limit left for an order, what are the consequences? Do you send a message to the customer?

E: If there is not enough credit limit, the order will be blocked. However, this does not mean that we do not want to sell to the customer. It is unclear who decides if the risk on debtor loss can be taken. Often customer sales determine this, sometimes they ask the Director Sales and sometimes finance. Since one employee left, no credit limits for new customers are requested. This is problematic. Also, when we remove a credit limit in ERP to be able to insert the order, no one takes care of inserting the credit limit after the order has been proceeded.

I: How does a new order reaches the planning department, after inserting in ERP?

E: Vaess has make-to-stock and make-to-order products. When someone wants to buy make-to-order products, then the customer sales department can click on produce and then the planning department automatically gets a notification of the new order.

I: When do you check if the customer data is correct?

E: After implementing the order.

I: Do you need to insert urgency orders in the system? Or do you need to deliberate with other departments first?

E: For urgency orders, the first action is to check if the product is in stock. If this is not the case, deliberation with other departments (planning/production) is needed. When the product is in stock, no deliberation is needed.

I: Do you sometimes deviate from the prices in Exact? Why is this happening?

E: Yes. It could be that salesmen pass on the wrong price. Normally, the prices are always the same. Sometimes, salesmen decide with customers to offer a lower price if they order in larger volumes, but then they forgot to pass that price to the customer sales department. This causes a lot of chaos and confusion.

I: Do you receive a message from the planning department if the production of an order experiences delay? Do you leak this to the customer or does the salesman has to arrange this?

E: Both departments can do this. Somehow it did not work out to live up to the planning. Sometimes the customer sales department does not get a notification of this at all. Then the transportation has been arranged and arrived, but there are no products. This costs a lot of money.

I: Do you check stock if a product is a make-to-stock product? What happens if there is no stock? If there is stock, do you directly send a message to logistics?

E: In the optimal situation, make-to-stock products should always be on stock. However, this is often not the case, due to a lot of factors (not enough employees, shortage of raw materials, problems with machines). The customer needs information about when the order can be delivered (this has to be as soon as possible), but often we (customer sales) do not have that information, because nobody knows. If there is stock, we plan transportation for the order. Logistics gets a notification when they must make the order ready.

I: How do you arrange transportation?

E: For all the orders within the Netherlands or Belgium, DHL is coming daily for transport. Outside the Netherlands, transportation must be arranged. This happens often beforehand when the order comes in.

I: When do you make an invoice? Directly or for example when the production is finished? Does the finance department make those invoices or are you doing that by yourselves? What is the payment term for a customer? What happens if the customer does not pay in time?

E: The invoice will be made when the order has been delivered at the customer. Customer sales employee can click on button "create invoice" and then it can be sent to the customer. The payment term differs per customer. When someone did not pay in time, finance will get a message and will arrange the payment.

I: Do you ever experience delay caused by the transportation company?



E: Yes, sometimes a truck is too late. Sometimes the truck is on time at our warehouse, but then it gets stuck in a logistic center. This should be prevented, because Vaess gets a bad reputation caused by other companies.

I: All the employees on this department are working parttime, how does the information transfer go between the different employees? Is this happening in an effective way?

E: Everything within our department is on paper. In Exact it is not possible to add attachments to an order. After a day off, an employee must read all the mails and papers from the day before, this takes a lot of time.

### **Interview 3: (planning department)**

I: How do you receive a new order?

E: Previously, we received new orders on paper, but nowadays we receive those by Sumatra.

I: What is the process for the purchasing of raw materials? Do you have a minimum level of stock for each raw material? Do you purchase raw materials for every order separately?

E: As a planning department, we can continuously see the current level of the stock, which decreases by production. If the stock gets beneath a specific level, then it will be colored yellow, which gives the department a sign that they should reorder that raw material. It is still difficult to determine the most optimal way of ordering, regarding how many raw materials do you purchase at once and how often you order. At the moment, there is a minimum and maximum level for each raw material and the department tries to stay between those two.

I: Does it appear that there are not enough raw materials to produce an order? What are the consequences of this? Do you extend the delivery term of 10 working days then?

E: Yes, this happens. Firstly, we try to order extra raw materials as soon as possible. If those cannot arrive in time, we ask quality assurance if we can use an alternative raw material. If that is not possible, then we postpone the order and we ask customer sales to inform the customer about this.

I: Regarding make-to-stock products, are those always in stock when an order comes in? Or do you sometimes still need to produce the products?

E: It can happen that make-to-stock products are not in stock, then we inform customer sales about this, who can inform the customer.

I: Do you plan new orders based on date (first arrived will be produced first) or is this happening based on urgency/size order/....?

E: We plan orders in a time schedule of a week, which will be bonded on Thursday or Friday the week before. In the weekends, cleaning takes place. In the beginning of the week, all orders with clean production will be produced, the further in the week, the dirtier the orders become.

I: How do you arrange transport?

E: This is not done at our department. The customer sales department is taking care of the transport.

I: If you are not able to live up to the delivery time of 10 working days (or 2 working days with make-to-stock products), do you inform the customer then? Has this any other consequences?

E: If we cannot live up to the delivery time, we inform customer sales, and they inform the customer. The consequence is that this is not good for the relationship with the customer, so we have to prevent this as much as possible.

I: How do you deal with delay at the production department? What are the consequences?

E: Communication regarding delay is challenging at the moment. In most cases, the planning department gets noted about the delay at the daily meeting (13.00). So, they can start thinking about how to deal with the delay, only from 13.00 on, which is too late. In the ideal situation, they get noted about a delay right away.

I: Do you receive a confirmation when the production is done?

E: After production, a final check takes place in the lab. If this is all okay, we receive the packing slip, that is sort of a confirmation that the order is ready.

I: Are there any other problems that you are experiencing within the order-to-cash process?

E: Yes. Due to limited production capacity, it is sometimes hard to have make-to-stock products back in stock within 10 days after the last order. It would be good to know more about the needs of a customer. Sometimes we make sure that a product is in stock within 10 days, while the customer does not need it for a few more weeks. If we know things like this beforehand, we can base our planning on this information.

Sometimes, there is a lot of delay because of raw material shortages, disturbances at production or employee shortages. Those factors can cause changes in the planning. Therefore, it would be better to refuse all urgency orders. This will result into less commotion at the production department and therefore people will make less mistakes.

There are a lot of problems with the bagging line. Only one employee has knowledge about this line and there are a lot of crashes within this line. This causes delay. The communication about problems with this bagging line is poor.

Before the production starts, there are order-pickers who pick all the necessary raw materials for that order. Sometimes it happens that one blender is ahead of planning and that the other one is behind. Order-pickers do not look at the current state of the planning, so that means that they also pick the raw materials for the blender that is behind planning. This results into one blender that cannot continue, because the raw materials have not been picked. There should be an overview for the order-pickers, so that they can anticipate on the current state of the planning.

Another wish from our department, is to have someone at the production department who has an overview of everything that is happening and who can communicate with the planning department.

We would also like to have sort of an overview or dashboard, where we can have insight into all steps within the production process (when raw materials for an order are being picked, when there is a crash at a machine and so on).

Another wish is that the production form will be digital. Currently, they are on paper. After the lab, they come back to the planning department all dirty, whereby we cannot scan the production forms, but we have to insert them manual.

I: What are the steps that take place when production is finished?

E: Firstly, the lab will check if the product is right (for example if the input of materials is equal to output). When this is good, planning will receive the production form, they will insert the data (which blender has been used, which employee produced the order, which date and time and so on). The planning then checks if scanning all the products went well in the system. If everything is fine, then the product can be sent to the customer.

#### **Interview 4: (production department)**

I: How do you receive the new week schedule? Digital or on paper? And what happens if the planning modifies (oral updates? new planning?)?

E: We receive the production planning for the upcoming week every Thursday. Every day, there is a meeting at 13.00, with the planning department, the production department and with customer sales. There we inform each other about delays, and we can discuss how to change the planning when necessary.

I: Do the order-pickers receive a separate planning (with which orders they have to pick today, so that production tomorrow morning can start directly)?

E: No, they receive only the production planning and based on that planning, they have to make sure that the raw materials are always ready when production has to start.

I: Before an order can be produced, you have to pick the raw materials for that order. Does this happen as soon as there is time, or do you try to pick the raw materials just before the start of production? Can it happen that not all raw materials are in stock?

E: Rarely, earlier this happened, but at the moment we make a planning in advance, so we can make sure that enough raw materials will be ordered.

I: After the raw materials have been picked, the mixing can start. Does it occur that the planning says start mixing, but that the raw materials are not there yet? Does delay occur at the mixing part?

E: In the ideal situation, we pick the raw materials one day before the production. Unfortunately, this is not always possible.

I: According to Quality Control, it sometimes occurs that mixing did not go well, for example because raw materials are missing, what is the cause of this?

E: Everyone has a scanner, which shows which materials to pick for each order. However, sometimes people pick the wrong products.

I: When the mixing part is done, do you bring the product then directly to the bagging line or is there time in between? Do you bring every product to the bagging line? Or is it done manually in some cases? Does the production department move the products or is logistics doing that?

E: In the ideal situation there is time in between. If you start directly at the bagging line after mixing, then the quality control has not finished yet and it could be that you are putting a product into smaller bags, which is not mixed in the right way. Products that come from blenders 15 and 19 are going to the bagging line, but those from 16, 17 and 18 are done manually. The products are moved by the order-pickers, so that is the production department.

I: When the product is finished at the bagging line, what are the next steps? Who puts the product at the right place in the warehouse and how do you know where to place the product? Are there

standard places for every product? Who brings the samples to Quality Control? Who receives the approval/disapproval of Quality Control? When do you take the samples out of the product?

E: There is not a standard place for every product. However, while placing products, you have to think of products related to specific allergies, which cannot be placed next to each other. A wish is that there will be a system, which tells you where to place everything, considering the specific requirements. The production department brings the sample to Quality Control. When the control returns a disapproval, the product will be put into the blender again and other raw materials will be added.

I: In general, when you are experiencing delay, what are the consequences? How do you communicate about this with other departments? What is the frequency of delay (daily/weekly/monthly)? What are the causes of delay (only unreliable machines and suppliers or are there more causes)?

E: We discuss delay at the 13.00-meeting, because the planning department cannot see when this is happening. They can only see when you start with the production of an order. There are a lot of issues. Normally, the capacity is around 90-100 ton per week, now it is not even 85% of that. However, the account managers are selling around 100-110 ton per week, while we are producing only 60 ton. Therefore, it was impossible to keep up with the demand and we started to outsource the production partly. Now, we are trying to improve the intern production, to be able to produce everything by ourselves soon.

I: Which parts of the production process require physical labor (mixing, bagging line)? Is this necessary or could this be arranged in another way?

E: Pouring raw materials, dissecting bags with raw materials, shaking out bags with raw materials and bagging (only for specific blenders).

I: What is your opinion about the communication between the different departments? What is going well and what needs improvement? What are your wishes/needs?

E: Structure and communication in general. The daily meeting at 13.00 brings already more structure. Because of the higher pressure due to capacity shortages, there is even less communication than before.

#### **Interview 5: (logistics department)**

I: If raw materials will be delivered by a supplier, do you take care of bringing them to the right place? What happens if they deliver less than ordered or when they do not deliver anything?

E: Yes, we arrange the arrival of raw materials. When we receive less products than ordered, we do nothing. When the delivered products are damaged, we send a message to the lab.

I: Before the production can start, all the raw materials must be picked. Is that done by your department or by production?

E: The production department takes care of that.

I: What happens when the production is finished? Who brings the end products to the warehouse?

E: The end products are brought to the warehouse by the production department. Then we (logistics department) will take care of bringing it to the right place.

I: What happens when a truck arrives too late or not at all? Does this happen a lot?

E: Yes, this happens, and it is very difficult due to a lack of space. We cannot really do anything about it, so we just wait for the truck.

I: With which departments do you communicate about the order-to-cash process mostly?

E: Actually, with a lot of departments, but mostly with planning about incoming raw materials.

I: What happens with make-to-stock products? Do you receive a direct message from customer sales and how does this process go?

E: Yes, we receive the complete order, we print the order and then we get a label. One day before the truck arrives, we pick the correct products for the order.

I: Are there any other problems that you are experiencing?

E: The communication is poor. There is always a lack of space in the warehouse. Sometimes the planning department orders too many raw materials, which do not all fit. People are worrying too much about each other and they do not admit their mistakes.

I: What are the consequences for your department if things change at the production department (delay, urgency order, and so on)?

E: The lab needs to carry out a quality control. Sometimes, the truck is already there, but the check has not been done. Then the driver has to wait, which is something that we have to be more aware of.

#### **Interview 6: (Quality Control/Quality Insurance department)**

I: What happens when raw materials will be delivered?

E: The logistics department receives the raw materials and places them at the right place in the warehouse. They give a signal to us (Quality Control) about the arrival of the raw materials, and they give us a raw material control form. Then we will check the product, batch number, best before date, date of arrival and rspo. If it is necessary, we request a certificate of analysis at the supplier. We store the samples and we put the data into Excel and Exact.

I: What happens when the production of a product is finished?

E: After production, we receive a production form and two samples of the production department. We check first if everything on the form is correct. After that, we check which analyses are necessary and then we carry those out. If the checks analyses are not correct, we ask for new samples and check again. If it is correct, then we can ship the order. If it is not correct, then we discuss with the production department.

## Appendix B: Credit limit overview

Debtors with a sufficient credit limit:

| 1  | Debiteuren met voldoende limiet |             |         |            |                              |                        |                              |                         |                       |                   |              |                       |
|----|---------------------------------|-------------|---------|------------|------------------------------|------------------------|------------------------------|-------------------------|-----------------------|-------------------|--------------|-----------------------|
| 2  | Company                         | Customer No | Country | Customer   | Highest sales last 15 months | Betalingstermijn dagen | Betalingstermijn maanden + 1 | Benodigde kredietlimiet | Huidige kredietlimiet | Limiet voldoende? | Waarde exact | To do                 |
| 3  | VS                              | 11557       | BE      | Westvlee   | 16.435,20                    | 30                     | 2,0                          | 32.870,40               | 100.000,00            | WAAR              | 100000       | niks                  |
| 4  | VS                              | 10324       | BE      | Imperial M | 13.750,00                    | 90                     | 4,0                          | 55.000,00               | 75.000,00             | WAAR              |              | 0 limiet exact aanpas |
| 5  | VS                              | 11359       | DE      | NWT-CT G   | 22.920,00                    | 30                     | 2,0                          | 45.840,00               | 50.000,00             | WAAR              | 20000        | limiet exact aanpas   |
| 6  | VS                              | 11433       | NL      | Promessa   | 13.460,00                    | 60                     | 3,0                          | 40.380,00               | 50.000,00             | WAAR              | 50000        | niks                  |
| 7  | VS                              | 11154       | SI      | VOBO d.o   | 6.510,00                     | 30                     | 2,0                          | 13.020,00               | 15.000,00             | WAAR              | 15000        | niks                  |
| 8  | VS                              | 11573       | NL      | Bobeldijk  | 4.024,50                     | 30                     | 2,0                          | 8.049,00                | 10.000,00             | WAAR              | 10000        | niks                  |
| 9  | VS                              | 11200       | PL      | WIPASZ S.  | 3.610,00                     | 30                     | 2,0                          | 7.220,00                | 40.000,00             | WAAR              | 40000        | niks                  |
| 10 | VS                              | 11600       | CN      | Fortune Fi | 3.247,00                     | 0                      | 1,0                          | 3.247,00                | 5.000,00              | WAAR              | 5000         | niks                  |
| 11 | VS                              | 11589       | PL      | Piekarnia  | 2.733,00                     | 14                     | 1,5                          | 4.008,40                | 10.000,00             | WAAR              | 10000        | niks                  |
| 12 | VS                              | 11580       | NL      | Evolution  | 2.778,00                     | 7                      | 1,2                          | 3.426,20                | 8.000,00              | WAAR              | 8000         | niks                  |
| 13 | VS                              | 11551       | NL      | BACU Alm   | 1.527,60                     | 40                     | 2,3                          | 3.564,40                | 15.000,00             | WAAR              | 15000        | niks                  |
| 14 | VS                              | 10330       | NL      | Vion Food  | 714,50                       | 14                     | 1,5                          | 1.047,93                | 5.000,00              | WAAR              | 1000         | limiet exact aanpas   |
| 15 | VS                              | 11233       | DE      | The Famil  | 298,62                       | 30                     | 2,0                          | 597,24                  | 5.000,00              | WAAR              | 5000         | niks                  |
| 16 | VS                              | 11593       | GR      | Alfa Athar | 540,00                       | 30                     | 2,0                          | 1.080,00                | 10.000,00             | WAAR              | 10000        | niks                  |
| 17 | VS                              | 11615       | NL      | Mora Proc  | 3.772,03                     | 30                     | 2,0                          | 7.544,06                | 15.000,00             | WAAR              | 15000        | niks                  |

Debtors with no sales the past 15 months:

| 1  | Customer 2021 | Debiteuren zonder omzet past 15 months |         |  |                              |                        |                              |                         |                       |                   |              |       |
|----|---------------|--|---------|--|------------------------------|------------------------|------------------------------|-------------------------|-----------------------|-------------------|--------------|-------|
| 2  | Company       | Customer No                            | Country | Customer Name                                      | Highest sales last 15 months | Betalingstermijn dagen | Betalingstermijn maanden + 1 | Benodigde kredietlimiet | Huidige kredietlimiet | Limiet voldoende? | Waarde exact | To do |
| 3  | VS            | 11584                                  | BE      | Vanzegbroeck Krokot BV                             | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 4  | VS            | 11642                                  | NL      | Slegers Technique BV                               | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 5  | VS            | 11576                                  | PL      | Piekarnia Cukiernia Marek Szalbelski               | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 6  | VS            | 11617                                  | DE      | Colucci Pizza Mehr GmbH & Co                       | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 7  | VS            | 11602                                  | NL      | Interbanket B.V.                                   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 8  | VS            | 11619                                  | SE      | Magnus Dafgard AB                                  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 9  | VS            | 11610                                  | NL      | F.J.A. Jeurgens Holding B.V                        | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 10 | VS            | 11611                                  | NL      | Jumbo supermarkten                                 | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 11 | VS            | 11612                                  | NL      | LB food consultancy                                | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 12 | VS            | 11607                                  | NL      | Gepo Vleeswaren B.V.                               | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 13 | VS            | 11605                                  | DE      | Salomon Hitburger GmbH                             | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 14 | VS            | 11606                                  | NL      | Perier's Vleesbedrijf B.V.                         | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 15 | VS            | 11603                                  | NL      | Signature Foods Nederland B.V.                     | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 16 | VS            | 11604                                  | PL      | Pan Kurczak  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 17 | VS            | 11188                                  | PL      | Barentz Sp. z.o.o.                                 | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 18 | VS            | 11537                                  | LV      | Nando  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 19 | VS            | 11569                                  | NL      | Novish B.V.  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 20 | VS            | 11333                                  | NL      | Crisp Sensation                                    | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 21 | VS            | 11315                                  | BE      | Cube N.V.  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 22 | VS            | 11313                                  | DK      | Fomaco   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 23 | VS            | 11309                                  | FR      | Vandemoortele Torcé                                | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 24 | VS            | 10105                                  | NL      | De Weerd Specerijen                                | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 25 | VS            | 10059                                  | NL      | Timmers Food Creations                             | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 26 | VS            | 11370                                  | PL      | Pan Kurczak  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 27 | VS            | 10000                                  | NL      | Vaessen-Schoemaker b.v.                            | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 28 | VS            | 11391                                  | NL      | Dutch Convenience Meat                             | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 29 | VS            | 11295                                  | NL      | Diviande   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 30 | VS            | 11278                                  | GB      | Lantmannen Unibake UK Limited                      | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 31 | VS            | 11194                                  | IT      | Tillmanns SpA                                      | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 32 | VS            | 11148                                  | NL      | Maasland Vleeswaren                                | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 33 | VS            | 11151                                  | PL      | Sokolow S.A.                                       | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 34 | VS            | 11202                                  | BE      | VandeMoortele                                      | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 35 | VS            | 11142                                  | US      | D2INGREDIENTS                                      | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 36 | VS            | 11238                                  | ES      | Cremyco Fillings S.L.                              | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 37 | VS            | 11269                                  | ES      | EMO S.A. Partner- Machinebouw                      | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 38 | VS            | 10837                                  | NL      | Vion Beuningen                                     | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 39 | VS            | 11049                                  | PL      | CEDROB S.A.  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 40 | VS            | 11571                                  | US      | DSM  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 41 | VS            | 11399                                  | NL      | Van Geloven  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 42 | VS            | 11394                                  | DE      | MPF GmbH   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 43 | VS            | 11410                                  | RU      | LINA LTD   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 44 | VS            | 11553                                  | NL      | Vegafit B.V.                                       | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 45 | VS            | 11552                                  | HU      | Hiberfood kft                                      | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 46 | VS            | 11550                                  | BE      | Goumanisto SA/NV                                   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 47 | VS            | 11554                                  | IE      | The Edlong Corporations                            | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 48 | VS            | 11408                                  | UA      | LLC "UNI TREID"                                    | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 49 | VS            | 11559                                  | NL      | Bouwhuis Enthoven                                  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 50 | VS            | 11562                                  | NL      | Hoogland Vis                                       | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 51 | VS            | 11565                                  | NL      | Groot Holland                                      | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 52 | VS            | 11564                                  | DE      | ARYZTA Bakeries Deutschland GmbH                   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 53 | VS            | 11560                                  | BE      | Meco N.V   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 54 | VS            | 11548                                  | BE      | Cis van den Broeck                                 | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 55 | VS            | 11549                                  | NL      | Breatec B.V.                                       | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 56 | VS            | 11546                                  | SI      | URSIC d.o.o  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 57 | VS            | 11538                                  | NL      | Snackproduktie Trial B.V.                          | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 58 | VS            | 11418                                  | PL      | Stortebloom  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 59 | VS            | 11412                                  | BE      | Noyen NV   | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 60 | VS            | 11413                                  | GB      | Bernard Matthews Food Limited                      | 0,00                         | #N/B                   | 0                            | #N/B                    | 1,0                   | 0,00              | #N/B         | #N/B  |
| 61 | VS            | 11547                                  | US      | Georgia Spice Company                              | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 62 | VS            | 11541                                  | NL      | Nice to Meat                                       | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 63 | VS            | 11544                                  | PL      | Remit  | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 64 | VS            | 11545                                  | BE      | Infrabaker International                           | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 65 | VS            | 11267                                  | GB      | Vandemoortele UK, FTAO NP                          | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 66 | VS            | 11637                                  | NL      | J. Kooij   | 0,00                         | #N/B                   | 30                           | #N/B                    | 2,0                   | 0,00              | #N/B         | #N/B  |
| 67 | VS            | 11355                                  | TN      | Societe Quality trading                            | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 68 | VS            | 11048                                  | PL      | Rzeszowskie Zaklady Drobiarskie RES-DROB Sp. z o.o | 0,00                         | #N/B                   | #N/B                         | #N/B                    | #N/B                  | #N/B              | #N/B         | #N/B  |
| 69 | VS            | 11334                                  | BY      | FarmSolutions-Bel                                  | 0,00                         | #N/B                   | 0                            | #N/B                    | 1,0                   | 0,00              | #N/B         | #N/B  |

## Debtors within the category self-assessment and with a needed credit limit < €20.000:

| Customer 2021 |          |         |         |                           |                       |                           |                       |                     |                   |            |                     |                      |                        |
|---------------|----------|---------|---------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------|-------------------|------------|---------------------|----------------------|------------------------|
| Comp          | Customer | Country | Custori | Highest sales last 15 mon | Betalingsstermijn dag | Betalingsstermijn maanden | Benodigde kredietlimi | Huidige kredietlimi | Limiet voldoende? | Creditsafe | In te voeren limiet | Huidige limiet exact | To do                  |
| 3             | VS       | 11046   | NL      | Remkes I                  | 14.931,60             | 7                         | 1,2                   | 18.415,64           | 0,00              | ONWAAR     | 170.000             | 20000                | 9000 limiet aanpassen  |
| 4             | VS       | 11145   | NL      | Jonkman                   | 9.931,46              | 17                        | 1,6                   | 15.625,49           | 0,00              | ONWAAR     | -                   | check risk           | 18000 limiet aanpassen |
| 5             | VS       | 10041   | NL      | Plukon Pi                 | 9.871,20              | 30                        | 2,0                   | 19.742,40           | 0,00              | ONWAAR     | 5.000,00            | 20000                | 0 limiet aanpassen     |
| 6             | VS       | 11120   | NL      | Nico Stui                 | 6.507,00              | 30                        | 2,0                   | 13.014,00           | 12.000,00         | ONWAAR     | 10.000              | check risk           | 12000 limiet aanpassen |
| 7             | VS       | 11417   | NL      | Hartman                   | 7.259,00              | 30                        | 2,0                   | 14.518,00           | 5.000,00          | ONWAAR     | 6.000               | check risk           | 0 limiet aanpassen     |
| 8             | VS       | 10805   | NL      | Epos B.V.                 | 5.900,00              | 30                        | 2,0                   | 11.800,00           | 0,00              | ONWAAR     | 5.000,00            | 20000                | 15000 limiet aanpassen |
| 9             | VS       | 11429   | AT      | Weizenfr                  | 7.905,80              | 30                        | 2,0                   | 15.811,60           | 0,00              | ONWAAR     | 47.500              | 20000                | 10000 limiet aanpassen |
| 10            | VS       | 10273   | NL      | Piet de V                 | 4.440,00              | 30                        | 2,0                   | 8.880,00            | 0,00              | ONWAAR     | 6.000               | check risk           | 15000 limiet aanpassen |
| 11            | VS       | 11235   | NL      | Vivera B.                 | 9.281,46              | 30                        | 2,0                   | 18.562,92           | 0,00              | ONWAAR     | 1.550.000           | 20000                | 15000 limiet aanpassen |
| 12            | VS       | 10039   | NL      | Dalco Fo                  | 5.424,90              | 60                        | 3,0                   | 16.274,70           | 0,00              | ONWAAR     | 495.000             | 20000                | 15000 limiet aanpassen |
| 13            | VS       | 11106   | NL      | KG Khum                   | 17.404,64             | 0                         | 1,0                   | 17.404,64           | 0,00              | ONWAAR     | 20.000              | 20000                | 10000 limiet aanpassen |
| 14            | VS       | 10257   | DE      | Plukon V                  | 8.516,40              | 30                        | 2,0                   | 17.032,80           | 0,00              | ONWAAR     | 525.000             | 20000                | 15000 limiet aanpassen |
| 15            | VS       | 10314   | NL      | Plukon Cl                 | 5.706,83              | 30                        | 2,0                   | 11.413,66           | 0,00              | ONWAAR     | 5.000.000           | 20000                | 20000 niks             |
| 16            | VS       | 11227   | NL      | Zwiers V                  | 8.482,60              | 30                        | 2,0                   | 16.965,20           | 6.000,00          | ONWAAR     | 535.000             | 20000                | 6000 limiet aanpassen  |
| 17            | VS       | 10318   | BE      | Vlievio N                 | 7.824,40              | 30                        | 2,0                   | 15.648,80           | 0,00              | ONWAAR     | -                   | check risk           | 15000 limiet aanpassen |
| 18            | VS       | 11353   | NL      | Ter beke                  | 3.992,10              | 60                        | 3,0                   | 11.976,30           | 0,00              | ONWAAR     | 10.000              | check risk           | 0 limiet aanpassen     |
| 19            | VS       | 10011   | NL      | Van Bee                   | 4.253,50              | 30                        | 2,0                   | 8.507,00            | 0,00              | ONWAAR     | 2.500               | check risk           | 15000 limiet aanpassen |
| 20            | VS       | 10156   | BE      | Bens Ret                  | 5.226,20              | 60                        | 3,0                   | 15.678,60           | 0,00              | ONWAAR     | 390.000             | 20000                | 10000 limiet aanpassen |
| 21            | VS       | 10086   | NL      | Setz-Apa                  | 2.850,10              | 30                        | 2,0                   | 5.700,20            | 0,00              | ONWAAR     | 59.000              | 20000                | 15000 limiet aanpassen |
| 22            | VS       | 10159   | DE      | Avo Werk                  | 2.538,00              | 30                        | 2,0                   | 5.076,00            | 0,00              | ONWAAR     | -                   | check risk           | 15000 limiet aanpassen |
| 23            | VS       | 10859   | NL      | Vion Schi                 | 2.541,44              | 14                        | 1,5                   | 3.727,45            | 0,00              | ONWAAR     | 5.000.000           | 20000                | 5000 limiet aanpassen  |
| 24            | VS       | 11585   | BE      | Marmo N                   | 7.547,75              | 30                        | 2,0                   | 15.095,50           | 0,00              | ONWAAR     | 525.000             | 20000                | 10000 limiet aanpassen |
| 25            | AS       | 830054  | GB      | TMI Foc                   | 7.449,60              | 30                        | 2,0                   | 14.899,20           | 0,00              | ONWAAR     | 1.000.000           | 20000                | #N/B #N/B              |
| 26            | VS       | 11393   | NL      | Rutting V                 | 3.852,00              | 30                        | 2,0                   | 7.704,00            | 0,00              | ONWAAR     | 95.000              | 20000                | 15000 limiet aanpassen |
| 27            | VS       | 10489   | NL      | Vishand                   | 3.220,50              | 30                        | 2,0                   | 6.441,00            | 0,00              | ONWAAR     | -                   | check risk           | 9000 limiet aanpassen  |
| 28            | VS       | 10241   | DK      | KRYTA A                   | 5.450,00              | 30                        | 2,0                   | 10.900,00           | 0,00              | ONWAAR     | 53.000              | 20000                | 10000 limiet aanpassen |
| 29            | VS       | 11627   | NL      | Yama Prc                  | 5.520,00              | 20                        | 1,7                   | 9.200,00            | 0,00              | ONWAAR     | 290.000             | 20000                | 0 limiet aanpassen     |
| 30            | VS       | 10088   | NL      | Encebe V                  | 4.904,00              | 14                        | 1,5                   | 7.192,53            | 0,00              | ONWAAR     | 5.000.000           | 20000                | 15000 limiet aanpassen |
| 31            | VS       | 11422   | NL      | Quick Frc                 | 3.408,10              | 30                        | 2,0                   | 6.816,20            | 0,00              | ONWAAR     | 125.000             | 20000                | 15000 limiet aanpassen |
| 32            | VS       | 10488   | NL      | Varia Vis                 | 1.695,00              | 30                        | 2,0                   | 3.390,00            | 0,00              | ONWAAR     | 92.000              | 20000                | 15000 limiet aanpassen |
| 33            | VS       | 11428   | NL      | Hilton Fc                 | 4.639,10              | 30                        | 2,0                   | 9.278,20            | 0,00              | ONWAAR     | 3.400.000           | 20000                | 20000 niks             |
| 34            | VS       | 10067   | NL      | Plukon O                  | 4.461,20              | 30                        | 2,0                   | 8.922,40            | 0,00              | ONWAAR     | 5.000.000           | 20000                | 20000 niks             |
| 36            | VS       | 10450   | GB      | Highlanc                  | 2.909,00              | 30                        | 2,0                   | 5.818,00            | 0,00              | ONWAAR     | -                   | check risk           | 10000 limiet aanpassen |
| 37            | VS       | 11644   | BE      | De Vlees                  | 9.829,70              | 30                        | 2,0                   | 19.659,40           | 0,00              | ONWAAR     | 2.500               | check risk           | 0 limiet aanpassen     |
| 38            | VS       | 10311   | BE      | 't Vleessi                | 2.400,00              | 30                        | 2,0                   | 4.800,00            | 0,00              | ONWAAR     | 60.000              | 20000                | 3000 limiet aanpassen  |
| 39            | VS       | 11633   | NL      | PMJ Food                  | 7.947,51              | 30                        | 2,0                   | 15.895,02           | 0,00              | ONWAAR     | -                   | check risk           | 0 limiet aanpassen     |
| 40            | VS       | 11629   | BE      | Levensto                  | 8.592,80              | 30                        | 2,0                   | 17.185,60           | 0,00              | ONWAAR     | -                   | check risk           | 10000 limiet aanpassen |
| 41            | VS       | 10149   | BE      | Vleeswa                   | 2.880,80              | 30                        | 2,0                   | 5.761,60            | 5.000,00          | ONWAAR     | -                   | check risk           | 6000 limiet aanpassen  |
| 42            | VS       | 11136   | NL      | Zwanent                   | 6.792,00              | 30                        | 2,0                   | 13.584,00           | 0,00              | ONWAAR     | 5.000.000           | 20000                | 10000 limiet aanpassen |
| 43            | VS       | 11244   | NL      | Roem vai                  | 3.369,60              | 30                        | 2,0                   | 6.739,20            | 0,00              | ONWAAR     | 1.500.000           | 20000                | 7000 limiet aanpassen  |
| 44            | VS       | 11574   | BE      | Gallinis                  | 5.519,00              | 8                         | 1,3                   | 6.990,73            | 4.000,00          | ONWAAR     | 97.000              | 20000                | 4000 limiet aanpassen  |
| 45            | VS       | 10142   | BE      | Ovi N.V.                  | 3.954,30              | 30                        | 2,0                   | 7.908,60            | 0,00              | ONWAAR     | -                   | check risk           | 10000 limiet aanpassen |
| 46            | VS       | 11613   | NL      | Groenlar                  | 4.680,00              | 30                        | 2,0                   | 9.360,00            | 0,00              | ONWAAR     | 1.000.000           | 20000                | 10000 limiet aanpassen |
| 47            | AS       | 830049  | GB      | Riverway                  | 5.722,00              | 30                        | 2,0                   | 11.444,00           | 0,00              | ONWAAR     | 160.000             | 20000                | #N/B #N/B              |
| 48            | VS       | 11045   | NL      | Aarnink t                 | 3.108,40              | 0                         | 1,0                   | 3.108,40            | 0,00              | ONWAAR     | 250.000             | 20000                | 3500 limiet aanpassen  |
| 49            | VS       | 11592   | NL      | Decon Fc                  | 3.500,00              | 15                        | 1,5                   | 5.250,00            | 0,00              | ONWAAR     | 7.500               | 7500                 | 1 limiet aanpassen     |
| 50            | VS       | 10780   | NL      | Klaas Pui                 | 5.544,00              | 45                        | 2,5                   | 13.860,00           | 0,00              | ONWAAR     | 96.000              | 20000                | 15000 limiet aanpassen |
| 51            | VS       | 10180   | BE      | Chicken f                 | 2.907,00              | 30                        | 2,0                   | 5.814,00            | 0,00              | ONWAAR     | 60.000              | 20000                | 5000 limiet aanpassen  |
| 52            | VS       | 11632   | NL      | Marea Al                  | 2.350,00              | 30                        | 2,0                   | 4.700,00            | 0,00              | ONWAAR     | 335.000             | 20000                | 5000 limiet aanpassen  |
| 53            | VS       | 10157   | BE      | BVBA De                   | 2.796,70              | 30                        | 2,0                   | 5.593,40            | 0,00              | ONWAAR     | 12.000              | 12000                | 4500 limiet aanpassen  |
| 54            | VS       | 10183   | NO      | Orkla For                 | 2.266,80              | 30                        | 2,0                   | 4.533,60            | 0,00              | ONWAAR     | 7.500               | 7500                 | 0 limiet aanpassen     |
| 55            | VS       | 11324   | NL      | Detailfres                | 3.950,00              | 30                        | 2,0                   | 7.900,00            | 0,00              | ONWAAR     | 5.000.000           | 20000                | 20000 niks             |
| 56            | VS       | 11294   | IE      | Karro Cal                 | 3.386,00              | 14                        | 1,5                   | 4.966,13            | 0,00              | ONWAAR     | 935.000             | 20000                | 9000 limiet aanpassen  |
| 57            | VS       | 10287   | NL      | Beaphar                   | 2.424,00              | 30                        | 2,0                   | 4.848,00            | 0,00              | ONWAAR     | 1.450.000           | 20000                | 8000 limiet aanpassen  |
| 58            | VS       | 11630   | NL      | Nordpesi                  | 2.754,00              | 30                        | 2,0                   | 5.508,00            | 0,00              | ONWAAR     | 1.050.000           | 20000                | 15000 limiet aanpassen |
| 59            | VS       | 11638   | NL      | Van der z                 | 2.932,80              | 30                        | 2,0                   | 5.865,60            | 0,00              | ONWAAR     | -                   | check risk           | 10000 limiet aanpassen |
| 60            | VS       | 11621   | NL      | Handelst                  | 2.750,00              | 30                        | 2,0                   | 5.500,00            | #N/B              | #N/B       | 4.500               | check risk           | #N/B limiet aanpassen  |
| 61            | VS       | 11346   | GB      | FMP LTD                   | 3.243,00              | 0                         | 1,0                   | 3.243,00            | 0,00              | ONWAAR     | -                   | check risk           | 0 limiet aanpassen     |
| 62            | VS       | 11050   | NL      | J.W. Kip É                | 1.820,00              | 30                        | 2,0                   | 3.640,00            | 0,00              | ONWAAR     | 37.500              | 20000                | 5000 limiet aanpassen  |
| 63            | VS       | 11283   | NL      | Arva Spei                 | 989,00                | 30                        | 2,0                   | 1.978,00            | 0,00              | ONWAAR     | 175.000             | 20000                | 1200 limiet aanpassen  |
| 64            | VS       | 10099   | NL      | Van Uhm                   | 1.496,00              | 30                        | 2,0                   | 2.992,00            | 0,00              | ONWAAR     | 175.000             | 20000                | 2200 limiet aanpassen  |
| 65            | VS       | 11631   | NL      | Kaldenbe                  | 2.367,00              | 30                        | 2,0                   | 4.734,00            | 0,00              | ONWAAR     | 680.000             | 20000                | 0 limiet aanpassen     |
| 66            | AS       | 820032  | IE      | Monaghe                   | 1.148,40              | 30                        | 2,0                   | 2.296,80            | 0,00              | ONWAAR     | Onbekenc            | 20000                | #N/B #N/B              |
| 67            | VS       | 11152   | NL      | Mastenb                   | 512,00                | 14                        | 1,5                   | 750,93              | 0,00              | ONWAAR     | -                   | check risk           | 1000 limiet aanpassen  |
| 68            | VS       | 10074   | NL      | Tyson Fo                  | 1.747,50              | 30                        | 2,0                   | 3.495,00            | 0,00              | ONWAAR     | 300.000             | 20000                | 10000 limiet aanpassen |
| 69            | VS       | 11430   | GB      | Morton's                  | 1.704,80              | 30                        | 2,0                   | 3.409,60            | 0,00              | ONWAAR     | 1.500               | check risk           | 3500 limiet aanpassen  |
| 70            | AS       | 820031  | AT      | Reichher                  | 1.687,00              | 30                        | 2,0                   | 3.374,00            | 0,00              | ONWAAR     | 600.000             | 20000                | #N/B #N/B              |
| 71            | VS       | 11335   | NL      | Verstege                  | 686,00                | 30                        | 2,0                   | 1.372,00            | 0,00              | ONWAAR     | 3.350.000           | 20000                | 10000 limiet aanpassen |
| 72            | VS       | 10322   | BE      | Henka N.                  | 786,00                | 30                        | 2,0                   | 1.572,00            | 0,00              | ONWAAR     | 4.500               | 4500                 | 1500 limiet aanpassen  |
| 73            | VS       | 11639   | NL      | Vrieshui                  | 1.491,10              | 30                        | 2,0                   | 2.982,20            | 0,00              | ONWAAR     | 135.000             | 20000                | 0 limiet aanpassen     |
| 74            | VS       | 11625   | NL      | Tamro                     | 1.107,00              | 30                        | 2,0                   | 2.214,00            | 0,00              | ONWAAR     | 5.000               | 5000                 | 1500 limiet aanpassen  |
| 75            | VS       | 11598   | NL      | Vishand                   | 1.460,00              | 30                        | 2,0                   | 2.920,00            | 0,00              | ONWAAR     | 105.000             | 20000                | 10000 limiet aanpassen |
| 76            | VS       | 11643   | FR      | Greenlar                  | 1.422,00              | 30                        | 2,0                   | 2.844,00            | 0,00              | ONWAAR     | 5.000               | 5000                 | 9000 limiet aanpassen  |
| 77            | VS       | 10106   | NL      | Koninklij                 | 1.281,80              | 30                        | 2,0                   | 2.563,60            | 0,00              | ONWAAR     | 1.750.000           | 20000                | 3500 limiet aanpassen  |
| 78            | AS       | 830046  | GB      | Karro Foc                 | 1.100,00              | 30                        | 2,0                   | 2.200,00            | 0,00              | ONWAAR     | 28.000              | 20000                | #N/B #N/B              |
| 79            | VS       | 11366   | NL      | Muller Fr                 | 1.086,75              | 30                        | 2,0                   | 2.173,50            | 0,00              | ONWAAR     | 2.550.000           | 20000                | 1 limiet aanpassen     |
| 80            | VS       | 11609   | DE      | Salomon                   | 475,00                | 7                         | 1,2                   | 585,83              | 0,00              | ONWAAR     | -                   | check risk           | 1000 limiet aanpassen  |
| 81            | VS       | 10107   | NL      | H. van W                  | 1.760,00              | 30                        | 2,0                   | 3.520,00            | 0,00              | ONWAAR     | 160.000             | 20000                | 7000 limiet aanpassen  |
| 82            | VS       | 11645   | GB      | KQF Foc                   | 776,00                | 30                        | 2,0                   | 1.552,00            | 0,00              | ONWAAR     | 500                 | check risk           | 1000 limiet aanpassen  |
| 83            | VS       | 10168   | DE      | Welding                   | 598,40                | 30                        | 2,0                   | 1.196,80            | 0,00              | ONWAAR     | 4.500.000           | 20000                | 1200 limiet aanpassen  |
| 84            | VS       | 10336   | BE      | Sanparei                  | 525,00                | 0                         | 1,0                   | 525,00              | 0,00              | ONWAAR     | -                   | check risk           | 3000 limiet aanpassen  |
| 85            | VS       | 11577   | NL      | Van Loor                  | 417,50                | 30                        | 2,0                   | 835,00              | #N/B              | #N/B       | 570.000             | 20000                | #N/B #N/B              |
| 86            | VS       | 11351   | NL      | L.J. Post É               | 278,00                | 30                        | 2,0                   | 556,00              | 0,00              | ONWAAR     | 140.000             | 20000                | 1500 limiet aanpassen  |
| 87            | VS       | 11280   | NL      | Verbufo I                 | 216,00                | 30                        | 2,0                   | 432,00              | 0,00              | ONWAAR     | 80.000              | 20000                | 500 limiet aanpassen   |
| 88            | VS       | 11626   | NL      | Tomasse                   | 152,80                | 30                        | 2,0                   | 305,60              | 0,00              | ONWAAR     | 520.000             | 20000                | 15000 limiet aanpassen |
| 89            | VS       | 11281   | DE      | Bakerma                   | 5.204,00              | 30                        | 2,0                   | 10.408,00           | 0,00              | ONWAAR     | 41.500              | 20000                | 10000 limiet aanpassen |



## Debtors without self-assessment, but with a needed credit limit &lt; €20.000:

| Customer 2021 |             |       |                                      |                              |           |                  |                       |                     |        |         |
|---------------|-------------|-------|--------------------------------------|------------------------------|-----------|------------------|-----------------------|---------------------|--------|---------|
| Company       | Customer ID | Count | Customer Name                        | Highest sales last 15 months | Betalings | Betalingstermijn | Benodigde kredietlimi | Huidige kredietlimi | Limiet | doende? |
| AS            | 830048      | UA    | TOV "Premipack"                      | 17.600,00                    | 0         | 1,0              | 17.600,00             | 0,00                | ONWAAR |         |
| VS            | 11263       | BG    | Hebar EAD                            | 11.553,00                    | 9         | 1,3              | 15.147,27             | 10.000,00           | ONWAAR |         |
| VS            | 11127       | SR    | Deep Sea Atlantic N.V.               | 16.064,00                    | 0         | 1,0              | 16.064,00             | 0,00                | ONWAAR |         |
| VS            | 11390       | EE    | Scarpio OÜ                           | 6.750,50                     | 30        | 2,0              | 13.501,00             | 10.000,00           | ONWAAR |         |
| AS            | 810003      | PL    | Madaj Wróbel Sp. z o.o.              | 3.901,35                     | 45        | 2,5              | 9.753,37              | 0,00                | ONWAAR |         |
| AS            | 830033      | UA    | Dmytruk Foods LLC                    | 3.960,00                     | 30        | 2,0              | 7.920,00              | 0,00                | ONWAAR |         |
| AS            | 810001      | PL    | Animex Foods Sp. z o.o.              | 3.906,00                     | 30        | 2,0              | 7.812,00              | 0,00                | ONWAAR |         |
| VS            | 11641       | GE    | Eurotrade                            | 13.993,80                    | 0         | 1,0              | 13.993,80             | 0,00                | ONWAAR |         |
| AS            | 810015      | PL    | Koral S.A.                           | 2.311,32                     | 30        | 2,0              | 4.622,64              | 0,00                | ONWAAR |         |
| VS            | 11340       | PL    | Capital Trade Sp zoo                 | 6.689,50                     | 4         | 1,1              | 7.469,94              | 0,00                | ONWAAR |         |
| VS            | 11556       | PL    | Zaklady Miesne Nowy Zmigrod Sp. zo.  | 4.587,00                     | 30        | 2,0              | 9.174,00              | 0,00                | ONWAAR |         |
| VS            | 10394       | MA    | Eldin S.A.                           | 7.640,00                     | 0         | 1,0              | 7.640,00              | 0,00                | ONWAAR |         |
| VS            | 11555       | RU    | MIGRU LLC                            | 7.087,40                     | 0         | 1,0              | 7.087,40              | 0,00                | ONWAAR |         |
| VS            | 11364       | SK    | V.M. MARLEX, s.r.o.                  | 1.137,40                     | 0         | 1,0              | 1.137,40              | 0,00                | ONWAAR |         |
| AS            | 830001      | BY    | "Servolux Agro", CJSC                | 1.145,50                     | 60        | 3,0              | 3.436,50              | 0,00                | ONWAAR |         |
| AS            | 830062      | LT    | UAB "Spaisvile"                      | 7.927,50                     | 30        | 2,0              | 15.855,00             | 0,00                | ONWAAR |         |
| AS            | 810045      | PL    | NPA Fumum Sp. z o.o.                 | 2.852,69                     | 30        | 2,0              | 5.705,37              | 0,00                | ONWAAR |         |
| VS            | 11536       | PL    | IMEX & Co Sp. Z O.O                  | 3.675,00                     | 0         | 1,0              | 3.675,00              | 0,00                | ONWAAR |         |
| VS            | 11570       | NZ    | Yarrows the Bakers ) 2011 Limited    | 3.138,40                     | 0         | 1,0              | 3.138,40              | 0,00                | ONWAAR |         |
| VS            | 11344       | MU    | SDA Mauritius                        | 3.040,00                     | 30        | 2,0              | 6.080,00              | 0,00                | ONWAAR |         |
| VS            | 11376       | UG    | Sokoni Africa Ltd.                   | 949,00                       | 30        | 2,0              | 1.898,00              | 0,00                | ONWAAR |         |
| AS            | 810022      | PL    | „RAVEN-POL” Firma Prywatna Jan Mari  | 1.421,00                     | 0         | 1,0              | 1.421,00              | 0,00                | ONWAAR |         |
| AS            | 910257      | PL    | ASID Radosław Kaczmarczyk            | 84,22                        | 7         | 1,2              | 103,87                | 0,00                | ONWAAR |         |
| AS            | 810024      | PL    | INA INFINITY Natalia Regulska        | 219,00                       | 30        | 2,0              | 438,00                | 0,00                | ONWAAR |         |
| AS            | 810050      | PL    | Recovery Green Recycling Surowce Sp. | 418,00                       | 30        | 2,0              | 836,00                | 0,00                | ONWAAR |         |
| AS            | 810041      | PL    | LEO TRANS Sp. z o.o.                 | 309,76                       | 7         | 1,2              | 382,04                | 0,00                | ONWAAR |         |
| AS            | 910243      | PL    | Paweł Adach Food Technology          | 76,85                        | 7         | 1,2              | 94,79                 | 0,00                | ONWAAR |         |
| AS            | 810051      | PL    | Sylwia Koch-Kopyszko                 | 154,00                       | 7         | 1,2              | 189,93                | 0,00                | ONWAAR |         |
| AS            | 910258      | PL    | Radosław Adaszyński NJP Rozwiązania  | 25,52                        | 7         | 1,2              | 31,47                 | 0,00                | ONWAAR |         |
| AS            | 810038      | PL    | Bettonico Sp. z o.o.                 | 26,40                        | 14        | 1,5              | 38,72                 | 0,00                | ONWAAR |         |
| AS            | 810047      | PL    | ATK Partnerzy Biznesu Tomasz Wcisło  | 26,40                        | 14        | 1,5              | 38,72                 | 0,00                | ONWAAR |         |

## Debtors with a needed credit limit &gt; €20.000:

| Customer 2021 |        |        |            |                           |         |         |                       |                     |                  |  |
|---------------|--------|--------|------------|---------------------------|---------|---------|-----------------------|---------------------|------------------|--|
| Compa         | tomer  | Countr | Custon     | Highest sales last 15 mon | Betalir | Betalir | Benodigde kredietlimi | Huidige kredietlimi | Limiet voldoende |  |
| VS            | 10727  | DE     | Allfein F  | 199.640,00                | 30      | 2,0     | 399.280,00            | 190.000,00          | ONWAAR           |  |
| VS            | 11042  | NL     | Mola B.V   | 276.935,08                | 30      | 2,0     | 553.870,16            | 90.000,00           | ONWAAR           |  |
| AS            | 830030 | GB     | Pilgrim's  | 141.081,60                | 90      | 4,0     | 564.326,40            | 75.000,00           | ONWAAR           |  |
| VS            | 11231  | BE     | Gourmar    | 231.894,94                | 30      | 2,0     | 463.789,88            | 270.000,00          | ONWAAR           |  |
| AS            | 830029 | GB     | Lynn's Co  | 195.513,60                | 30      | 2,0     | 391.027,20            | 250.000,00          | ONWAAR           |  |
| VS            | 11081  | BE     | Lantmän    | 114.044,60                | 30      | 2,0     | 228.089,20            | 150.000,00          | ONWAAR           |  |
| VS            | 11008  | NL     | De Graaf   | 94.474,50                 | 45      | 2,5     | 236.186,25            | 190.000,00          | ONWAAR           |  |
| AS            | 830012 | US     | D2 Ingre   | 190.920,00                | 60      | 3,0     | 572.760,00            | 0,00                | ONWAAR           |  |
| VS            | 10079  | NL     | Lerøy Sea  | 81.415,26                 | 30      | 2,0     | 162.830,52            | 100.000,00          | ONWAAR           |  |
| VS            | 11065  | IE     | Golden E   | 101.806,15                | 60      | 3,0     | 305.418,45            | 180.000,00          | ONWAAR           |  |
| AS            | 830010 | AU     | VS Austr   | 97.525,00                 | 60      | 3,0     | 292.575,00            | 40.000,00           | ONWAAR           |  |
| VS            | 11268  | NL     | Europast   | 71.279,20                 | 30      | 2,0     | 142.558,40            | 100.000,00          | ONWAAR           |  |
| VS            | 11257  | NL     | Vion Ret   | 79.727,45                 | 14      | 1,5     | 116.933,59            | 50.000,00           | ONWAAR           |  |
| VS            | 10184  | PL     | AGRO-TO    | 82.839,50                 | 30      | 2,0     | 165.679,00            | 80.000,00           | ONWAAR           |  |
| VS            | 11155  | PL     | Plukon Si  | 46.665,63                 | 30      | 2,0     | 93.331,26             | 30.000,00           | ONWAAR           |  |
| VS            | 11215  | LT     | Manting    | 48.991,50                 | 60      | 3,0     | 146.974,50            | 120.000,00          | ONWAAR           |  |
| VS            | 11112  | NL     | Maxima     | 59.648,40                 | 30      | 2,0     | 119.296,80            | 40.000,00           | ONWAAR           |  |
| VS            | 10044  | NL     | Huijbregt  | 59.436,10                 | 30      | 2,0     | 118.872,20            | 60.000,00           | ONWAAR           |  |
| VS            | 11286  | BE     | Vandemo    | 52.837,84                 | 60      | 3,0     | 158.513,52            | 140.000,00          | ONWAAR           |  |
| AS            | 810008 | PL     | Sokolów    | 45.202,63                 | 60      | 3,0     | 135.607,88            | 0,00                | ONWAAR           |  |
| VS            | 11361  | DE     | PET-FISCH  | 51.365,00                 | 30      | 2,0     | 102.730,00            | 50.000,00           | ONWAAR           |  |
| VS            | 11343  | NL     | Van der l  | 92.458,68                 | 30      | 2,0     | 184.917,36            | 0,00                | ONWAAR           |  |
| VS            | 11357  | BG     | Mesokon    | 37.478,40                 | 30      | 2,0     | 74.956,80             | 50.000,00           | ONWAAR           |  |
| VS            | 11246  | PL     | SCM Sp. z  | 35.322,00                 | 30      | 2,0     | 70.644,00             | 20.000,00           | ONWAAR           |  |
| VS            | 10376  | MX     | Mc Cormi   | 59.072,38                 | 60      | 3,0     | 177.217,14            | 85.000,00           | ONWAAR           |  |
| VS            | 11331  | NL     | Stortebo   | 22.926,20                 | 14      | 1,5     | 33.625,09             | 0,00                | ONWAAR           |  |
| AS            | 830058 | NL     | Meatless   | 98.135,00                 | 30      | 2,0     | 196.270,00            | 0,00                | ONWAAR           |  |
| VS            | 11150  | RO     | S.C. Krale | 15.946,00                 | 30      | 2,0     | 31.892,00             | 25.000,00           | ONWAAR           |  |
| VS            | 10103  | NL     | Smilde B   | 26.833,89                 | 30      | 2,0     | 53.667,78             | 0,00                | ONWAAR           |  |
| VS            | 10331  | BE     | Vleeswa    | 13.952,00                 | 30      | 2,0     | 27.904,00             | 0,00                | ONWAAR           |  |
| VS            | 10178  | IT     | Deimos S   | 29.535,20                 | 75      | 3,5     | 103.373,20            | 20.000,00           | ONWAAR           |  |
| AS            | 810004 | PL     | Zakłady M  | 12.961,34                 | 45      | 2,5     | 32.403,36             | 0,00                | ONWAAR           |  |

|    |    |        |    |           |           |    |     |            |           |        |
|----|----|--------|----|-----------|-----------|----|-----|------------|-----------|--------|
| 35 | AS | 810005 | PL | UNICO PC  | 12.459,17 | 30 | 2,0 | 24.918,34  | 0,00      | ONWAAR |
| 36 | VS | 11628  | PL | Elite Foo | 27.390,44 | 25 | 1,8 | 50.552,18  | 50.000,00 | ONWAAR |
| 37 | VS | 11276  | NL | De Vries  | 17.061,53 | 60 | 3,0 | 51.184,58  | 50.000,00 | ONWAAR |
| 38 | VS | 11322  | PL | PRO SPIC  | 51.880,00 | 18 | 1,6 | 83.008,00  | 0,00      | ONWAAR |
| 39 | VS | 11004  | MD | Stapinul  | 26.260,20 | 30 | 2,0 | 52.520,40  | 0,00      | ONWAAR |
| 40 | VS | 11566  | NL | ME-AT Le  | 27.834,60 | 30 | 2,0 | 55.669,20  | 0,00      | ONWAAR |
| 41 | VS | 11247  | NL | Oromar E  | 13.782,85 | 30 | 2,0 | 27.565,70  | 0,00      | ONWAAR |
| 42 | VS | 11124  | GH | Whitelar  | 55.020,00 | 30 | 2,0 | 110.040,00 | 30.000,00 | ONWAAR |
| 43 | VS | 11034  | BG | Campus I  | 63.304,20 | 30 | 2,0 | 126.608,40 | 30.000,00 | ONWAAR |
| 44 | VS | 11270  | NL | AnT Seaf  | 28.830,60 | 30 | 2,0 | 57.661,20  | 50.000,00 | ONWAAR |
| 45 | VS | 11561  | DE | Tillman's | 13.825,00 | 42 | 2,4 | 32.967,31  | 0,00      | ONWAAR |
| 46 | VS | 11634  | NL | VTM Qua   | 26.037,12 | 30 | 2,0 | 52.074,24  | 50.000,00 | ONWAAR |
| 47 | AS | 830053 | RU | Soltech L | 20.400,00 | 0  | 1,0 | 20.400,00  | 0,00      | ONWAAR |
| 48 | VS | 11405  | NL | Swinkels  | 20.277,00 | 56 | 2,9 | 57.934,29  | 45.000,00 | ONWAAR |
| 49 | VS | 10234  | BE | Vleesw.F  | 15.157,70 | 60 | 3,0 | 45.473,11  | 0,00      | ONWAAR |
| 50 | VS | 11575  | ES | EQUIPOS   | 13.755,75 | 30 | 2,0 | 27.511,50  | 15.000,00 | ONWAAR |
| 51 | VS | 10181  | MY | Erofoma   | 13.634,40 | 90 | 4,0 | 54.537,60  | 30.000,00 | ONWAAR |
| 52 | VS | 10045  | NL | Azur Seat | 11.344,56 | 30 | 2,0 | 22.689,12  | 0,00      | ONWAAR |
| 53 | VS | 11341  | BE | Vamix NV  | 10.713,60 | 60 | 3,0 | 32.140,80  | 0,00      | ONWAAR |
| 54 | VS | 11226  | DE | Vink + Co | 16.990,00 | 30 | 2,0 | 33.980,00  | 0,00      | ONWAAR |
| 55 | VS | 11328  | NL | Aviko B.V | 21.637,78 | 30 | 2,0 | 43.275,57  | 40.000,00 | ONWAAR |
| 56 | VS | 11368  | SK | Forbak s. | 11.346,80 | 45 | 2,5 | 28.367,00  | 20.000,00 | ONWAAR |
| 57 | VS | 10395  | IS | Samhent   | 21.293,00 | 0  | 1,0 | 21.293,00  | 0,00      | ONWAAR |
| 58 | VS | 10135  | BE | Luka N.V. | 11.453,90 | 26 | 1,9 | 21.476,06  | 0,00      | ONWAAR |
| 59 | AS | 830031 | BG | RIGANA S  | 21.506,00 | 30 | 2,0 | 43.012,00  | 0,00      | ONWAAR |
| 60 | VS | 11614  | UA | LLC unive | 39.872,40 | 0  | 1,0 | 39.872,40  | 0,00      | ONWAAR |
| 61 | VS | 11191  | LT | UAB Nan   | 11.288,25 | 45 | 2,5 | 28.220,63  | 20.000,00 | ONWAAR |
| 62 | VS | 11133  | MK | Forbak d  | 18.241,20 | 60 | 3,0 | 54.723,60  | 0,00      | ONWAAR |
| 63 | VS | 10786  | NL | Poelierst | 10.150,80 | 30 | 2,0 | 20.301,60  | 6.000,00  | ONWAAR |
| 64 | VS | 10175  | GR | AVENCO S  | 7.947,40  | 90 | 4,0 | 31.789,60  | 15.000,00 | ONWAAR |
| 65 | VS | 11375  | NL | NewForre  | 35.500,80 | 30 | 2,0 | 71.001,60  | 60.000,00 | ONWAAR |
| 66 | VS | 11240  | BG | Pimel Fo  | 11.384,75 | 30 | 2,0 | 22.769,50  | 10.000,00 | ONWAAR |
| 67 | VS | 11372  | HR | Forbak d  | 7.841,80  | 60 | 3,0 | 23.525,40  | 20.000,00 | ONWAAR |
| 68 | VS | 11260  | PL | Madpol E  | 10.150,00 | 30 | 2,0 | 20.300,00  | 10.000,00 | ONWAAR |
| 69 | AS | 810049 | PL | TARCZYŃ   | 18.712,32 | 30 | 2,0 | 37.424,64  | 0,00      | ONWAAR |

Debtors from which data is missing:

| 1  | Customer 2021 |       |        |            |                           |         |         |                       |                     |        |         |  |
|----|---------------|-------|--------|------------|---------------------------|---------|---------|-----------------------|---------------------|--------|---------|--|
| 2  | Compa         | omer  | Countr | Custor     | Highest sales last 15 mon | Betalir | Betalir | Benodigde kredietlimi | Huidige kredietlimi | Limiet | doende? |  |
| 3  | VS            | 11193 | IR     | Emrariar   | 17.800,00                 | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 4  | VS            | 11131 |        |            | 15.000,00                 | #N/B    | #N/B    | #N/B                  | #N/B                | #N/B   |         |  |
| 5  | VS            | 11298 | NL     | FishPartr  | 9.504,00                  | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 6  | VS            | 11622 | DE     | Wulff Fle  | 4.872,00                  | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 7  | VS            | 11089 | BE     | Life Supp  | 3.750,00                  | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 8  | VS            | 11621 | NL     | Handels    | 2.750,00                  | 30      | 2,0     | 5.500,00              | #N/B                | #N/B   |         |  |
| 9  | VS            | 11091 | NL     | GEA-CFT    | 871,50                    | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 10 | VS            | 11597 | PL     | Zaklad Pi  | 834,10                    | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 11 | VS            | 11623 | ID     | Pt. Wira I | 642,00                    | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 12 | VS            | 11577 | NL     | Van Loor   | 417,50                    | 30      | 2,0     | 835,00                | #N/B                | #N/B   |         |  |
| 13 | VS            | 11620 | DE     | Handtma    | 198,00                    | #N/B    | #N/B    | #N/B                  | #N/B                | #N/B   |         |  |
| 14 | VS            | 11599 | DE     | GBB TK G   | 9.154,00                  | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |
| 15 | VS            | 11567 | NL     | Group of   | 620,00                    | #N/B    | #N/B    | #N/B                  | #N/B                | #N/B   |         |  |
| 16 | VS            | 11539 | NL     | Moy Park   | 638,25                    | #N/B    | #N/B    | #N/B                  | 0,00                | #N/B   |         |  |

# Credit limit process

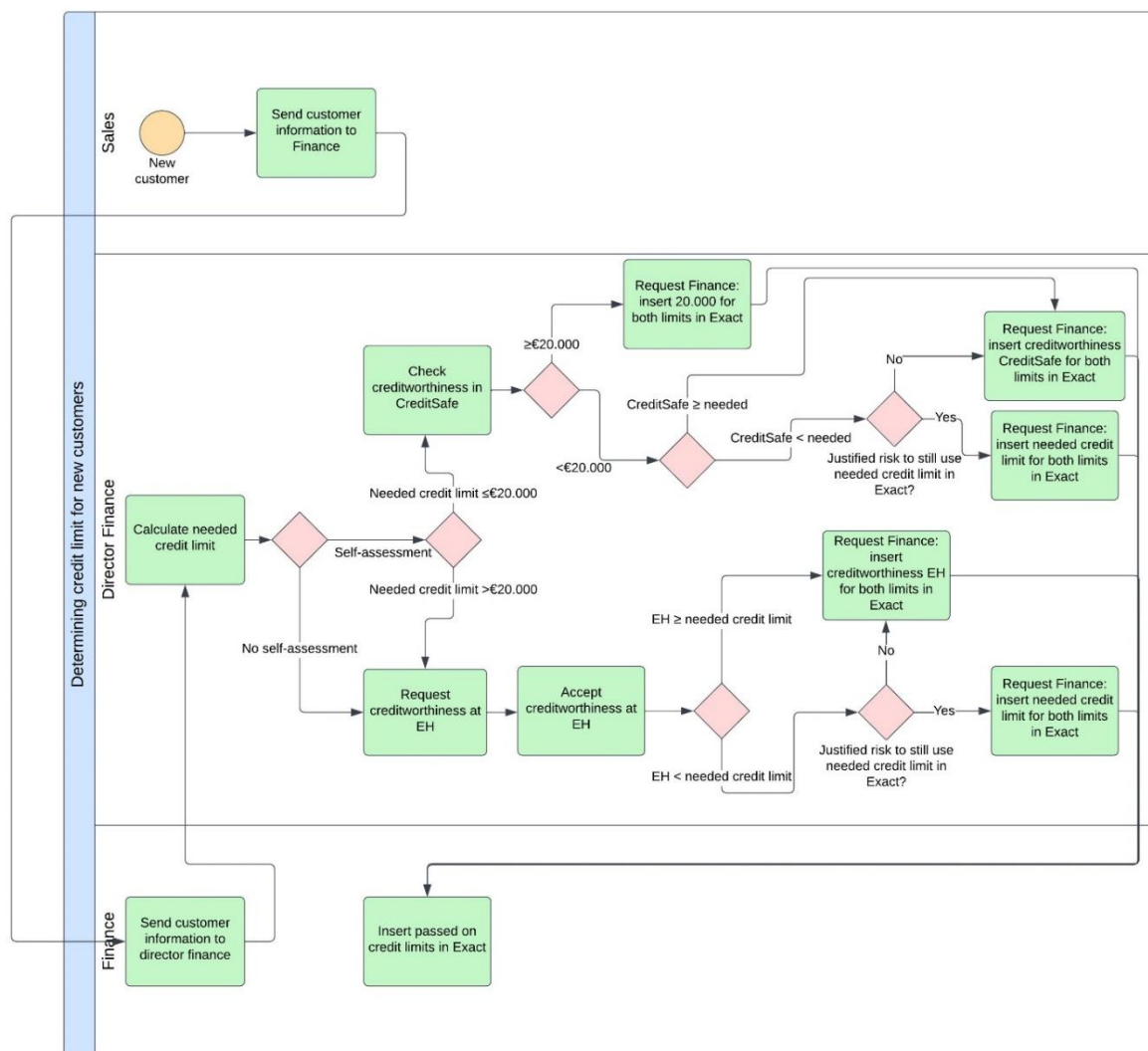
Vaess – Dutch Food Engineers

Process credit limits:

- Request for credit limit
- Change of existent credit limits
- Monitoring of existent credit limits within the credit insurance

Vaessen-Schoemaker B.V.  
Dutch Food Engineers  
Munsterstraat 22  
7418 EV Deventer

## Request for credit limit



### Explanation:

For every new customer, it is important to set the height for a credit limit. The first step is that the customer information will be send to Finance, who sends this information afterwards to the Director Finance. Next, the Director Finance will calculate the needed credit limit for the customer. This will be done based on the expected turnover (per month) and the payment term.

After that, there will be looked at the country where the customer is located. When this country belongs to the category self-assessment<sup>8</sup>, there must be checked if the needed credit limit  $\leq$  €20.000. When this is the case, there will be looked at the creditworthiness of the customer in Creditsafe. When this is larger than or equal to €20.000, than finance will be requested to import the limit in Exact.

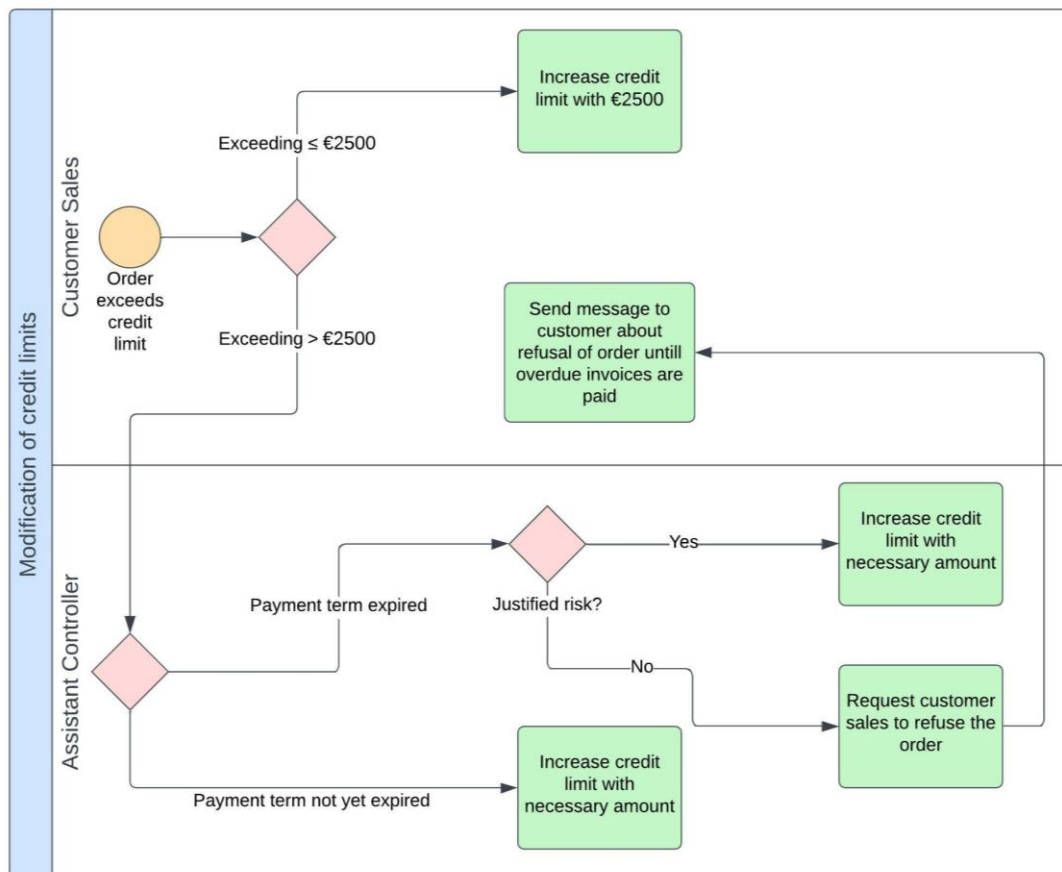
When the creditworthiness in Creditsafe is smaller than €20.000, than there will be looked if this value is higher or lower than the needed credit limit. In case it is higher, than the creditworthiness from Creditsafe will be applied in Exact. In case is it lower, than there will be considered if it is a

<sup>8</sup> Austria, Belgium, Switzerland, Germany, Denmark, Finland, France, United Kingdom, Ireland, Liechtenstein, Luxembourg, Norway, Sweden, Netherlands

justified risk to use the needed limit anyway. When this cannot be seen as a justified risk, then the creditworthiness from Creditsafe will be imported in Exact.

When a company does not belong to the category self-assessment or when the needed credit limit > €20.000, then the needed credit limit will be requested at Euler Hermes. Next, this limit will be accepted in all cases<sup>9</sup>. Afterwards, there will be looked if this limit is larger or smaller than the needed credit limit. In case it is larger or equal to the needed credit limit, Finance will be requested to insert this limit in Exact. In case it is smaller than the needed credit limit, there will be considered if it is a justified risk to use the needed limit anyway<sup>10</sup>. If this is not a justified risk, then the credit limit from Euler Hermes will be inserted in Exact by Finance.

### Monitoring credit limits



Explanation:

For every order that exceeds the credit limit, there must be considered if the risk on debtor loss can be taken. If an order exceeds the limit, an Customer Sales employee can firstly check if this exceeding is smaller than €2500. If this is the case, then the employee is allowed to increase the credit limit in Exact with €2500.

<sup>9</sup> This will be done, because of the minimum insurance premium, which has not been reached yet.

<sup>10</sup> For this consideration, there can be looked at the payment history of the customer and at the creditworthiness in Creditsafe.

When the exceeding is larger than €2500, the assistant controller will be asked to assess the risk. Firstly, he will check if the payment term is already expired. If this is not the case, he will increase the current credit limit. If this is the case, then it has to be considered if it is an justified risk, based on:

- A difference between creditworthiness in Creditsafe and Euler Hermes
- Payment history of the specific customer

If there will be decided that it is a justified risk, then he will increase the credit limit with the needed amount. If it is not a justified risk, he will request Customer Sales to reject the order, until outstanding bills have been paid.

One important aspect within this process, is the fact that modified credit limits must be set back to the limit of Euler Hermes, after an order has been placed. Therefore, if a credit limit must be increased temporarily, it will be set to €999.999. Every week, a rapport must be made, which makes it visible for which debtors the limit is equal to €999.999 in Exact. The finance department will receive this rapport weekly, and they can set the credit limits back to their original value. In this way, it is not possible to transgress the credit limit repeatedly, without considering the risks.



# Appendix D: KPI dashboard

| OrderR | Saldo EU  | Debiten | Order      | Delivery Note | Welke week? | Aantal werkdagen | Week | Totaal per week | Te laat per week | Optijd per week | Feestdagen | Aantal dagen te laat | Frequentie |
|--------|-----------|---------|------------|---------------|-------------|------------------|------|-----------------|------------------|-----------------|------------|----------------------|------------|
| 131547 | -2.671,11 | 11375   | 23/08/2021 | 23-8-2021     | 35          | 1                | 1    | 0               | 0                | 0               | 25/12/2020 | 1                    | 17         |
| 131900 | -4.007,20 | 11614   | 27/10/2021 | 23-11-2021    | 48          | 20               | 2    | 26              | 23               | 3               | 26/12/2020 | 2                    | 22         |
| 129947 | -5.940,68 | 11193   | 07/12/2020 | 6-1-2021      | 2           | 21               | 3    | 23              | 13               | 10              | 01/01/2021 | 3                    | 19         |
| 129957 | -764,28   | 11042   | 08/12/2020 | 4-1-2021      | 2           | 18               | 4    | 16              | 11               | 5               | 02/04/2021 | 4                    | 12         |
| 129989 | -2.764,30 | 11081   | 16/12/2020 | 4-1-2021      | 2           | 12               | 5    | 26              | 23               | 3               | 04/04/2021 | 5                    | 11         |
| 129954 | -1.964,90 | 11042   | 08/12/2020 | 4-1-2021      | 2           | 18               | 6    | 11              | 5                | 6               | 05/04/2021 | 6                    | 17         |
| 129955 | -295,74   | 11042   | 08/12/2020 | 4-1-2021      | 2           | 18               | 7    | 15              | 6                | 9               | 27/04/2021 | 7                    | 11         |
| 129989 | -2.764,30 | 11081   | 16/12/2020 | 4-1-2021      | 2           | 12               | 8    | 22              | 13               | 9               | 05/05/2021 | 8                    | 27         |
| 129954 | -1.740,34 | 11042   | 08/12/2020 | 4-1-2021      | 2           | 18               | 9    | 40              | 34               | 6               | 13/05/2021 | 9                    | 34         |
| 129955 | -985,80   | 11042   | 08/12/2020 | 4-1-2021      | 2           | 18               | 10   | 10              | 9                | 1               | 23/05/2021 | 10                   | 46         |
| 129944 | -6.280,80 | 11257   | 07/12/2020 | 4-1-2021      | 2           | 19               | 11   | 12              | 6                | 6               | 24/05/2021 | 11                   | 92         |
| 130054 | -2.844,72 | 11081   | 05/01/2021 | 5-1-2021      | 2           | 1                | 12   | 12              | 7                | 5               | 25/12/2021 | 12                   | 82         |
| 129940 | -676,56   | 11008   | 04/12/2020 | 5-1-2021      | 2           | 21               | 13   | 17              | 16               | 1               | 26/12/2021 | 13                   | 67         |
| 129987 | -2.844,72 | 11081   | 15/12/2020 | 5-1-2021      | 2           | 14               | 14   | 32              | 21               | 11              |            | 14                   | 60         |
| 129940 | -677,47   | 11008   | 04/12/2020 | 5-1-2021      | 2           | 21               | 15   | 7               | 6                |                 |            | 15                   | 15         |
| 129987 | -2.923,74 | 11081   | 15/12/2020 | 5-1-2021      | 2           | 14               | 16   | 15              | 6                |                 |            | 16                   | 43         |
| 129978 | -3.754,17 | 11331   | 11/12/2020 | 6-1-2021      | 2           | 17               | 17   | 13              | 9                |                 |            | 17                   | 50         |
| 129995 | -1.773,50 | 10156   | 17/12/2020 | 6-1-2021      | 2           | 13               | 18   | 6               | 3                |                 |            | 18                   | 38         |
| 129980 | -1.694,00 | 10044   | 11/12/2020 | 6-1-2021      | 2           | 17               | 19   | 16              | 13               |                 |            | 19                   | 19         |
| 129995 | -1.533,64 | 10156   | 17/12/2020 | 6-1-2021      | 2           | 13               | 20   | 9               | 3                |                 |            | 20                   | 25         |
| 130032 | -8.854,10 | 11112   | 24/12/2020 | 6-1-2021      | 2           | 8                | 21   | 30              | 26               | 4               |            | 21                   | 12         |
| 129979 | -2.680,00 | 11331   | 11/12/2020 | 6-1-2021      | 2           | 17               | 22   | 11              | 8                | 3               |            | 22                   | 19         |
| 129937 | -3.971,37 | 10039   | 03/12/2020 | 6-1-2021      | 2           | 23               | 23   | 15              | 12               | 3               |            | 23                   | 14         |
| 129980 | -1.651,65 | 10044   | 11/12/2020 | 6-1-2021      | 2           | 17               | 24   | 21              | 14               | 7               |            | 24                   | 14         |
| 129994 | -658,88   | 11390   | 17/12/2020 | 8-1-2021      | 2           | 15               | 25   | 25              | 19               | 6               |            | 25                   | 8          |
| 129969 | -397,56   | 11008   | 10/12/2020 | 11-1-2021     | 3           | 21               | 26   | 23              | 15               | 8               |            | 26                   | 13         |
| 129946 | -715,00   | 11124   | 07/12/2020 | 14-1-2021     | 3           | 27               | 27   | 15              | 12               | 3               |            | 27                   | 7          |
| 130118 | -715,00   | 11124   | 14/01/2021 | 14-1-2021     | 3           | 1                | 28   | 7               | 6                | 1               |            | 28                   | 5          |
| 130009 | -1.676,85 | 11008   | 18/12/2020 | 8-1-2021      | 2           | 14               | 29   | 22              | 19               | 3               |            | 29                   | 6          |
| 130090 | -2.773,05 | 10067   | 08/01/2021 | 12-1-2021     | 3           | 3                | 30   | 27              | 23               | 4               |            | 30                   | 1          |

|   |                      |        |
|---|----------------------|--------|
| 1 | Totaal aantal orders | 903    |
| 9 | Aantal optijd        | 216    |
| 4 | Aantal te laat       | 687    |
| 3 | Percentage optijd    | 23,92% |
| 3 | Percentage te laat   | 76,08% |

| Aantal dagen te laat | Frequentie |
|----------------------|------------|
| 4                    | 12         |
| 5                    | 11         |
| 6                    | 17         |
| 7                    | 11         |
| 8                    | 27         |
| 9                    | 34         |
| 10                   | 46         |
| 11                   | 92         |
| 12                   | 82         |
| 13                   | 67         |
| 14                   | 60         |
| 15                   | 75         |
| 16                   | 43         |
| 17                   | 50         |
| 18                   | 38         |
| 19                   | 19         |
| 20                   | 25         |
| 21                   | 12         |
| 22                   | 19         |
| 23                   | 14         |
| 24                   | 14         |
| 25                   | 8          |
| 26                   | 13         |
| 27                   | 7          |
| 28                   | 5          |
| 29                   | 6          |
| 30                   | 1          |
| 31                   | 2          |
| 32                   | 2          |
| 33                   | 1          |
| 34                   | 1          |
| 35                   | 1          |
| 36                   | 0          |
| 37                   | 0          |

Chart Title