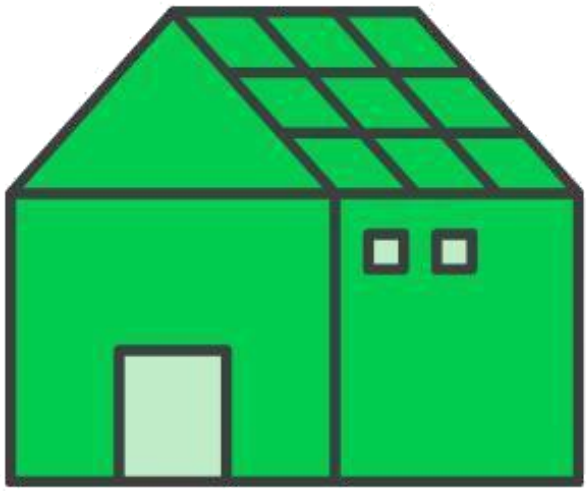


PROJECT PLAN

Group 4

Anna Chernova, Izabella Bogdanova, Yazan Fattal, Gijs Wijngaards, Sjoerd Heijmann

21/11/2021

TABLE OF CONTENTS

1.PROJECT STATEMENT

This document's main aim is to provide all relevant information on the project **"Sicreuq BV - Carleon Europe BV."** Following that, details about the company, its stakeholders, and its current situation. In a more project-oriented manner, the project problem, goal, deliverables, and constraints are presented. Furthermore, the phasing for this segment will indicate the stages in which this project will be completed, as well as a representation of the project schedule from start date till end date.

INTRODUCTION TO THE COMPANY

1.1 COMPANY THAT GAVE AN ASSIGNMENT.

Sicreuq is an information consultant who helps businesses streamline and optimize their processes by offering insight into complex business and enterprise software. Their main strategy is to deliver unique solutions for a variety of difficulties.

Their methodology is not sector-specific, although it focuses on businesses with 25 to 500 people in industries such as service, welfare and health care, education, and wholesale. It is familiar with a variety of platforms and has developed its own software, including the Sicreuq Business Portal, HR Portal, IFR (for purchase invoicing), and Credit Management Portal. Power BI and SQL are examples of applications that Sicreuq uses.

Sicreuq was assigned a case involving the corporation Carleon, which was dealing with a range of issues relating to various elements of the business. As a result, Sicreuq assigned the cases to us as their employees for us to analyze and improve their service.

1.2 THE COMPANY WITH THE CASE

Carleon was created in 1993 as an anti-squat company that provides temporary housing for home-seekers and offers a layer of support to owners of abandoned real estate by installing temporary inhabitants. They also assessed, in collaboration with the owner, which areas of a building's tenants are required for best security against squatters and vandalism. Another crucial component of the company's image is its residents. Their prospective occupants are required to have liability and household contents insurance.

Carleon is now the market dominant player for unoccupied property management. The Netherlands, the United Kingdom, France, Germany, Ireland, Finland, Denmark, and Belgium are the nations in which they currently operate. They are no longer anti-squatter companies par excellence, but instead operate in a variety of business divisions such as property management, security, real estate development, and maintenance, in addition to their excellent geographical location, Carleon offers a unique and entirely distinct set of services, allowing them to serve an exceptionally large consumer group.

For a development firm like Carleon, there is a variety of data that must be handled, not to mention new customers and overdue payments, alongside a lot of other issues that have yet to be identified. As a result, the Sicreuq was devised as a beneficial way for such emergence. All this information can be found in the document's appendix.

PROJECT LEAD & PROJECT OWNER

In terms of determining responsibilities, our project will have a project leader and a project owner who will operate as our stakeholders. The foregoing is their contact information.
The project leader is **Gijs Wijngaards**. The contact details can be found below.

Email: gijs.wijngaards@student.fontys.nl
The product owner for this project is **Marco Hormes**, who is also a supervisor of the project itself. The contact details can be found below.
Email: marco.hormes@fontys.nl

Together, they will guide us and collect our feedback before we launch our solution. Their feedback will decide if the solution is ready to move into the next phase and get published.

CURRENT SITUATION

Exact software is a new breakthrough at Carleon. This program's main purpose is to make it easier to keep track of all necessary data and make it easy to access for employees within the company's financial and customer service divisions. It is used to centralize the finances for all Carleon company units. This contrasts with the component of the company's financial process that deals with invoicing, deposits, approval forms, and a variety of other money-related processes.

Exactly allows employees of Carleon to put their focus on optimizing and professionalizing the information provision in the functional and technical fields. As well as gaining insight into costs to be able to control such valid information, it also allows improvement towards quality and cost savings. Problem Description

The issues from the presented **"Sicreuq BV - Carleon Europe BV"** scenario is provided during talks with the CEO and within the Exact software application, that delivers all the necessary data for investigation and problem recognition. As a result, the following issues arise:

Issues:

a. Employees have no idea how to use the Exact program.
b. The financial overhead at the office is excessive.
c. The workload is significant which leads to more additional needs for the department.
d. Quotations for the suppliers demand more time than is required.
e. Lose unnecessary money for suppliers because of payment delay.
f. The process of invoicing is delayed on timing due to being on the paper.
g. The quantity of overdue invoicing is increasing.

PROJECT GOAL

The purpose of this project is to improve Carleon's corporate service as well as their existing financial situation. The goal is to investigate Carleon's financial situation, including money lost through consumers, activities, and other data-related information, and to provide a long-term solution for them.

This goal should result in several releases by the end of the month of *January 28th, 2022*.

PRE-CONDITIONS FOR THE PROJECT

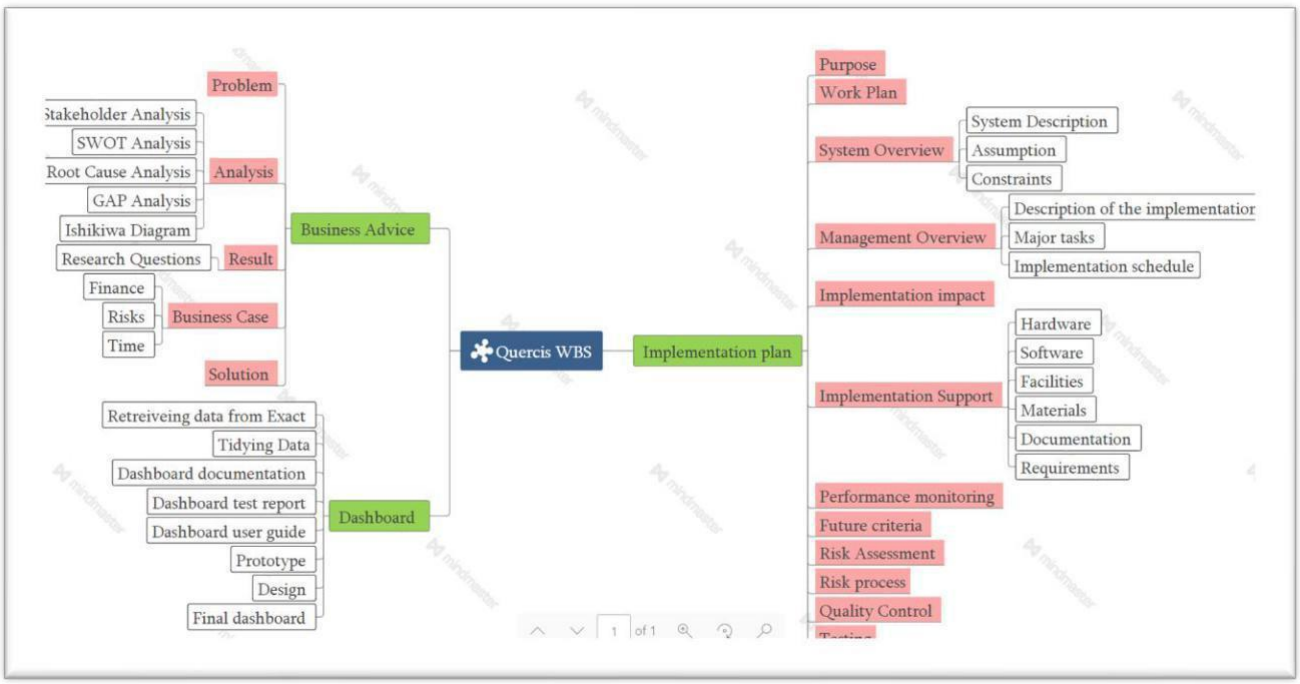
As for the project's pre-conditions, they will allude to the demand that has been placed on us and will allow us to work through the project. As a result, in terms of the setting, it is a university project that was supported by an existing company. The information about the company was inclined within the given case, as were the materials that were presented to us. Following, we were given a detailed database of materials that included a variety of information for our use, such as finances, dates, and other important data tables. Another set of pre-conditions could be customer meetings, which will give us a better idea of where we stand with the work we're doing on this project and allow us to track our progress and product development.

PROJECT DELIVERABLES

Project deliverables are crucial aspects of a project since they refer to the items which will be executed during the period of the project, as well as their contribution and deliverable in the entire project's duration.

Work breakdown structure is a hierarchical outline of the tasks required to complete a project. Breaking it down into smaller steps means work can be done by one or more team members, leading to better results.

There are three categories for each task: business advice, dashboard, implementation plan. Afterwards, we make a work breakdown structure for these categories. Then we implement the activities which will be used to complete such categories.



Using the brainstorm and the work-breakdown structure, we have an overview of all the activities. We will consider each activity as a task and make a list of the expected duration in weeks.

STEP	DESCRIPTION	PREDECESSOR	DURATION
A	Business Advice	-	6 weeks
B	Problem	-	4 weeks
C	Analysis	B	4 weeks
D	Result	B, C	2 weeks
E	Business Case	A,B,C,D	2 weeks
F	Solution	B,C,D,E	5 weeks
G	Implementation Plan	A,B,C,D,E,F	4 weeks
H	Purpose	H	1 week
I	Work Plan	G, H	2 weeks
J	System Overview	I, G	1 week
K	Management overview	I, G	1 week
L	Implementation Impact	I, G	1 week
M	Implementation Support	I, G	1 week
N	Performance Monitoring	I, G	1 week
O	Future Criteria	G	1 week
P	Risk Assessment	R, G	2 weeks
Q	Quality Control	R, Ab	3 weeks
R	Risk Process	R, Ab, Q	1 week
S	Testing	R, Ab, Q, S	1 week
T	Dashboard	G, R, Ab, Q, S, R	8 weeks
U	Retrieve data from Exact's	-	1 week
V	Tidying Data	U	1 week
W	Dashboard Documentation	G	2 weeks
X	Dashboard test report	G	2 weeks
Y	Dashboard user guide	G	2 weeks
Z	Prototype	U, V	3 weeks
Aa	Design	Z	3 weeks
Ab	Final Dashboard	Aa	1 week

To get a clear view of this table, the step represents the naming of the task, which is description, then the predecessor in this table means, that first we need to start with defining the problem and only then start with analysis.

PROJECT CONSTRAINTS

Project constraints are a major aspect of this project since they outline the project's limitations and actions, as well as how they affect the project's quality and achievement. The following are some of the project constraints.

Time constraint - The project assignment must be finished within 18 weeks (about 4 months).

Resource constraint - To finish the project we have been allocated no budget or special equipment. Also, there is only limited opportunity and time to talk with the client and ask for their feedback.

Scope constraint - The work that must be finished in specified time with all deliverables.

Quality – The outcome of all deliverables must coincide with what the client wants and his expectations about the project.

Dependencies with other applications – We were provided with an Exact application which contains data that is used in SQL software too. The dashboard must be made in Power BI.

PROJECT RISKS

Risks	Probability	Impact on the project	Steps to prevent risk
Misunderstandings/ conflicts within the project group.	Medium	High	Talks amongst team members and frequent check-ups on everyone's work.
Technical issues with the Exact database.	Low	Medium	Consult teachers for assistance with the program. Research possible solutions online and in the user manual.
Time constraints	High	High	Divide the work amongst group members and set priorities for what needs finishing when.
Application problems. (PowerBI, Exact)	Medium	High	Do more research into specific applications. If the problems are of substantial importance, ask a teacher for aid.

2.PROJECT PLANNING

INTRODUCTION

Timing and planning are extremely important aspects of this project's work. There will be a phasing estimate whereas a clear schedule and delivery of the results can be followed, as well as the quantity of work that will be kept in. At the start of the project the team made some agreements to be able to reach the goals mentioned later, which are essential and agreed upon in a contract that can be found in the document's appendix.

ASSUMPTIONS

In this section, we're assuming that, owing to the length of our project, we'll have weekly team meetings every week, ranging from one to two meetings per week, in order to apply personal deliverables, feedback, and evaluation to each of our tasks. Another assumption that could be made is the timing of work that each group member does. Depending on the task, each group member relies on a follow-up deadline to complete their task, which could take anywhere from 30 minutes to 5 hours.

PROJECT PHASING

2.1 METHODS

For our project we are obliged to use methodologies which are a set of guiding principles and processes used to plan and execute projects. The methodology we choose determines how our work is prioritized and completed.

We appoint to make a mix of methodology which contains *agile* and *waterfall* techniques. Agile and waterfall are unique methodologies of procedures to finish tasks or work items. Agile is an iterative technique that contains a cyclic and collaborative process. Waterfall is a sequential technique that also can be collaborative, however responsibilities are usually dealt with in an extra linear process.

As a result, we decided to use a combination of methodologies because of our capacity to be flexible and always be able to step back and analyze our approach as an agile, as well as contribute to a specific item with more direct and clear performance as in a waterfall. This combination allows us to be flexible while also learning from the project's development.

2.2 SPRINTS

The estimated time for completing this project is 18 weeks (about 4 months). The deliverables will be divided into 2 main phases and 4 sprints in-between.

- **Initial phase (week 1-6)** – This phase is also the getting to know phase, we will get started with familiarizing ourselves with the problems which our client is experiencing. Furthermore, we will do the necessary research and deliver the first part of our documentation, which also includes the project plan, business advice and business case.
- **Sprints (7-18)** – During this we will execute our proposed solution. Here we will be working on our deliverables. In the last week we will submit our project report and give a presentation.

Initial phase **Week 1-6**	Business advice with the business case. Project Plan.
Sprint 1 **Week 7-12**	After receiving feedback, we will finalize the business advice with the business case. Create a draft version of implementation plan. Research necessary topics for the dashboard. Create a mock design for the dashboard.
Sprint 2 **Week 13-18**	Implementation plan. Finished dashboard. Extensive written report. Presentation of the project.

2.3 REQUIRED SKILLS

To complete this project as a unit, we will need to be able to tackle a variety of skills. There are two sorts of abilities that will be used in this project: soft and hard skills. For this project, it is a more personally created technique for soft skills, but it still contains a team effect. When it comes to hard skills, which are more technical and business-oriented, there are always improvements to be made, as well as the learning process, which will include classes and individual research. The following are the skills that will be used in this project:

Soft Skills	Hard Skills
Communication	SQL
Teamwork	Power BI
Creativity	Data analysis
Problem Solving	Business analysis
Flexibility	Business management
Critical thinking	Finance
Time management	

GANTT CHART

The Gantt chart helps us stay on track with our deadlines and deliveries by displaying the days we worked on a given objective and the time it took us to get there. Each of the dates indicated represents our timeline and the things we are working on to complete our project on schedule.

Task ID	Task Name	Start Date	End Date	Duration (In Days)	06/09/2021	13/09/2021	20/09/2021	27/09/2021	04/10/2021	11/10/2021	18/10/2021	25/10/2021	01/11/2021	08/11/2021	15/11/2021	22/11/2021	29/11/2021	06/12/2021	13/12/2021	20/12/2021	24/12/2021
T01	Project Plan	06/09/2021	04/10/2021	28																	
T02	Business Advice	06/09/2021	04/10/2021	28																	
T03	Research topics of Dashboard	11/10/2021	08/11/2021	28																	
T04	Mock Design Dashboard	11/10/2021	08/11/2021	28																	
T05	Implementation plan	15/11/2021	20/12/2021	28																	
T06	Test Report (Validation of Dashboard)	15/11/2021	20/12/2021	35																	
T07	Dashboard User Guide	15/11/2021	20/12/2021	35																	
T08	Extensive written report	15/11/2021	20/12/2021	35																	
T09	Final Dashboard	15/11/2021	20/12/2021	35																	
T10	Final Presentation	24/12/2021	24/12/2021	1																	

3.RESEARCH

RESEARCH QUESTIONS

3.1 MAIN RESEARCH QUESTION

- Is the financial situation of Carleon satisfactory?

3. 2 SUB-QUESTIONS

1. What leads to customers paying late?

2. What can we do to decrease the time between customers getting an invoice and the customer paying the invoice?

3. How is the unpaid money divided among our customers?

4. What is needed to make sure the streamlined process is followed in the future?

5. What is the current days sales outstanding?

RESEARCH DESIGN

To come to conclusions, research is necessary to conduct. For our project we need to conclude facts from the given database as well as researching through reading papers and articles. Below the methods used are described per question to give an idea of how we are planning to get concrete answers.

RESEARCH QUESTION 1: WHAT LEADS TO CUSTOMERS PAYING LATE?

For this research question we first want to explore the available data for any apparent patterns to see if there are case-specific conclusions we can draw from there. Furthermore, we need to research the topic of overdue payments and human behavioral explanations to the phenomenon by using credible papers and articles. We can then combine the information to find an answer to this research question, which leads to our overall conclusion and advice.

RESEARCH QUESTION 2: WHAT CAN WE DO TO DECREASE THE TIME BETWEEN CUSTOMERS GETTING AN INVOICE AND THE CUSTOMER PAYING THE INVOICE?

To answer this question, we need to explore the payment process from the customer's side to see whether there are bottlenecks and potential issues we could solve easily. Then we can use problems found in research question 1 and look for potential solutions. While we try to answer these questions, we need to check the data provided for backup of our findings to make sure we draw the correct conclusions and focus on the correct problems.

RESEARCH QUESTION 3: HOW IS THE UNPAID MONEY DIVIDED AMONG OUR CUSTOMERS?

This research question will also back up our findings and help us focus on the correct problems. By using invoice aging, we can determine if there are outliers within our customer group. It is also important to check the combined value of due payments, as this could differ a lot between separate customers. By concluding concrete numbers from the dataset, we can answer this question and make sure our focus is right.

RESEARCH QUESTION 4: WHAT IS NEEDED TO MAKE SURE THE STREAMLINED PROCESS IS FOLLOWED IN THE FUTURE?

This research question is not connected to the dataset. To answer this question, we need to explore the topic of employee training and business processes. We will draw conclusions from visualized processes to identify bottlenecks. In addition, we will draw general conclusions from credible research papers and articles. This will lead to a good understanding of how to make sure our advice will be a durable solution to the proposed problems.
By combining the findings of these four questions, we will be able to answer our main research question. If additional research is needed, this will be conducted in an analogous manner as the sub-questions, by using the dataset and credible research articles and papers.

RESEARCH QUESTION 5: WHAT IS THE CURRENT DAYS SALES OUTSTANDING?

For this research question, we looked at the evolution of the Daily Sales Outstanding to see how long it takes on average for a consumer to pay his account after receiving an invoice. It is a data-driven research question, and in order to generate a solution, we will use data to back up our results.

4.APPENDIX

Appendix 1

Contract Agreement

---

1. Purpose

This is a contract agreement that will define and track the rights and responsibilities of all six project participants. The following six parties will be observed: Yazan Fattal; Izabella Bogdanova; Anna Chernova; Sjoerd Heijmann; Nguyen Tan Quang; Gijs Wijngaards. All of the parties stated above will be bound by a partnership deal or other legal entity, and each party will continue to be responsible for their own commitment to this project as well as any future agreements between entities that will be stayed below.

2. Terms and Terminations

This agreement specifies a precise timeline by which all parties must agree on the end of this approach by January 17th.

3. Duties

In this project's labor and healthy cooperation, each side is loyal and trustworthy to the other. As a result, each group member must generate or be capable of performing particular tasks, such as:

3.1 Make research of the company.
3.2 Keep responsibilities for the meetings.
3.3 Establishing a project schedule and determining each phase.
3.4 Assigning tasks to project members.
3.5 Communication with the client.
3.6 Determine data related outcomes.

The responsibilities indicated above will not be utilized to their maximum potential by every single member of this group. As a result, the relevant ones will be assigned to each of the members individually, and they will be held accountable for their work effort and individual approach to this project. Which will be kept subsequently between members during their workflow.

4. Obligated Rules

All parties will agree on the basic set of rules and terms that will be observed throughout the project. The parties are required to obey them and rely on them collectively. Examples:

4.1 Be on time for the meetings.
4.2 Be aware of the work.
4.3 Attend group meetings.
4.4 Do your work.
4.5 Ask for help when its needed.
4.6 Meeting your deadlines.
4.7 Submit deliverables on time.
4.8 Communicate about your progress.
4.9 Be in touch with a mentor.
4.10 Be a team player.

These are some instances of the responsibilities that all parties must fulfill. It is a group commitment to the work in the overall progress and success of the project, but all participants should also develop as individuals while participating in the task.

5. Other provisions

If the parties do not follow the rules indicated in section.4, there are a number of unintended consequences that must be considered, even if the group member is not subject to the rule. As a response:

5.1 If the group member cannot be on time, then there should be a declared reason for his or her absence, preferably before the meeting.

5.2 If the group member is not aware of the work he or she must fulfill, then ask for help or state a reason for misunderstanding.

5.3 If a group member fails to show up for a meeting without warning, address the reason for the absence before it occurs.

5.4 If a group member fails to maintain his or her task, seek for assistance when needed or explain why the work is absent.

5.5 If the group member doesn't ask for help, speak with the teacher or your team.

5.6 If the group member doesn't meet the deadlines, then consider outcomes and declare the reasoning.

5.7 Consider the outside environment and worry about the individual as a team member if the group member fails to present deliverables on time.

5.8 If the group member doesn't communicate about his or her progress with other members, then be aware of the situation and be in contact with a mentor.

5.9 If a group member is not in contact with a mentor, be aware of the reasoning as a team and assess the team's overall communication with a mentor.

5.10 If a group member refuses to participate in a team project, explain why or speak with a mentor about it.

When a member of the team fails to comply with the previously agreed on rules, a warning will be given. After the third warning, said team member must provide lunch for the whole team.

Furthermore, if the party wishes to leave the project, the members must be informed in advance to maintain the workload and effectively complete the project without the departing member.

6. Ending statement

The parties have concluded the following cooperation agreement based on the above-described declarations and duties that are mentioned by all the parties in this agreement.

Signature

Name: Izabella Bogdanova; Anna Chernova; Gijs Wijngaards; Sjoerd Heijmann; Nguyen Tan Quang; Yazan Fattal.

Date: 02/09/2021

Appendix 2

1 CASE "SICREUQ BV – CARLEON EUROPE BV"

1.1 Introduction

An essential element in semester 3 is the Professional Task (ProfTask). In this ProfTask, a practical situation is simulated based on the case study "**Sicreuq BV - Carleon Europe BV**".

In this case, you are an employee of **Sicreuq Information Consultants (Sicreuq BV)**. With several colleagues from **Sicreuq BV,** you form a team that is responsible for setting up and executing a project for "**Carleon Europe BV**".

Sicreuq BV has been asked by "**Carleon Europe BV**" to:

- Issue substantiated advice on the future structure of the financial process.
- Develop a prototype for automating the financial process to support and optimise the business operations and administration of the company.

This document contains the background information that you can use for the implementation of your project:

- Brief information about the employer **Sicreuq BV**.
- Extensive information about the client "**Carleon Europe BV**". In addition to general information about the company and operational management, this document contains information about the current structure of the Information System, background information about the origin of the assignment, and information about the content of the assignment.

In addition to the information in this document, there are various options during the assignment to obtain additional information about the customer and his business operations.

The assignment must be concluded with:

- An extensive written report to the **employer** about the implementation and results of the project.
- A formal presentation to the **employer** on the implementation and outcomes of the project, including a short demonstration of the developed prototype.

We wish you a lot of fun and success.

1.2 Sicreuq Information Consultants

As information consultants, the employees of Sicreuq are working daily to provide insight into complex business and enterprise software and streamlining and optimising business processes. The premise is to provide practical and innovative solutions for various issues, which help organisations to realise their ambitions. This is done by combining managerial knowledge with the use of technology, software and creative people.

Sicreuq has two branches, one in Eindhoven and one in Zwolle. They are a team of 25 enthusiastic professionals—all people with exceptional qualities. From school-leaver to seasoned veteran, by linking experience with young talent, they can quickly switch between demand, knowledge and latest developments in the market.

Sicreuq does not work sector-specific but has the main focus on companies between 25 and 500 employees who are active in the following sectors:

- Services (B2B)
- Welfare and Health Care
- Education
- Wholesale

They know from experience that every business situation often requires a slightly different solution. That's why Sicreuq does things differently. There is no yes and amen, but a team that thinks critically. This requires flexibility from the staff, software solutions, but also the design of projects. That is why Sicreuq can execute projects based on actual costing, but it is also possible to perform projects based on "fixed price / fixed quality".

Sicreuq has knowledge of various platforms but also has its own software such as the Sicreuq Business Portal, HR portal, IFR (for purchase invoices) portal and Credit management portal. Exact's financial software is the common thread in Sicreuq 's solutions. Exact Globe is a solid basic financial ERP solution. It comprises market and process-oriented total solutions. With Exact Synergy, you achieve optimal cooperation between all departments within your company. Exact Synergy is a scalable solution and forms the basis for Sicreuq 's HR solution.

As an Exact partner, the cooperation with Exact is naturally close. Besides, there are also partnerships with software providers such as Scan Sys and Blueten. Microsoft SQL Server management studio is an important tool, and related to Business Intelligence, the Microsoft solutions Power BI or Reporting Services have been selected.

1.3 Carleon Europe BV, general information and company history

Carleon Europe was founded in 1993 as an anti-squat company in 's-Hertogenbosch. Two intelligent gentlemen saw that there were no reasonable solutions to combat squatting and set to work to offer owners of vacant real estate a thorough legal basis for the then-unknown concept of anti-squatting: the loan agreement. With this dual concept, they filled the void they found.

1. On the one hand, it offers a form of security to owners of vacant real estate by placing temporary residents. Vandalism, squatting, theft, impoverishment and technical damage are prevented.
2. On the other hand, it provides an economical temporary housing option for home-seekers. Residents are allowed to use a building for a small fee per month.

Also, in the late 1990s, Carleon took the lead over other providers by being the first to come up with a fire safety package for residents. In consultation with various fire departments, all residents purchase smoke detectors, fire extinguishers, fire blankets and obtain instructions on how to safely and responsibly live in vacant properties. Carleon inspects the safety and usage status of the building as well as the residents every month and reports this to the client. Carleon also does not necessarily opt for the maximum occupancy of a building, but strategic habitation. This means that together with the owner, it is examined in which places in a building habitation is necessary to achieve optimal protection against squatters and vandalism.

Carleon carefully selects its residents. After an extensive registration form has been completed, a prospective resident is always requested to come to the office. During the selection, mostly the responsibility of the prospective resident is looked at. They are compulsorily insured against liability and household contents.

In 2001, Carleon took the first steps across the border with the opening of an office in Brussels. Protection by the occupancy of vacant real estate is a typically Dutch invention that attracts a great deal of interest across national borders. The London office soon followed. The English market quickly adopted the concept, and in 2005, Carleon was awarded the prize for the best export product from the Dutch-British Chamber of Commerce: The NBCC Award.

Since its establishment, more than one hundred thousand residents have been placed through the loan agreement. Besides, there were only 26 summary proceedings because the borrowers refused to leave. All of these proceedings have been successfully won by Carleon.

Today, Carleon is the European market leader for vacant property management. They currently operate in 8 countries: the Netherlands, the United Kingdom, France, Germany, Ireland, Finland, Denmark and Belgium. In addition to this geographical growth, they are also working on further developing the range of tasks. They are no longer an anti-squatter company par excellence, but now operate four different business units :

- Property management
- Security
- Real estate development
- Maintenance

With this, Carleon offers a unique and totally distinctive package of services, enabling them to serve a very broad customer group extensively.

1.4 Business Units Carleon Europe BV

1.4.1 Property management

Real estate management of transformed and new construction projects.

The focus is on housing special target groups such as starters, young people, students, expats and status holders. The management is done not only for the Carleon Real Estate portfolio but also for third parties. They deal with administrative, commercial, technical and social management. Also, they focus on all conceivable forms of temporary rental; from rental based on the Vacancy Act to youth contracts and regular rental. The property management portfolio now has a larger size than the vacant property management portfolio.

Property Management of vacant real estate.

They manage vacant real estate on behalf of the owner and create, based on information provided by owners, a business case for the optimal mix of risk and yield management through a clever combination of Living, Working and Storage. Hereby, they serve all property owners, from Government to private owners. The speciality is an extensive pallet of flexible living and usage agreements. Property owners have their property quickly available at all times.

1.4.2 Security

There is a regular need for short-term security. This may be because an object is not suitable for temporary residence. As, for example, is the case on construction sites, where the need for security is high. Carleon has therefore set up its own Security Service.

In addition to the deployment of alarm cases, they are increasingly focusing on the development of High-Tech Security Services. Smart alternatives are offered for surveillance and security personnel. These services are provided in all European Carleon countries. The flagship is currently the High Tech camera mast, the Carleon Watchtower, developed by Carleon itself. A technical *tour de force* that translates into securing the largest number of square meters at the lowest cost.

1.4.3 Real estate development

Carleon Real Estate transforms offices and schools and realises new housing projects, especially for students and young people. Existing buildings that have lost their function, for example, former offices, are thoroughly renovated. The focus is on offering residential products such as independent studios/apartments of 20-65m2. This so-called Microliving Solution, a single household on a small surface, is the living trend of today! The ambition is to realise 3000 such homes in the 25 largest cities in the Netherlands in the next 5 years.

The rooms are always fully furnished at handover. Residents have their own kitchen and bathroom. Also, there are common areas (such as Karaoke Room, Cinema, Study Room, laundry salons and Comfort Seating). Because they provide all services from a single source, Carleon Property takes the entire rental process up on itself. Besides this, they work also as an administrator, developer and consultant for others.

1.4.4 Maintenance

Daily, weekly, monthly and incidental maintenance or assistance with an extensive analysis to arrive at a Multi-year maintenance plan? All buildings are well-maintained. This applies to the premises in the management as well as premises in possession of Carleon. They work with their own technical department,

with qualified and/or certified employees who can carry out the work in inspections. Based on the current laws and standards, this service provides all necessary safety and technical inspections (electricity, fire safety, legionella, asbestos). Safety is a top priority at Carleon. They, therefore, apply strict quality standards, meet various technical standards and have certifications in their pocket. This makes them highly distinguished in the vacant property sector. Greenery maintenance and winter maintenance are also being tackled.

Carleon continuously strives for improvement to continue to respond to market demands. This has built a reputation as a knowledge leader and innovator. The Campuses are a good example of this.

1.5 Policy and Management

1.5.1 Carleon Policy

The policymakers of the information and process optimisation within Carleon are Geert Joosten (CEO) and Harm Petersen (CFO). They must specify the broad outlines and determine where the focus will lie concerning process optimisation and information provision. Both realise that Carleon will only have a right to exist in the future if they go along with the lightning-fast development of automation, new payment options and information provision. Central to this is that everything aims at ease of use and operability for employees, (real estate) owners and residents/users.

Finally, Geert and Harm are supported in the policy program by Hendrik Trom (Business Analyst), Jorg Swaans (Controller) and Ted Proper (IT Coordinator); together, they are the policy team.

The policy program includes:

a) Optimising and professionalising the information provision in the functional and technical field. Gaining insight into costs to be able to control costs, taking into account automation, globalisation and Carleon's BPM. Improve and further implement ITIL, ASL and BiSL; Quality improvement and cost savings. Not waiting for enterprise-wide standardisation of applications, but tackle now! The possible option of outsourcing of ICT is discussed increasingly.

b) Increasing insight into effectiveness and efficiency. There is a great need for management reporting. The various business units need a continuous up-to-date overview of outstanding items, payment arrears and return statements. Of great importance is an integrated view of the business units. Top management needs management information and the financial position to control the company.

c) Introduction of (new) accounting program. Of course, it is not just about setting it up, but also about maintaining new systems and setting up externally-oriented management (support).
A security policy comes into play as well as improvements concerning backup and recovery.

A devilish dilemma that policymakers both grapple with is: 'Centralisation versus decentralisation'. The 'economy of scale' requires large central, robust, scalable systems with which all business units can work with. But on the other hand, there is the proven flexibility of current small systems that better suit the specific wishes and requirements of the various business units.

1.5.2 Information Services

Financial

On the website of Carleon, you can find that financial and administrative management is a mandatory part of renting out or lending out real estate. Outsourcing is sold as follows: "By outsourcing financial and administrative management to Carleon, you can be sure that everything is well organised. That way, you save time for other things."

A nice business case but also a point of attention for Carleon itself, because invoices are still sent by post, and you can only request a direct debit request by post. Purchase invoices are printed out and deposited with the responsible person at the office to sign for approval. In addition, bank statements are manually

checked and compared with what has actually been mutated in the bank account. And that, while a few years ago, Exact Globe was purchased to centrally record the financial administration for all business units. However, this does not seem to be used optimally yet.

Commercial

The purpose of commercial management is to get as much return as possible from the real estate that owners have placed with Carleon. This includes the complete recruitment-selection process, from planning visits to contract preparation and placing borrowers/lessees. But also the contact with residents/users during the rental, so both in the event of technical malfunctions and payment arrears of residents, the contact is picked up by Carleon. In order to work as efficiently as possible, good information and registration with regard to (prospective) residents and the real estate portfolio are necessary.

Carleon had previously Trimble Manhattan as an IWMS solution which is purely focused on internal management. All personal data and contact moments with (prospective) residents/users who arrive at the contact centre by e-mail or telephone are stored here, but also inspection reports, complaints and (maintenance) contracts are recorded and maintained by various employees on specific real estate projects or persons. This should take care that the staff are able to quickly and clearly see the history of people and projects. However, various employees within Carleon are not completely satisfied with the operation of this software.

New prospect registrations (customer as well as a project) are created with as much data as possible by the sales and recruitment and selection team. During the acceptance procedure, everything is recorded in Manhatten, and as soon as a home is allocated or a project is accepted, an employee changes the type prospect to customer. In addition, they inform their colleagues from the office staff and financial administration by e-mail that a new project or resident has been accepted and this should be included in the daily routine.

Also, this method is more or less equal to new complaints or incident reports: A new complaint is opened on the client or the project and as much information as possible is added, involved colleagues are again informed by mail and they perform their respective duties, after which the information should be updated and naturally the financial records also brought in order and completed before the complaint could be closed.

Technical

One last important tool for daily work is Betty Blocks. Betty Blocks is an hpaPaaS platform that offers the possibility to build applications for web and mobile without any programming knowledge. Also called a no-code application development platform.

Betty Blocks communicates with the CRM solution and is within Carleon mainly used by the technical service and property managers. Carleon employees can prepare inspection reports within Betty Blocks, enter meter readings and create incident/complaint reports, which are then linked as a PDF to the related project or person in the CRM system.

1.6 The origin of the assignment

Every month there is a brainstorming session with the policy team for process optimisation, where each member can indicate where he or she sees opportunities. Then there will be consultations about the progress of current projects and prioritisation. Recently another meeting took place, and it was not for the first time that it exploded during the exciting meetings.

Geert starts with the first item on his agenda that the overhead costs of dept. Finance is too high and must be reduced. Harm indicates that this is evident for the growth of the company, and Geert must see it in relation to the increased turnover. Jorg complains that the workload is already too high and that actually additional staff is needed for the Finance department. Henry does not consider this as a solution and sees opportunities to work more efficiently. There is too little structure, Geert wonders aloud how and if the new accounting software from Exact Globe is used? Harm and Jorg say that it is used, but that it takes some time to get used to it, and that they have always worked this way. This never caused problems in the past.

Besides, Geert has noticed a growth in the total number of outstanding invoices from tenants. When are the opening, monthly and final invoices collected? Is this on time? Also, it feels like the reminders of suppliers keep increasing. "What is the problem to pay on time and thus make use of favourable payment conditions? We lose unnecessary money", remarks Geert. Jorg blames the outstanding items of the tenants on the defaulters. "The quality of tenants in recent years has declined because of the increasing number; the selection is less strict". On the supplier's question, Jorg does have a likely answer, but because he is not entirely sure, he is trying to avoid an answer. Henry is again quite critical and indicates that the processes, the outdated way of working and poor information within Carleon are the culprits of several problems. There is a fierce discussion within the entire team, in which Geert intervenes and declares a break.

After the break Harm suggests to involve more expertise in and get Mieke, manager customer contact centre (KCC) and Sepp (business office - maintaining all supplier contacts). The problem is presented to both colleagues. Mieke thinks that she also noticed the growth in outstanding invoices, but she does not agree that this is due to the decreased quality of tenants. She indicates that there are few deliberate defaulters and that the selection procedure is still just as strict as before, but that processing is delayed. She spends a lot more time than before with calling tenants and sending one-off, start and end invoices as well as payment reminders. In addition, the KCC can see the history of complaints and incident reports, but no financial data. For this, they need to call the dept. Accounting, or refer a customer to this department. This leads to more work and frustration for both Jorg's department (who now nods eagerly), as well as that of Mieke.

Regarding the suppliers, Sepp indicates that this is absolutely not their fault. They always submit the purchase order in time to the approvers, before they are allowed to pay. But they have to wait too long until they receive it back signed and approved before they can pass it on to the Finance department. "And if we are on time to forward it to Finance, the invoice will remain there; I know how long" Sepp adds. Jorg, meanwhile getting more and more frustrated with all the commentary, says his hands are often tied, and he has to make do with whatever resources he has.

Sepp also indicates that they have lost a lot of time, due to requesting quotations from suppliers again. The number of suppliers has increased considerably, and they have to request quotes for everything in three

places, which is also irritating for some suppliers because they have to send new quotes every month for the same requests.

The blaming continues that this could become even worse by bringing in extra colleagues. After all, "the more souls, the more joy" does not always apply. Now it is Harm who indicates that it is time for a break to cool down. During the break, Harm has new inspiration and presents the following to the team:

We see several problems. The workload has increased for everyone due to the growth of Carleon and what used to be an excellent working method appears to be out of date in various respects. We can no longer fully retain the personal approach that we are known for, towards tenants and suppliers, and we will have to (partially) abandon this. Automate, analyse and inform (one another) better should become the new motto.

However, even though Ted (who so far has kept relatively neutral in the discussion) is an excellent IT coordinator and Hendrik an above-average analyst, Harm suggests to start a project with a third party for the analysis of the situation and ask for a proposal how this should be optimised. Ted and Hendrik will supervise this project together and hand over the following assignment to the third party (in this case, Sicreuq):

1. *We let Sicreuq advice on the organisational, functional and technical implementation of the Financial Administration and mutual information provision. Special attention should be paid to the balance between "doing it yourself" and outsourcing.*
2. *Let Sicreuq develop a prototype for the improvement of the management reports for all levels of Carleon as well as for several specific employees, to gain better insights in their appropriate situations.*

Everyone understood that this is a proposal to be able to prioritise and see where the most profit can be achieved so that ultimately the information, workload and financial records of Carleon can be brought under control again and made future-proof.

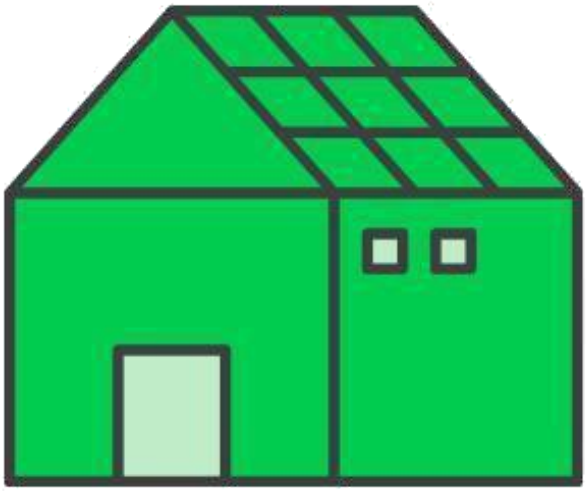
1.6.1 Carleon's assignment to Sicreuq

In the week after the collision in the management team, Harm Petersen has a meeting with the management of Sicreuq Information Consultants.

He informs the management about the background and the content of the job they want to provide.

- It is agreed that Sicreuq will start making a project proposal (PID). Based on this project proposal, Carleon will give the green light for the implementation of the project.
- To keep up to date and monitor the project continuously, Harm will review them regularly. In addition to these management presentations, Sicreuq will internally audit the project groups so that quality is guaranteed and the project groups will have the opportunity to interview Carleon employees.

Appendix 3



BUSINESS ADVICE

Group 4

Anna Chernova, Izabella Bogdanova, Yazan Fattal, Gijs Wijngaards, Sjoerd Heijmann

18/11/2021

TABLE OF CONTENTS

1.INTRODUCTION

1.1 SUMMARY

This business advice provides information and problem description about the case of "Sicreuq BV – Carleon Europe BV".

We found some issues:

1. Employees have no idea how to make use of the Exact program.
2. Lose unnecessary money for suppliers because of payment delay.
3. The process of invoicing is delayed on timing due to being on the paper.
4. The quantity of overdue invoicing is increasing.

Afterwards, we made business analysis in which we include stakeholder analysis, swot analysis, root cause analysis, gap analysis and ishikawa diagram. Therefore, we came up with research questions:

Main: Is the financial situation of Carleon satisfactory?

Sub-questions:

1. What leads to customers paying late?

We found that this could be due to the shame of having to pay, or sudden financial issues a customer might have.

2. What can we do to decrease the time between customers getting an invoice and the customer paying the invoice?

To solve a customer invoice process, we can provide some ideas to improve the situation about the customer paying the invoice in time. For instance: set non-negotiable due dates, customer invoice on time, offer payment by instalments, penalties for overdue payments and set email reminders.

3. How is the unpaid money divided among our customers?

We provided a graph Figure 5. Graph showing the total amount of money owed per age. From the following aging analysis, the total owed amount of €526.480,10 is divided between the ages as follows; 0-30: *€162.507,16*, 31-60: *-€60.392,49*, 61-90: *€26.153,69* and >90: *€277.426,75*. Then we also showed Figure 6. Graph showing the division of the owed money. It demonstrates the amount of money that the company hasn't received from customers within 2015 and 2016. And Figure 7. Graph showing the division of the amount of money that the company has not received from customers. It shows the total amount of money in millions during 2016. Indicating that the quantity of unpaid invoices increases, as seen in Figure 8. Graph showing the number of unpaid invoices based on the 2016 looking back at the past few months of 2016, it's clear that the number of outstanding invoices reached an all-time high.

4. What is needed to make sure the streamlined process is followed in the future?

We provided some techniques which company can implement in their case, such as workshops, employee morale and to consider is the possibility of an internal period of checks.

5. What is the current days sales outstanding?

We showed the Figure 9. Graph showing the days sales outstanding based on the date which represents the number of days that Carleon takes to get paid after invoicing. In other words, the faster a company collects payment from its clients, the faster it can pay its suppliers.

Then based on the results from the research questions the following recommendation is made to automate the process. As found in the GAP-analysis, the automation of the process would remove a lot of the nettle points currently encountered. Second, create the dashboard. The dashboard will enable for additional information and analysis of the company's financial situation, as well as a better understanding of the influence of their clients' account payable.

1.2 INTRO ABOUT THE BUSINESS ADVICE

We have been assigned to work on the **Carleon Europe BV** case as **Sicreuq BV** personnel. Our prospective role is to offer substantiated advice on the financial process' future structure to assist and optimize Carleon's company operations and administrations within the company. This is a fundamental approach that we, as Sicreuq employees, will have to understand and implement in this business advice and subsequently later work.

1.3 PROBLEM DESCRIPTION

The issues from the presented **"Sicreuq BV - Carleon Europe BV"** scenario is provided during talks with the CEO and within the Exact software application, that delivers all the necessary data for investigation and problem recognition. As a result, the following issues arise:

Issues:

1. *Employees have no idea how to make use of the Exact program.*
2. *Lose unnecessary money for suppliers because of payment delay.*
3. *The process of invoicing is delayed on timing due to being on the paper.*
4. *The quantity of overdue invoicing is increasing.*

2.BUSINESS ANALYSIS

2.1 INTRODUCTION

Before dividing into workable solutions, we must first analyse the conceivable gaps and processes within Carleon's financial aspect. We will not only rely on the financial approach, but we will also work through an issue and establish an investigation for our stakeholders in this segment of our business advice to determine and approach the knowledge toward a solution for Carleon later.

2.2 STAKEHOLDER ANALYSIS

Every person who has an impact on, or is impacted by, the property and project-related schemes in Carleon is referred to as a stakeholder. This indicates that not only 'professionals' involved in property acquisition, development, and management, but also homeowners, can have an impact on the development of real estate equity. (*Who are the stakeholders in the property industry?*)

1. *Who are the relevant stakeholders?*

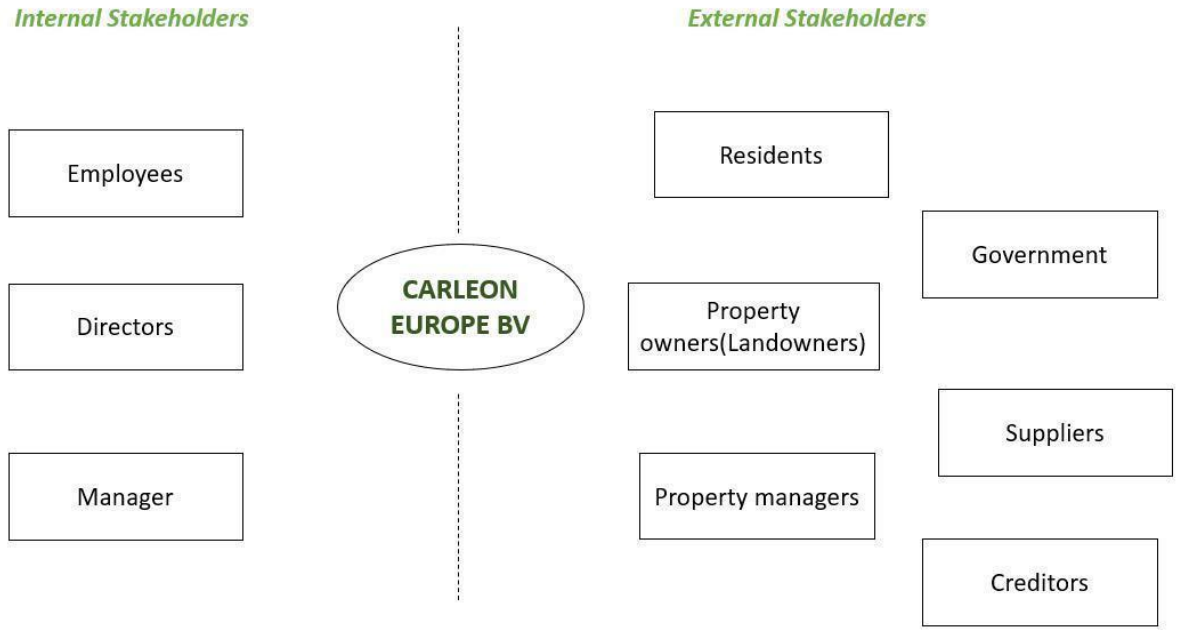


Figure 1. Stakeholder analysis

For stakeholder analysis about Carleon we divide it by internal and external stakeholders.

Internal stakeholders:

- **Employees** have considerable financials and time investments within the company, and play a defining role in the strategy, tactics, and operations the company incorporates. The Carleon, for instance, has a property security department, a technical unit, and other departments that keep up with their real estate scheme.

- **Managers** play a significant function in determining the approach of the company, and a big voice in operational decisions. They also are responsible for an act as a factor of contact between shareholders, the board of directors, and the company itself. In Carleon their managers provide a structure for the property aspects such as property managers, economic management, commercial and others that are involved within the company.

- **Director** has a big responsibility to act in the best interests of the company and to decide when, and what stakeholders should be considered. (Boundless, *Boundless management*)

External stakeholders:

- **Suppliers** are interdependent, in which the achievement of one will affect the success of another. As a result, suppliers are strongly associated with companies as key external stakeholders.

- **Government** as a stakeholder play a vital role, relying mostly on taxes and related issues of legality and proper payment methods in the company's operations.

- **Landowners** are likely to be key performers in housing development. They might sell their land, at the value that developers think is affordable given all the costs and risks involved.

- **Property managers** refer to the overseeing and management of diverse commercial and residential properties. This consists of looking after all the day operations for a property consisting of collecting rent, managing maintenance, tenant complaints and more. (*Property management: Definition and responsibilities*)

- **Creditors** lend money to businesses, and they could have a secured interest in the company's worth. Creditors receive a commission back from the sale of services or products at the business. (Mining, *The 10 types of stakeholders that you meet in business* 2021)

- **Residents** are the people who purchase items relating to real estate. Customers that work with Carelon can be flexible and approach the correct quality at the right pricing for their overall housing demands.

2. *What are the interests of each stakeholder? / What is the power of each stakeholder?*

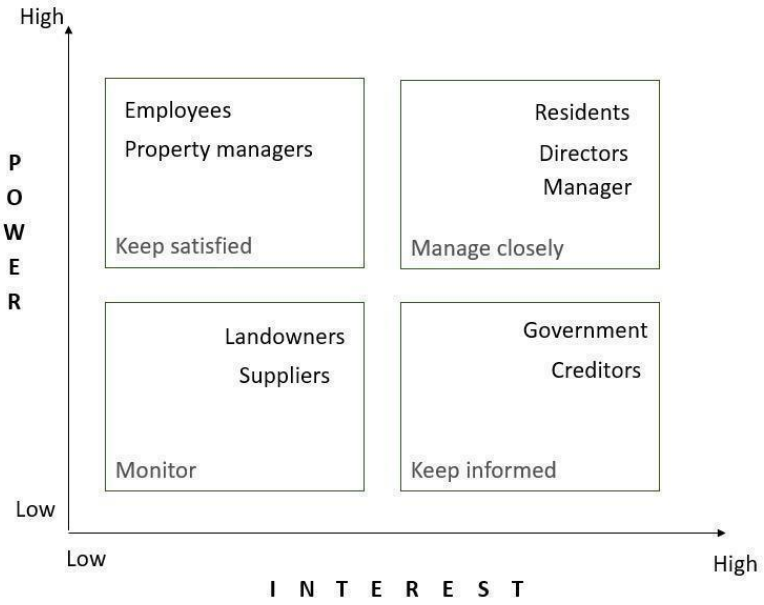


Figure 2. Stakeholder quadrant

High power - High interest: Residents, directors, managers are decision makers and have the biggest impact on the business success and hence everyone must proactively manage their expectations.

High power - Low Interest: Employees and property managers needed to be kept in a loop and kept satisfied even though they don't seem to be concerned about the business side.

Low power – High interest: Keep government and creditors informed and talk to them to ensure that no key issues are arising.

Low power - low interest: Monitor landowners and suppliers, but do not bore them with excessive communication.

2.3 SWOT ANALYSIS

A SWOT analysis is a framework for figuring out strengths, weaknesses, opportunities and threats. It is implemented to any business and industry, from non-profit charities through to massive company entities. (*Introduction to SWOT analysis, n.d.)*

This method allows us to evaluate Carleon's strengths and weaknesses based on fact-based analysis, fresh perspectives, and innovative ideas. In addition, view the potential of the real estate business, their competition, and risks.

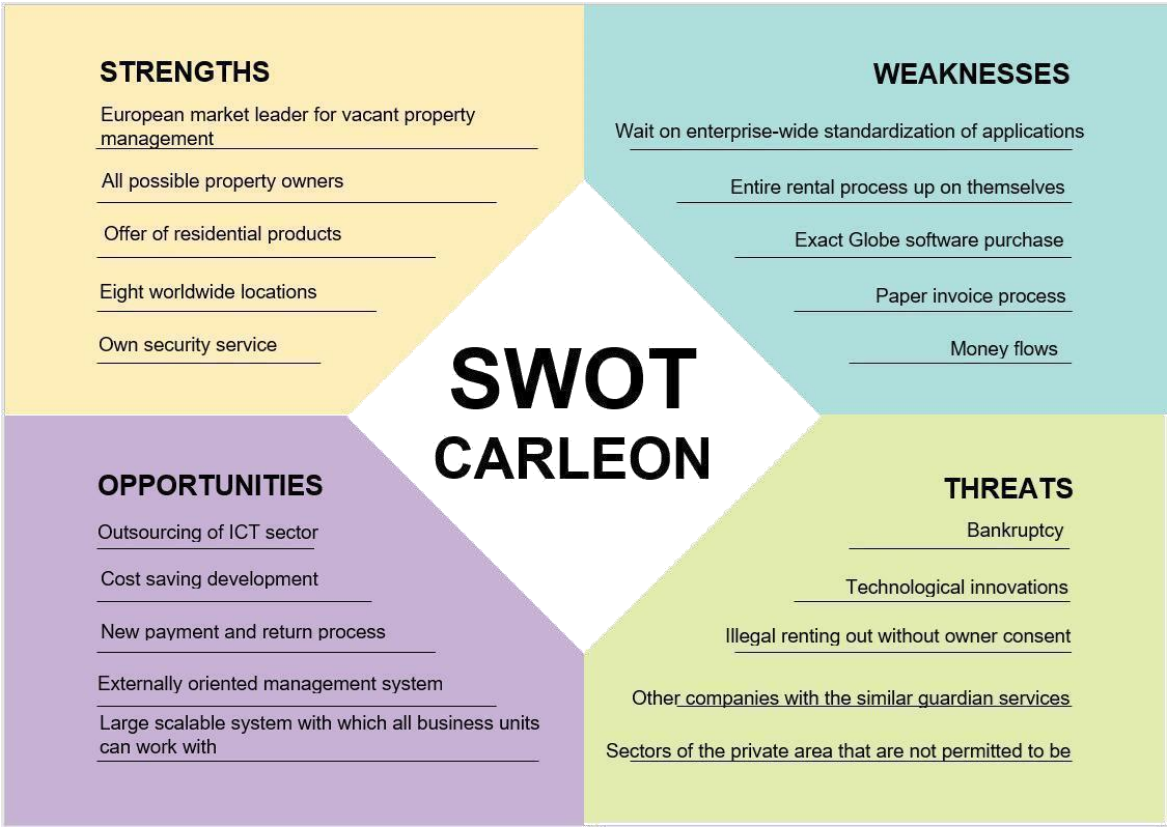


Figure 3. SWOT analysis of Carleon.

Carelon earned a worthwhile reputation as a corporation with high customer participation, not to mention its variety of locations and security that prevented vandalism, squatting, theft, and other illegal acts. As for their residential products, it is well known that as a firm, they specialize in "*Microliving Solution*," which focuses on developing small studios, apartments for young people to live in.

As for the flaws, Carleon's financial systems, which rely on a paper-based technique for generating bills and obtaining quotes from suppliers, are particularly problematic. Due to being autonomous in administration, development, consulting, security, and technological parts of the organization, as well as having a lot of obligations to take on in one, a lot of information is lacking or in chaotic patterns. Due to the launch of a new software called *Exact Global*, which is not yet fully utilized or applied by the company's personnel, which takes too long to learn. Another issue that might be considered is the money lost as a result of their financial procedure and consumers' payment methods.

This company contributes to the cost-cutting, ICT sector, management process, and other opportunities. Carleon will be able to take their approach to real estate to a new level, with the ability to be more organized and up to date with payments from their customers, which information will be included in new information technology development.

Finally, threats are a crucial element of this analysis, particularly for Carleon, given their awareness of their competitors and potential difficulties as a corporation. As a result, based on their real estate history, they will rely on illegal renting-outs, other organizations with similar

goals and grounds, and private rental sectors, all of which can have a direct impact on the real estate industry. Then, as for today's businesses, technological innovations and bankruptcy are the two critical factors to be aware of. In terms of technology, Carleon needs to be more involved and adopt more is required to be deemed a market leader, and without proper financial processes and resolution of their problems, they will face bankruptcy.

2.4 ROOT CAUSE ANALYSIS

This section focuses on a root cause that has been causing problems at Carleon; it is the first step in delving further into the company's problem and providing viable solutions afterwards.

Table 1. Root Cause Analysis

Symptom	**Effect**	**Failure**	**Cause**	**Root cause**
Monetary loss	Loose unnecessary money for suppliers	Do not pay for suppliers on time	Customer payment is late	Process of invoicing is delayed and not optimized due to customer paper invoices
Not acquainted technological usage.	Workload is too high	Economic management is not optimized	Financial data is not centred	Employees are not familiar to use Exact

Based on the case description, regarding the financial part, one of the current problems of the company is financial loss. The obvious reason is that they have many penalties for suppliers of the missing payment on time. However, the primary source of the problem is the client, whose payments are frequently late. But if we look at the entire process of payment, the root cause belongs to the company as their invoice system is delayed due to the customer paper invoices. Outdated and non-optimal invoicing processes can be considered as the root cause leading to economic loss.

Another problem that the company is facing is the labour shortage in the finance department due to the high workload of current employees. Their monetary management system is not optimized, which causes them a lot of struggles and waste of time during work. A visible problem in this process is that the data is not centralized between departments, so every time the customer manager processes customer invoices, they must call the Financial Department to get related data. The root cause they have is that employees do not have any experiences in using Exact application.

2.5 GAP ANALYSIS

When analysing the given business case, it is easier to understand the underlying processes by visualising them. In appendix item 1 and 2, (Monthly payment IST, Monthly payment SOLL) the monthly payment process is showcased using BPMN. Using these visualisations, we have pinpointed risk areas in the IST situation. We then used these risk points to create a GAP-analysis (see figure 4).

Before we continue with the GAP analysis, first we want to grant a bit more insight in the modelled process.,98.9% of Carleon's customers pay via direct debit. The direct debit process is shown in the modelled process down below. If this debit goes through without an issue, the process works flawlessly. However, when there is an issue with this direct debit, or for the customers who want an invoice is where we encountered bottlenecks. For these customers a paper invoice is created by hand. Following that, the invoice is sent out by post. The customer then has a payment term of 30 days. After these 30 days a different department must manually check in the system if the company has received the due payment. If the payment was successfully received the process ends. If the payment was not received a reminder is made by hand and sent out to the customer.

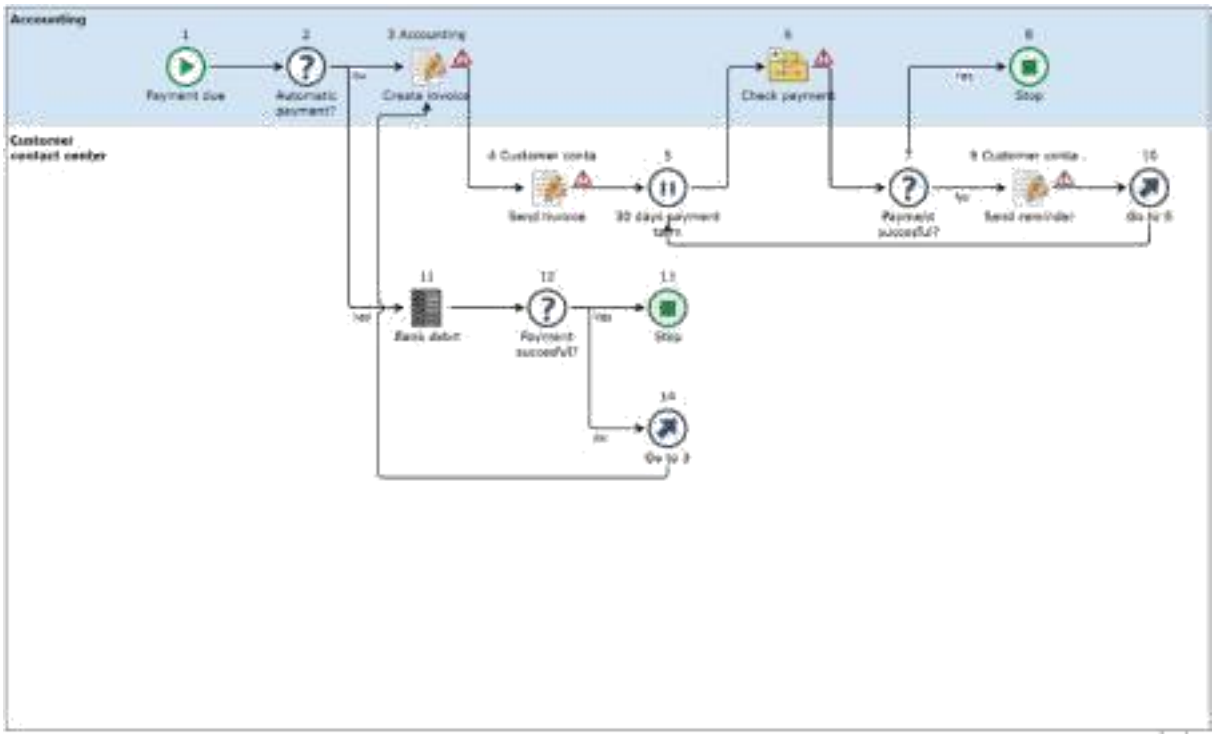


Figure 4. Gap analysis BPMN

Table 2. Gap Analysis

Items	Current situation (IST)	Desired situation (SOLL)	Gap	Remedial action
	Abbreviations: KCC = Customer Contact Center, dept. = department.			
Invoice creation	The accounting dept. creates the invoice by hand for each customer. Resulting in a labour and time intensive job.	The invoice is created once and added to the automated invoicing program to automatically reflect new purchases.	Creating invoices is currently done by hand. This job costs a lot of time and thus money.	By adding an automated system, the invoices need to be created once from a template and then added into the payment system.
Sending invoices	Invoices are currently being made by hand as was stated previously. They are then also manually sent out to clients.	The invoice is automatically sent out to the correct client via an automated system. This prevents human error and eliminates waste.	Sending out the invoices by hand is a step that costs a lot of time. An employee needs to manually sort out where the invoices need to go.	By automating the invoicing system using a bookkeeping tool or an addon for the ERP system, a lot of employee time will be freed up. This also prevents human errors.
Checking payments	after the payment term, the accounting dept. has to manually check the system if the client has paid. The KCC can't check this themselves.	The system automatically checks open invoices for payments. If the invoice has been paid, the status changes.	A lot of communication goes on between departments for this step. This can be a bottleneck for the process. Because the KCC can't check the system themselves this leads to time waste.	By automating the system and opening it up to the KCC, communicational waste between departments will be resolved. The system pings the correct dept. with updates about payments.
Sending reminders	Reminders are manually sent by the KCC after they have received the payment information from the accounting dept.	Reminders are automatically sent by the system when it notices the payment term has passed without receiving payment.	Similar to the previous step, the communication between the two departments leads to waste. Afterwards, the KCC manually sends out reminders to clients with open invoices. This is a cost intensive process	Automating the system to automatically check statuses for open invoices enables it to also send out automated reminders to clients. Freeing up employee time.

The biggest form of waste analysed in the GAP is in the form of time. The process involves a lot of manual steps which can be fastened and executed with less errors when making use of an automated system. Currently, the KCC can't access payment information without provided steps in their paper system.

2.6 ISHIKAWA DIAGRAM

A fishbone diagram is a cause-and-impact discovery tool that allows figure out the reason(s) for defects, variations, or failures inside company's process. In different words, it helps break down, in successive layers, root causes that located within the company. *(Fishbone diagram explained: Reliable Plant, 2020)*

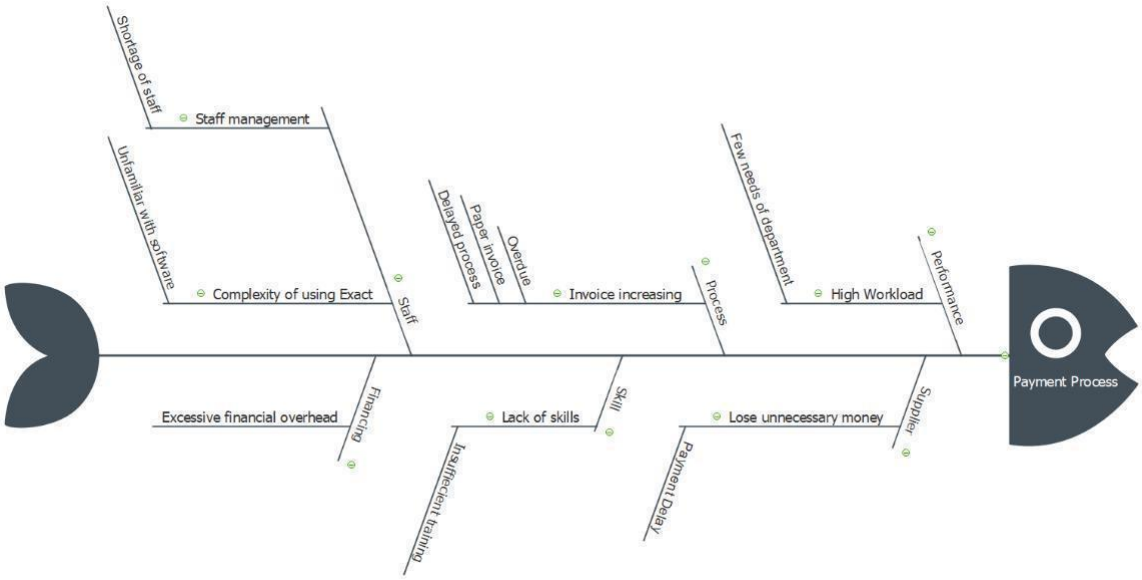


Figure 5. Ishikawa diagram

There are six probable causes for the payment procedure, as shown in this diagram:

Staff

According to research, staff play a role in this difficulty, and the link that we have discovered is staff management, which generates a staff shortage, and the second cause is the complexity of utilizing Exact software, which the employees appear to be uncomfortable with.

Process

The number of customer invoices is increasing, which can lead to resulting in missed invoice payments. The second factor was the employment of a paper invoicing system.

Performance

Employee performance can have a significant impact on the payment process; the issue that has been identified is heavy workload, which impacts employee performance at work.

Finance

The financial overhead is excessive which leads to an overdue payment process.

Skill

Employees' abilities are influenced by the company's performance as well as payment problems. As a result of the investigation, it was determined that there is a major lack of skills in the performance of employees, which has an impact on the payment process.

Supplier

The final cause that could lead to payment delay is losing unnecessary money which can be found in the supplier department.

3.RESEARCH QUESTIONS

3.1 MAIN RESEARCH QUESTION

We developed the main research question for this project, which we will address later as part of the research on Carleon's financial process.

- **Is the financial situation of Carleon satisfactory?**

To be able to respond to our main question, we must first construct a solution to our sub-questions, which serves as a skeleton for our main question, and decide on an answer to it.

3. 2 SUB-QUESTIONS

Made sub-questions:

1. What leads to customers paying late?

2. What can we do to decrease the time between customers getting an invoice and the customer paying the invoice?

3. How is the unpaid money divided among our customers?

4. What is needed to make sure the streamlined process is followed in the future?

5. What is the current days sales outstanding?

We can provide a greater understanding of the financial process and a stronger solution to resolve previously stated difficulties based on the results that we will obtain by answering these questions.

4.RESULTS

- **What leads to customers paying late?**

First, the data shows that customers often miss a second payment, once the first payment is missed. This could be due to the shame of having to pay, or sudden financial issues a customer might have.

Using the 'Payment method' query found in the appendix, we see that only 336 of the total 28.887 payments were not made with an automatic payment, "incasso" in Dutch. From this we can conclude that forgetting to pay should not be an issue. The missed payments are probably payments that couldn't be deducted due to too low bank balances, or payments that customers retracted after the money was deducted.

According to Lea at al. (1993) there are certain factors that indicate customers being prone to be in debt. The biggest contributing factors are economic factors. Adverse family economic conditions were found to usually be the cause. Some social and psychological factors are also related to debt, like religious beliefs and attitude towards having debt.

- **What can we do to decrease the time between customers getting an invoice and the customer paying the invoice?**

In our case a customer invoice is a document issued by a company to a customer, requesting for payment of goods. It is offered to the customer before or after the transaction has taken place. In addition, invoice is a legal document that closes the settlement among the company and buyer. It cannot be cancelled or removed from sales records or an accounting outlook.

To solve a customer invoice process, we can provide some ideas to improve the situation about the customer paying the invoice in time.

- *Set non-negotiable due dates* – before signing the contract with the client, confirm with both sides on due dates for paying the invoice. (*What is an invoice? Raising them & getting paid* 2021)

- *Customer Invoice on time* – it is understood that a company needs to send customer invoices on time if they want their money on time. Keep the template handy so employees can substitute information quickly and easily. (*What is an invoice? Raising them & getting paid* 2021)

- *Offer payment by instalments* – dividing payments over a time not only enhances your cash flow, however it additionally makes that big lump sum a little less intimidating to your client. (*10 ways agencies are getting clients to pay their bills on time* 2020)

- *Penalties for overdue payments* – including late penalties can help in case your customer missed their invoice due date. That way, they'll have an incentive to make the payment on time. If they do not, you'll be compensated for it. (*10 ways agencies are getting clients to pay their bills on time* 2020)

- *Set email reminders* – when the payment deadline comes, it is better to be safe and send a small reminder to customers. (*10 ways agencies are getting clients to pay their bills on time* 2020)

All these suggestions are based on the efficiency and consumption of the time it takes consumers to pay their invoices and for the company to process them. Customers, suppliers, and Carleon itself are suffering from inconsistent waiting processes because of an earlier stated methodology related to a gap analysis in this advice. As a result, our primary proposal will be to base this procedure on easily accessible current software.

- **How is the unpaid money divided among our customers?**

To start the analysis, we first look at aging, which is the process of dividing the owed money into categories based on the range of the age of the due payment. At Carleon the ages 1-30 days, 31-60 days, 61-90 days and over 90 days are used. In Exact we look at 'Finance' → 'Accounts Receivable' → 'Balance list' while using 31-12-2016 as reference date. From the following aging analysis, the total owed amount of €526.480,10 is divided between the ages as follows; 0-30: *€162.507,16*, 31-60: *-€60.392,49*, 61-90: *€26.153,69* and >90: *€277.426,75*.

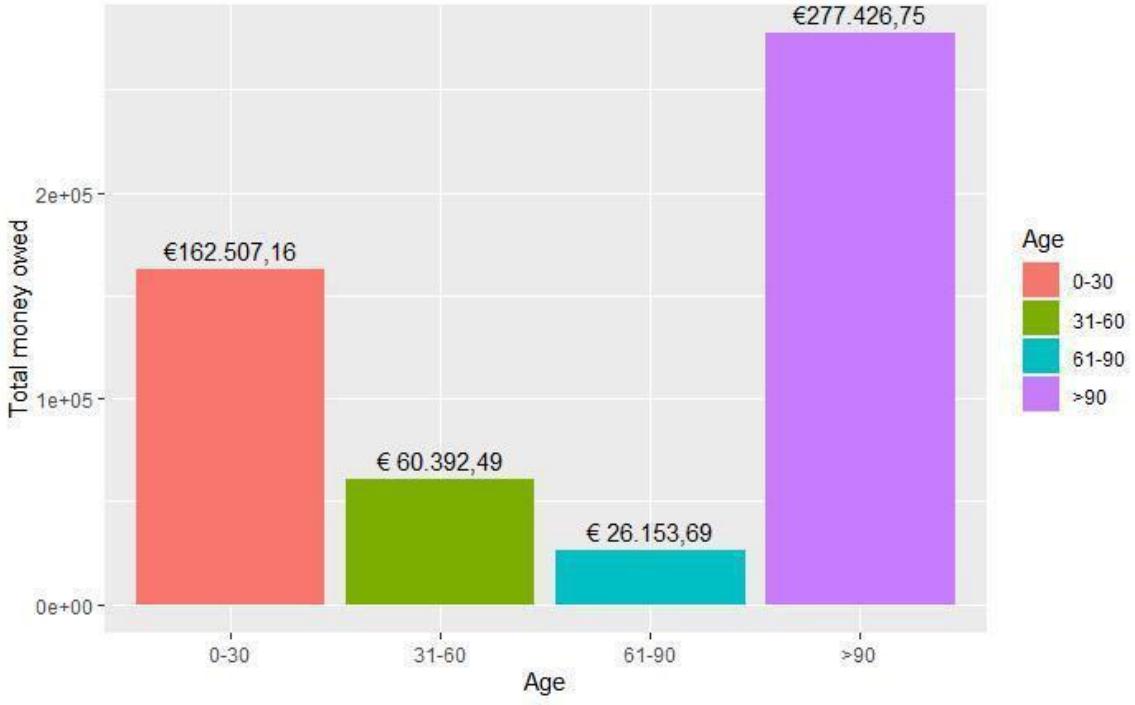


Figure 6. Graph showing the total amount of money owed per age.

The fact that more than 50% of the owed money is already stuck for more than 90 days is worrying, as this money cannot be used to pay suppliers. Since Exact is used from 01-01-2015, we can assume that an age of 730 days is the maximum possible number of days. Using the "aging query" found in the appendix, we get a total amount of *€60.725,07.* This is all money that is owed that is at least 2 years old, but potentially even older.

Using the same overview applied for the aging analysis, we can sort by total amount per customer, to see if certain clients owe a big amount of money. It becomes evident that one consumer, for example, owes *€26.550,00* in debt. The figure below also shows that 50% of the money owed is owed by 144 of 734 customers, which equates to around 20%. Because of this it would be beneficial to also focus on customers who still have an old debt still standing. Focussing the efforts on the worst defaulters will get the most out of them.

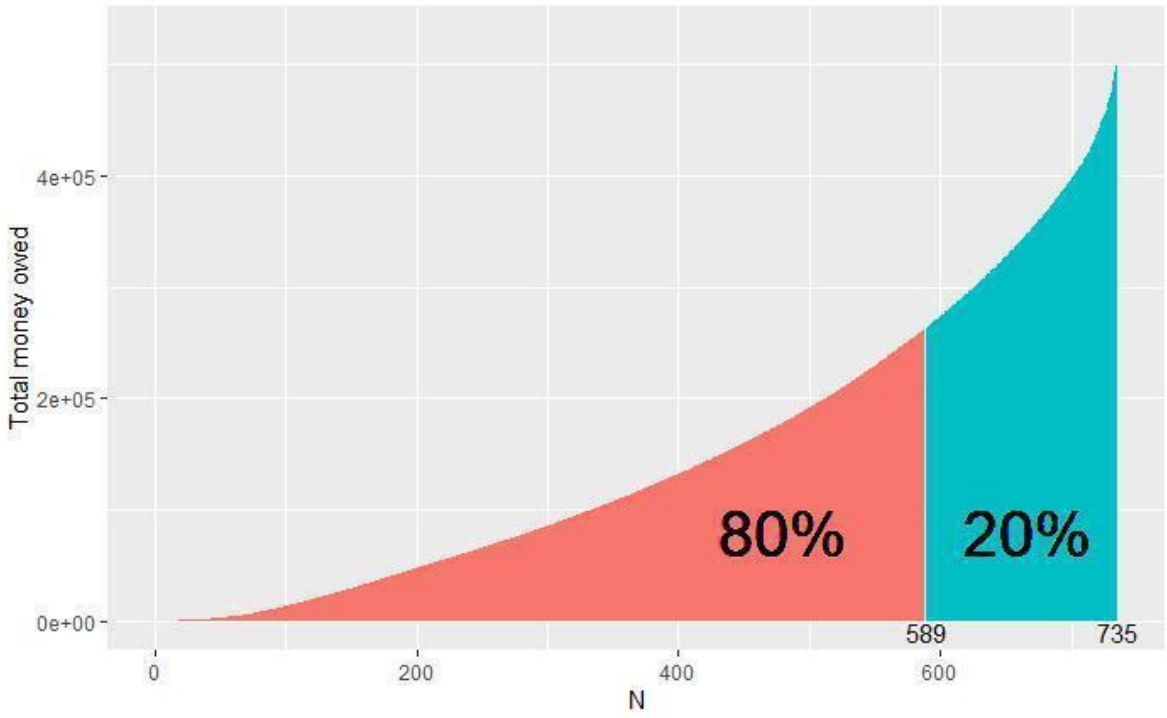


Figure 7. Graph showing the division of the owed money. Generated 17-11-2021

The graph below demonstrates the amount of money that the company has not received from customers within 2015 and 2016. The fact that the lines are growing over time indicates that they are receiving more unpaid invoices from customers. In general, the lines on the graph demonstrate a fluctuation in 2015 and an upward tendency in 2016 in unpaid money from consumers. As we can see, the unpaid money has gone up and down continuously significantly in 2015 (around 0.15 million in January 2015, with an approximate decline, before ending up at 0.03 million in December). In the next year, there is no substantial variation for the couple of first months that amount of unprocessed money stayed fluctuated below 0.025. However, there were a big increase in October that mount of unprocessed money reached nearly 0.15 million. It is important for the company to keep track amount of unprocessed account receivables. With

that, we can be aware of a part of current financial situation, notice the months that unprocessed money has an increased tendency then might be making any predictions or decision further.

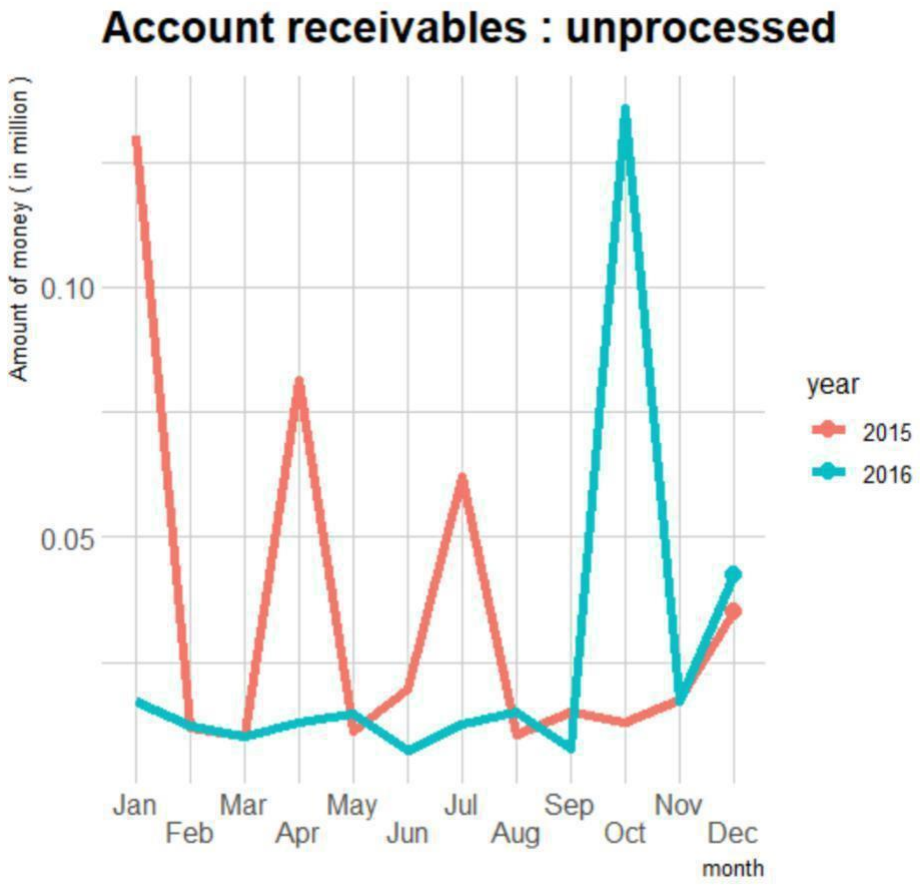


Figure 8. Graph showing the division of the amount of money that the company has not received from customers based on months

The graph below shows the total amount of unpaid invoices during 2016. The drop is inconsistent, and that when there is a significant increase in leads, there is always a significant increase in leads for the next month, indicating that the quantity of unpaid invoices increases constantly, as seen in Figure 8. Looking back at the past few months of 2016, it's clear that the number of outstanding invoices reached an all-time high, starting from September of this year. As can be seen in the graph below, the same outcomes continue to be seen as we move closer to 2017.

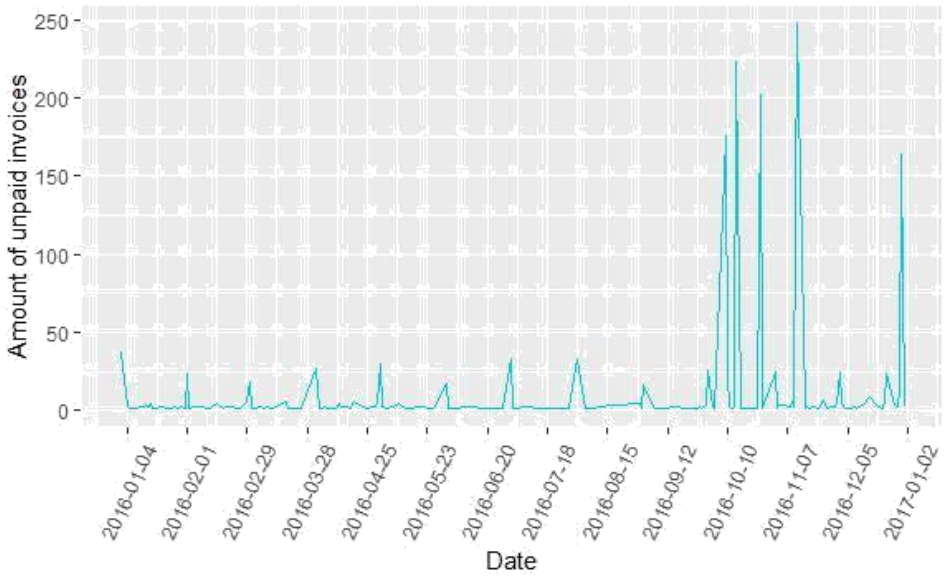


Figure 9. Graph showing the number of unpaid invoices based on 2016.

- **What is needed to make sure the streamlined process is followed in the future?**

Overall, the streamlined procedure produces faster results with fewer issues. For example, Carleon's invoicing procedure is still based on paper, even though the total number of outstanding invoices from tenants is increasing. There are issues with allocation of when the initial, monthly, and final payments are collected, processing delays, and so on. Payment reminders are also made by phone, which is inconvenient, just like sending one-time letters via post.

Useful technique to consider is the *workshop*. For example, referring to Exact Globe software, which is implemented in a firm, it takes time for employees to adapt and learn how to apply and use it. With workshops, Carleon personnel will be able to grasp the software much more quickly and easily and will be able to utilize it in the future to save time and effort. (Skill Zone Ltd,(n.d.))

Another factor to consider is *employee morale*, which refers to team and organizational communication to create a successful and engaging environment in Carleon. Employees will be able to adapt better because of the improved communication, as their aids in the definition of job tasks will be clearer, procedures will be properly defined, and the process will be more visible among financial operations. (*Employee morale shapes business success,* 2021)

Another point to consider is the possibility of an *internal period of checks*, which means that the accounts receivable and payable should be supervised based on the new accountable financial process. This will allow the procedure to be up-to-date and more within the timing parameters, preventing the payment from falling behind the abrogating money flow. This could also serve as a monitoring component for employees, based on invoicing methods and client interactions. (*How to identify internal control weaknesses - reciprocity, (n.d.)*)

Such suggestions may be able to assist the firm, its customers, and staff in striking a better balance and putting the organization in a stronger position. Another method to consider is a

possible newly formed process that can assist an organization's development in terms of both financial and other aspects.

- **What is the current days sales outstanding?**

The figure below shows the development of the Days Sales Outstanding, DSO for short, each month. DSO shows the average amount of days it takes a customer to pay his bill after he gets an invoice. It is beneficial to the company to have the DSO as low as possible, as this decreases the payment gap. As visible in the graph, the DSO fluctuates around 30 days, which is not troublesome. It is however a good idea to keep an eye on the DSO, so it is possible to respond quickly when it suddenly increases.

Figure 10. Graph showing the days sales outstanding per month.

5.SOLUTION

Based on the previously stated findings, there was a range of analysis directed towards Carleon's invoicing process, as well as suggestions for how to avoid or improve the situation. There was a dedication of a set of probable options that may be found to resolve the current situation at Carleon, such as automating the process, placing additional pressure on past payments, additional staff for financial department, conducting the supplier selection process and streamlining the process in general, based on a range of studies and outside sources.

There is a set of advice that may be given to follow up with the information and approach that one would apply to Carleon itself to contribute as a solution.

5.1 OPTIONS CONSIDER

- Placing additional pressure on past payments
- Streamlining the process in general
- Additional staff for financial department
- Conducting the supplier selection process

Placing greater pressure on prior payments and expediting the process in general are two answers that we are considering, but they are not our primary strategy for assisting Carleon with their process. The same as additional staff for financial department and conducting the supplier selection process.

5.3 FINAL SOLUTION

Based on the results from the research questions the following recommendation is made:

- **Automate the process**

As found in the GAP-analysis, the automation of the process would remove a lot of the pain points currently encountered. For this solution, we recommend using the Exact globe next software that is currently being used within the company. This software package provides tools that can be used to automate invoicing. Furthermore, the system can be set up to provide automated reminders to either the department and/or the customer when a customer invoice is late. The entire setup for the changes to the system can be provided by the exact installation team.

Besides the streamlining of this process, we also strongly recommend pairing this new setup up with an interactive dashboard that will be made by us. This dashboard would highlight the total amount of customer invoices, the status of customer invoices and how long the status has remained unchanged. This way the account payable departments will be able to keep track of

purchase invoices or customer invoice and when they have last received an update.
This dashboard can be provided by Sicreuq.

- **Dashboard**

The main solution approach is providing a better knowledge of the company's financial performance, which will be acquired through a visual dashboard. The dashboard will enable for additional information and analysis of the company's financial situation, as well as a better understanding of the influence of their clients' account payable. While it has already been determined in the preceding research on accounts receivable and payable, this dashboard will take it even farther in a procedure where information will be available for undetermined amount of time and will be flexible based on Exact database. Such an assessment will be able to be improved over time and will be carried out throughout the process and attribute at Carleon.

To clarify, a dashboard will be a representation of the main solution, whereas process automation will be an optimization focused on the solution's visual element.

5.3 BENEFITS

There is a set of beneficial prospects which can be taken in account within the solution towards it, exclaiming the automate process approach.

- Accounting, financial process will be automated and integrated → reduce the workload for employees
- Data becomes more accurate → avoid errors in customer invoices
- Interval between sending invoices to customers and get payments from them is shortened → pay for suppliers on time

While the above benefits are dependent on process automation, there is another alternative that we must consider, which is a dashboard. As a result:

- A clearer picture of the company's financial situation
- The data will be renewed automatically.
- For each data period, the data generation will be optimized and easy to examine.
- It is simple to change the provided visualizations in order to check for details.
- Provides a method for determining key performance indicators.

5. 4 TIMESCALE

As employee unfamiliar with exact it can take up 6 months for testing and implementation based on automate the process.

While the dashboard will be computerized, it will be finished before the project's end date, which is this week on the 18th.

5.5 COSTS

We estimate that Carleon has 200 employees per office according to *Camelot Property* website which has similar approach of business. As a result, we will give 48 people access to Exact software that currently exists and is used within Carleon. Following that, the software team will implement the cost, which will be followed by software subscription charges and individual license costs including given employees.

Table 3. Infrastructural determination.

Software	**Cost per 30 days**
Subscription	€139
Employees	€48
Customer license	€17.50
Subscription Cost	139 + 48*17.50 = 979

Table 4. Final total for infrastructural determination.

Software	**Cost per year**	**Cost per 30 days**
Accounting Platform (Exact)	€11748	€979

This cost refers to determining how much money will be spent on software and subscriptions. Carleon thus relies on an accounting platform, which might refer to a software subscription for the application as well as the number of people who will have access to it.

Table 5. Hired personnel.

Role	**Period**	**Cost**
Installation team (4 people)	30 days	3288 per person
Total		3288 * 4 = 13152

This data was gathered from *Software Engineer*, a website that offers a simple costing system for software teams that work on a company's behalf. Carelon's cost determination will be based on a team of four people who will assist in setting up and approaching new *Exact* performance, as well as explaining and adopting employees for its use.

In all, it will contribute €14131 to overall expenditures; however, this is only for the first month of work; after that, it will only contribute €979 to infrastructure costs.

As for the return investment due to a lack of information a calculation on the ROI will be omitted in favour of a description of how the company will get their investment back.

This project has the goal of granting Carleon insight in their money streams. By granting this insight, Carleon will be able to take the necessary action to retrieve the money that is currently being lost in the payment process. Via this way it is up to Carleon to send debt collectors or take other precautionary measures to prevent the current situation from occurring again. With the advised changes Carleon can ensure that they will receive their money sooner instead of having to wait for the client to pay. Carleon will start making the money for this project back when they start seeing the open payments come in.

The above cost calculation is based only on a future automated procedure that Carelon may lay on, even though the dashboard itself will not be profitable and will not contain any costs to construct.

5. 6 RISKS

Risk evaluates on a separate issuing regarding a company itself without taking in account our advice.

Due to the possibility of a lack of financial information, the department's contribution to their suppliers is on the rise, with no guarantee that the client's payment will be resolved. As a result, they may have to rely on a credit take, which means the company would have to take out a loan to repay them. Consequently, clients who default on their payments will have an impact on Carelon's time and expenditures.

If the company does not contribute to the above-mentioned alternative solutions, they may face bankruptcy due to a lack of account receivable oversight on payments.

Another danger to consider is that if a problem with their financial stake is not resolved soon, the company will be forced to shut down. That is to say, the company will not contribute to the future business of the property and real estate industry.

Another issue to consider is operational risk, which refers to the management style used on a day-to-day basis. This could have a negative impact on company's growth strategy and result in a financial disaster.

6.GLOSSARY

CEO – A chief executive officer is the highest-ranking executive in a company.

SWOT – Strengths, Weaknesses, Opportunities, and Threats. A SWOT evaluation organizes your top strengths, weaknesses, opportunities, and threats into an organized listing and is provided in a simple two-by-two grid.

ICT – International Communication Technology. ICT is a leading industrial technology solutions and service provider in the Netherlands.

IST – This stands for how it is now.

SOLL – This stands for solution.

BPMN – Business Process Model and Notation is a graphical representation for specifying business processes in a business process model.

KCC – Klant Contact Centrum which is a crucial point from which all customer interactions across various channels are managed. (Customer Contact Centre)

ROI – Return on investment or return on costs is a ratio between net income and investment.

DSO – Days sales outstanding is a measure of the average number of days that it takes a company to collect payment for a sale. The DSO is calculated with the following formula:

7.CITATION

8.REFERENCES

1. Kenton, W. (2021, September 27). *How SWOT (STRENGTH, WEAKNESS, opportunity, And THREAT) analysis works*. Investopedia. Retrieved September 27, 2021, from https://www.investopedia.com/terms/s/swot.asp

2. *Leaders in the property industry*. Camelot Europe. (n.d.). Retrieved September 28, 2021, from https://cameloteurope.com/

3. Heather-Saul. (2020, October 7). *Property Guardian company prosecuted over former care home where more than 30 guardians lived with one kitchen*. inews.co.uk. Retrieved September 28, 2021, from https://inews.co.uk/opinion/comment/property-guardian-company-prosecuted-over-former-care-home-where-more-than-30-guardians-lived-with-one-kitchen-274724

4. *10 biggest threats facing real estate*. Brad Brinkman. (2017, June 26). Retrieved September 28, 2021, from https://www.bradbrinkman.com/10-biggest-threats-facing-real-estate/

5. *How to streamline your work processes*. Smartsheet. (n.d.). Retrieved September 28, 2021, from https://www.smartsheet.com/streamlining-processes

6. HBS and RREF. (n.d.). *Who are the stakeholders in the Property Industry?* FutureLearn. Retrieved September 28, 2021, from https://www.futurelearn.com/info/courses/pathways-to-property/0/steps/44867

7. Boundless. (n.d.). *Boundless management*. Lumen. Retrieved September 28, 2021, from https://courses.lumenlearning.com/boundless-management/chapter/business-stakeholders/

8. Indeed Editorial Team. (2021, February 23). *Property management: Definition and responsibilities*. Indeed Career Guide. Retrieved September 28, 2021, from https://www.indeed.com/career-advice/finding-a-job/what-is-property-management

9. Minning, L. (2021, August 16). *The 10 types of stakeholders that you meet in business*. ActiveCampaign. Retrieved September 28, 2021, from https://www.activecampaign.com/blog/types-of-stakeholders.

10. Rupa Gohil Partnerships Manager and small business accounting advocate . (2021, June 10). *What is an invoice? Raising them & getting paid*. Tide Business. Retrieved September 28, 2021, from https://www.tide.co/blog/business-tips/what-is-an-invoice/

11. *10 ways agencies are getting clients to pay their bills on time*. Instapage. (2020, June 24). Retrieved September 28, 2021, from https://instapage.com/blog/getting-clients-to-pay-on-time

12. Heckendorn, K. (2019, July 22). *10 ways to get customers to pay their Invoices Faster*. Paystone. Retrieved September 28, 2021, from https://www.paystone.com/blog/10-ways-to-get-customers-to-pay-their-invoices-faster

13. Lea, S. E., Webley, P., & Levine, R. M. (1993). The economic psychology of consumer debt. *Journal of economic psychology*, *14*(1), 85-119. Skill Zone Ltd, https://www.skillzone.net. (n.d.). *Definition: Workshop*. Association for Qualitative Research (AQR). Retrieved October 3, 2021, from https://www.aqr.org.uk/glossary/workshop

14. *Employee morale shapes business success*. Mineral. (2021, May 21). Retrieved October 3, 2021, from https://trustmineral.com/blog/employee-morale-shapes-business-success/

15. *How to identify internal control weaknesses - reciprocity*. (n.d.). Retrieved October 3, 2021, from https://reciprocity.com/how-to-identify-internal-control-weaknesses/

16. *10 common project risks (plus how to analyze and solve them)*. Indeed Career Guide. (n.d.). Retrieved October 4, 2021, from https://www.indeed.com/career-advice/career-development/project-risks

17. Indeed Editorial Team. (2021, February 23). *Property management: Definition and responsibilities*. Indeed Career Guide. Retrieved September 28, 2021, from https://www.indeed.com/career-advice/finding-a-job/what-is-property-management.

18. *Salaris: Software engineer | glassdoor*. (n.d.). Retrieved October 4, 2021, from https://www.glassdoor.nl/Salarissen/netherlands-software-engineer-salarissen-SRCH_IL.0,11_IN178_KO12,29.htm?countryRedirect=true.

19. *Discover our range of free E-learnings & trainings*. exact.com. (n.d.). Retrieved October 4, 2021, from https://www.exact.com/training.

20. *Exact services help you make the most of your investment*. exact.com. (n.d.). Retrieved October 4, 2021, from https://www.exact.com/services.

21. *Citation generator*. Citation Machine, a Chegg service. (n.d.). Retrieved October 4, 2021, from https://www.citationmachine.net/apa.

22. Mill Valley ,Calif.(n.d.). *Camelot Property Management*. Retrieved October 4, 2021, from https://www.glassdoor.nl/Overview/Working-at-Camelot-Property-Management-EI_IE1256629.11,38.htm?countryRedirect=true.

23. *What is a business case?* APM. (n.d.). Retrieved October 4, 2021, from https://www.apm.org.uk/resources/what-is-project-management/what-is-a-business-case/.

24. *Introduction to SWOT analysis*. Lucidity. (n.d.). Retrieved October 25, 2021, from https://getlucidity.com/strategy-resources/swot-analysis/.

25. Trout, J. (2020, May 4). *Fishbone diagram explained: Reliable Plant*. Fishbone Diagram Explained | Reliable Plant. Retrieved October 25, 2021, from https://www.reliableplant.com/fishbone-diagram-31877.

26. *What are the biggest financial risks that companies face?* Soldo. (2021, April 19). Retrieved October 27, 2021, from https://www.soldo.com/en-gb/blog/what-are-the-biggest-financial-risks-that-companies-face/.

27. *Atradius*. Why is DSO important | Atradius Australia. (n.d.). Retrieved November 4, 2021, from https://atradius.com.au/article/why-is-dso-important.html.

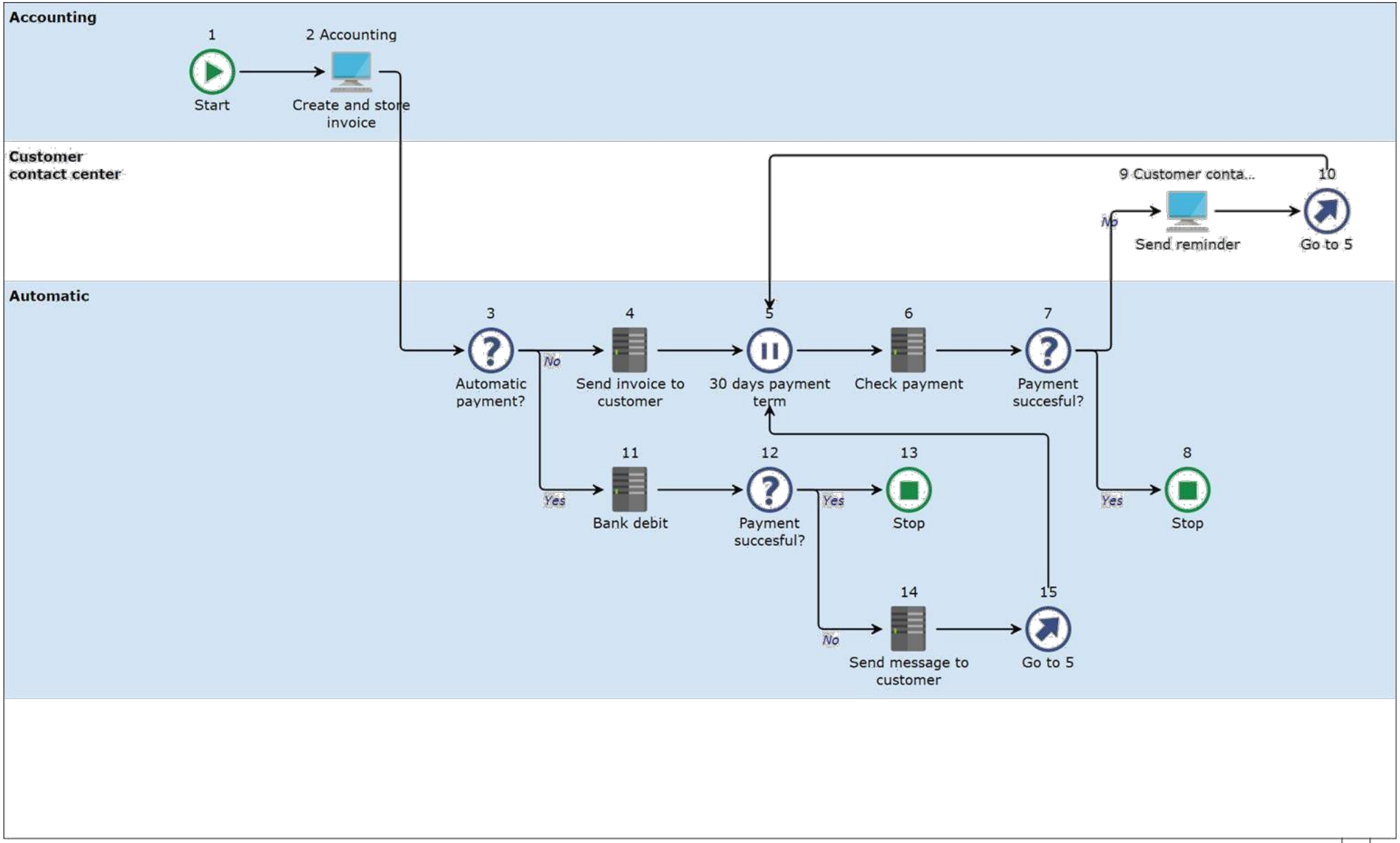
10.APPENDIX

Appendix 1

Monthly payment SOLL

Process Report

Date : 29-9-2021



Monthly payment SOLL

Monthly payment SOLL

1. Start

2. Create and store invoice

RACI

Accounting	*Responsible*
Sales dept.	*Consulted*

Customer data (Electronic Data) Sales dept.

Invoice (Document)

Role
Accounting

Description

The invoice is created for the customer and added to the automated invoicing program.

3. Automatic payment?

4. Send invoice to customer

RACI

Payment system	*Responsible*
Accounting	*Accountable*
Customer	*Informed*

Invoice (Document) Customer

Invoice (Document) Accounting

5. 30 days payment term

6. Check payment

RACI

Payment system	*Responsible*
Accounting	*Accountable*
Customer contact center	*Informed*

Customer payment info (Electronic Data)

Customer accountno (Database)

7. Payment succesful?

8. Stop

9. Send reminder

RACI

Customer contact center	*Responsible*
Customer contact center	*Accountable*
Customer	*Informed*
Accounting	

Role
Customer contact center

Payment succes (Database) Database

Payment reminder (Document) Customer

11. Bank debit

RACI

Payment system	*Responsible*
Accounting	*Accountable*
Customer	*Informed*

Customer payment data (Database)

Payment succes (Electronic Data)

12. Payment succesful?

13. Stop

14. Send message to customer

RACI

Payment system	*Responsible*
Customer contact center	*Accountable*
Customer	*Informed*

Payment succes (Electronic Data) Database

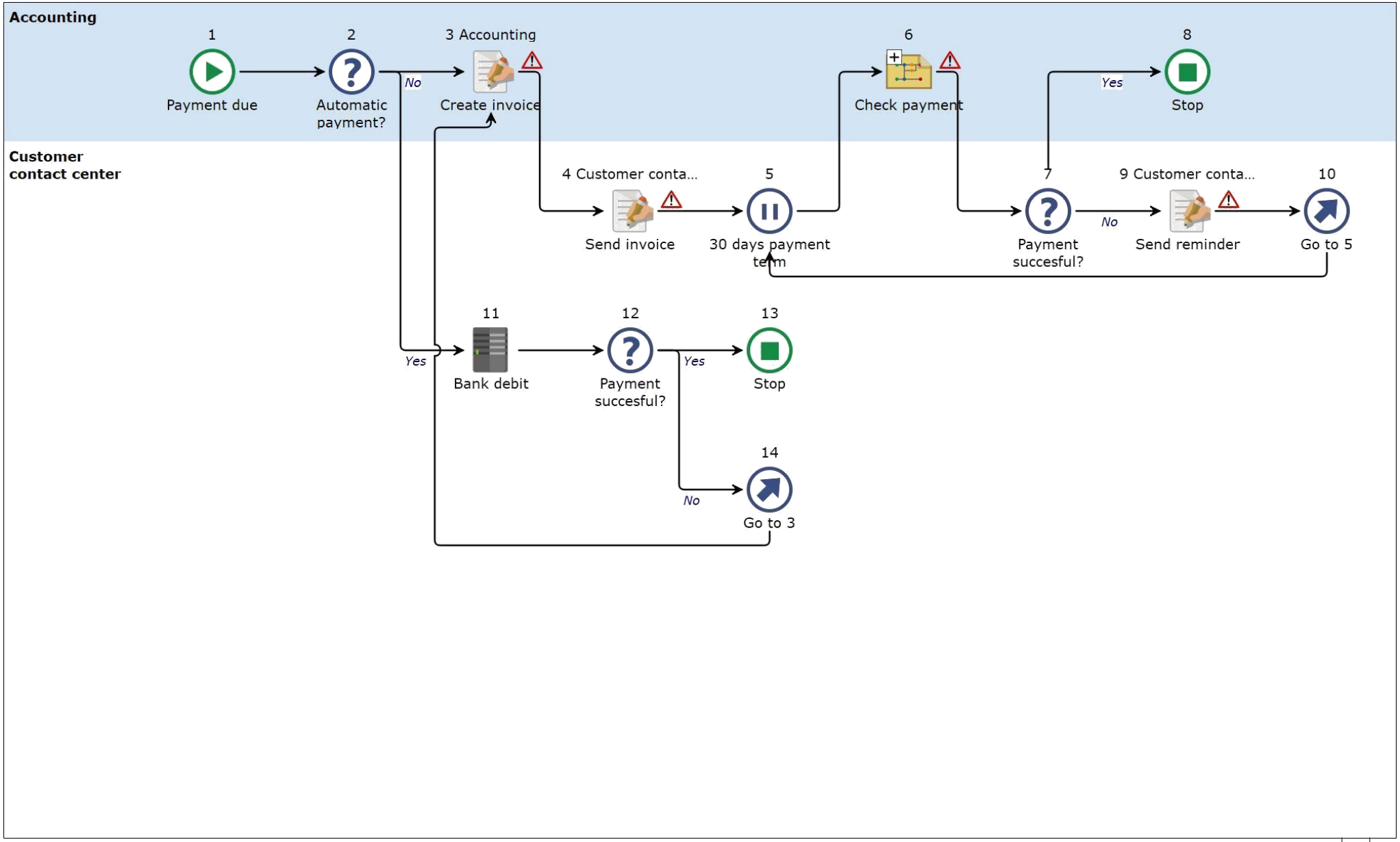
Payment reminder (Document) Customer

Appendix 2

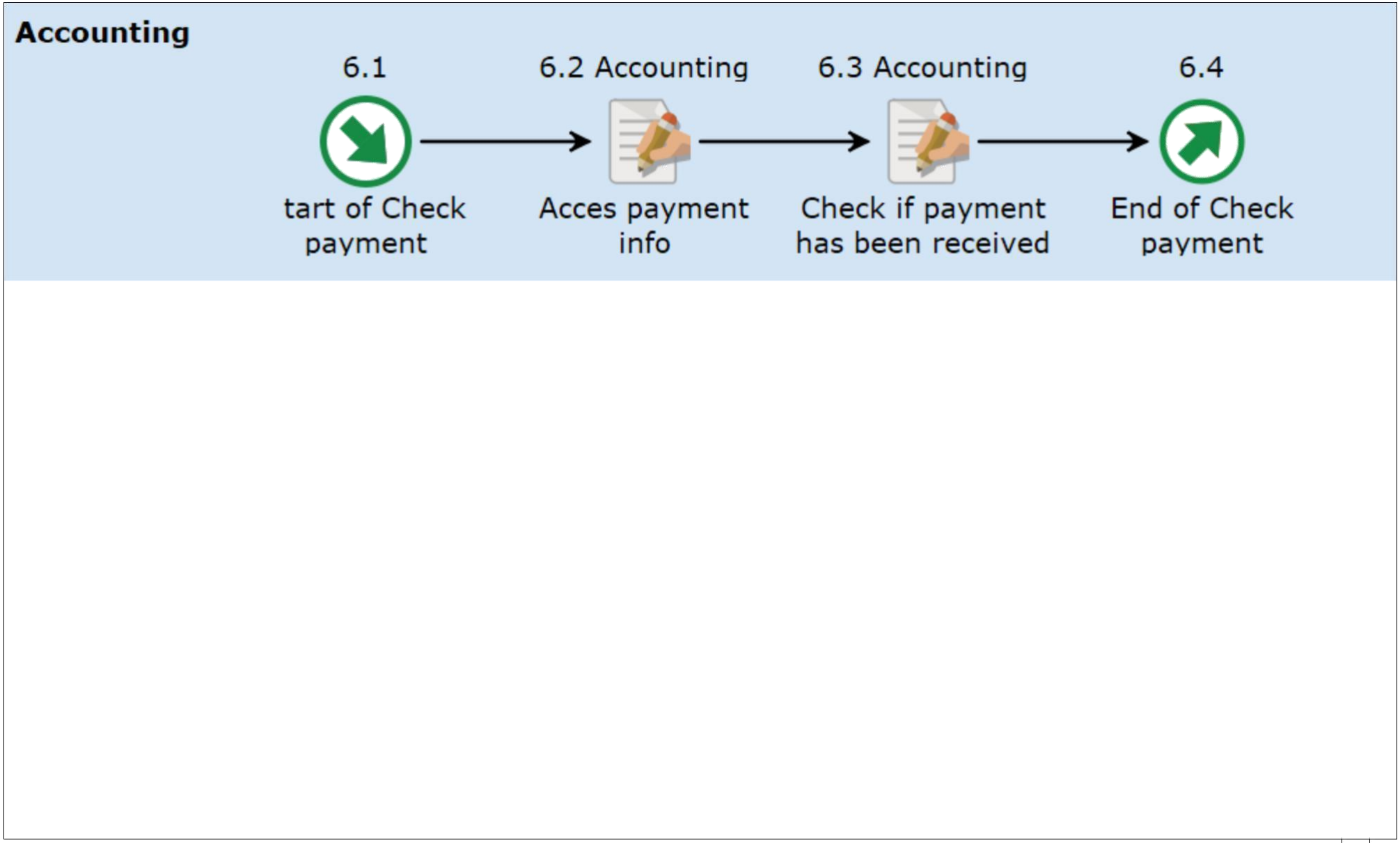
Monthly payment IST

Process Report

Date : 29-9-2021



Monthly payment IST



Check payment

Monthly payment IST

1. Payment due

2. Automatic payment?

3. Create invoice

Role
Accounting

Invoice (Document)

RACI

Accounting	*Responsible*
Accounting	*Accountable*
Customer	*Informed*

4. Send invoice

Role
Customer contact center

Invoice (Document)

Invoice (Document)

RACI

Customer contact center	*Responsible*
Customer contact center	*Accountable*
Customer	*Informed*
Accounting	

5. 30 days payment term

6. Check payment

6.1. Start of Check payment

6.2. Acces payment info

Role
Accounting

6.3. Check if payment has been received

Role
Accounting

6.4. End of Check payment

7. Payment succesful?

8. Stop

9. Send reminder

Role
Customer contact center

RACI

Customer contact center	*Responsible*
Customer contact center	*Accountable*
Accounting	*Informed*
Customer	

Payment succes (Electronic Data)

Payment reminder (Document) Customer

11. Bank debit

RACI

Payment system	*Responsible*
Accounting	*Accountable*
Customer contact center	*Informed*
Accounting	

Payment data (Electronic Data)

Payment succes (Electronic Data)

12. Payment succesful?

13. Stop

Appendix 3

Activity	Accounting	Customer	Customer center	Payment system	Sales contact	dept .
2. Create and store invoice	R				C	
4. Send invoice to customer	A	I		R		
6. Check payment	A		I	R		
9. Send reminder	I	I	RA			
11. Bank debit	A	I		R		
14. Send message to customer		I	A	R		

Abbreviations:

R	Responsible
A	Accountable
C	Consulted
I	Informed

Appendix 4

QUERIESES

Payment method query

```
SELECT COUNT(*)
  FROM [700].[dbo].[amutak]
  WHERE betwijze <> 'I'
```

Aging query

```
SELECT SUM(AmountDC) AS totalDCOld
FROM (
SELECT ci.debcode AS Relation
      ,DebtorNumber AS OffsetNumber
      ,ci.cmp_name AS OffSetName
      ,cc.ClassificationID AS Classification
      ,(
            CASE ci.cmp_type
                  WHEN 'A'
                        THEN 'Associate'
                  WHEN 'B'
                        THEN 'Bank'
                  WHEN 'C'
                        THEN 'Customer'
                  WHEN 'D'
                        THEN 'Division'
                  WHEN 'E'
                        THEN 'Employee'
                  WHEN 'N'
                        THEN 'NOT validated'
                  WHEN 'P'
                        THEN 'Prospect'
                  WHEN 'R'
                        THEN 'Reseller'
                  WHEN 'L'
                        THEN 'Lead'
                  WHEN 'S'
                        THEN 'Supplier'
                  WHEN 'T'
                        THEN 'Suspect'
                  ELSE ci.cmp_type
                  END
            ) AS RTYPE
      ,(
            CASE ci.cmp_status
                  WHEN 'A'
                        THEN 'Active'
                  WHEN 'B'
                        THEN 'Blocked'
```

```
                WHEN 'E'
                      THEN 'Inactive'
                WHEN 'N'
                      THEN 'NOT validated'
                WHEN 'P'
                      THEN 'Pilot'
                WHEN 'R'
                      THEN 'Reference'
                WHEN 'S'
                      THEN 'Passive'
                ELSE ci.cmp_status
                END
          ) AS RSTATUS
    ,SUM(ROUND((
                      CASE
                            WHEN bt.AmountDC > 0
                                  AND bt.Type = 'W'
                                  THEN bt.AmountDC
                            ELSE (
                                        CASE
                                              WHEN bt.Type = 'S'
                                                    AND bt.AmountDC < 0
                                                    THEN - bt.AmountDC
                                              ELSE NULL
                                              END
                                        )
                            END
                      ), 2)) AS Debit
    ,SUM(ROUND((
                      CASE
                            WHEN bt.AmountDC < 0
                                  AND bt.Type = 'W'
                                  THEN - bt.AmountDC
                            ELSE (
                                        CASE
                                              WHEN bt.Type = 'S'
                                                    AND bt.AmountDC > 0
                                                    THEN bt.AmountDC
                                              ELSE NULL
                                              END
                                        )
                            END
                      ), 2)) AS Credit
    ,SUM(ROUND((
                      CASE
                            WHEN DATEDIFF(dd, bt.DueDate, {d
```

```
'2016-12-31' }) BETWEEN 0
                                    AND 30
                               AND bt.Type = 'W'
                               THEN bt.AmountDC
                          ELSE (
                                    CASE
                                         WHEN DATEDIFF(dd,
bt.ValueDate, {d '2016-12-31' }) BETWEEN 0
                                                   AND 30
                                              AND bt.Type = 'S'
                                              THEN - bt.AmountDC
                                         ELSE NULL
                                         END
                                    )
                          END
                     ), 2)) AS T1
     ,SUM(ROUND((
                     CASE
                          WHEN DATEDIFF(dd, bt.DueDate, {d
'2016-12-31' }) BETWEEN 31
                                    AND 60
                               AND bt.Type = 'W'
                               THEN bt.AmountDC
                          ELSE (
                                    CASE
                                         WHEN DATEDIFF(dd,
bt.ValueDate, {d '2016-12-31' }) BETWEEN 31
                                                   AND 60
                                              AND bt.Type = 'S'
                                              THEN - bt.AmountDC
                                         ELSE NULL
                                         END
                                    )
                          END
                     ), 2)) AS T2
     ,SUM(ROUND((
                     CASE
                          WHEN DATEDIFF(dd, bt.DueDate, {d
'2016-12-31' }) BETWEEN 61
                                    AND 90
                               AND bt.Type = 'W'
                               THEN bt.AmountDC
                          ELSE (
                                    CASE
                                         WHEN DATEDIFF(dd,
bt.ValueDate, {d '2016-12-31' }) BETWEEN 61
```

```
                                                        AND 90
                                                  AND bt.Type = 'S'
                                                  THEN - bt.AmountDC
                                            ELSE NULL
                                            END
                                      )
                                END
                          ), 2)) AS T3
      ,SUM(ROUND((
                          CASE
                                WHEN DATEDIFF(dd, bt.DueDate, {d
'2016-12-31' }) > 90
                                      AND bt.Type = 'W'
                                      THEN bt.AmountDC
                                ELSE (
                                      CASE
                                            WHEN DATEDIFF(dd,
bt.ValueDate, {d '2016-12-31' }) > 90
                                                  AND bt.Type = 'S'
                                                  THEN - bt.AmountDC
                                            ELSE NULL
                                            END
                                      )
                                END
                          ), 2)) AS T4
      ,SUM(ROUND((
                          CASE
                                WHEN DATEDIFF(dd, bt.DueDate, {d
'2016-12-31' }) < 0
                                      AND bt.Type = 'W'
                                      THEN bt.AmountDC
                                ELSE (
                                      CASE
                                            WHEN DATEDIFF(dd,
bt.ValueDate, {d '2016-12-31' }) < 0
                                                  AND bt.Type = 'S'
                                                  THEN - bt.AmountDC
                                            ELSE NULL
                                            END
                                      )
                                END
                          ), 2)) AS NotDue
      ,SUM(ROUND((
                          CASE
                                WHEN bt.Type = 'W'
                                      THEN bt.AmountDC
```

```
                        ELSE - bt.AmountDC
                        END
                    ), 2)) AS AmountDC
      ,COUNT(*) AS TERM
      ,AVG(DATEDIFF(dd, ISNULL(bt.DueDate, bt.ValueDate), {d '2016-12-31'
})) AS iAge
      ,MAX(addr.AddressLine1) AS Adres
      ,MAX(addr.Postcode) AS Postcode
      ,MAX(addr.City) AS City
      ,MAX(addr.Phone) AS Tel
      ,MAX(addr.Fax) AS Fax
      ,MAX(cp.cnt_l_name) AS Contact
      ,MAX(ci.vatnumber) AS VatNumber
      ,ci.cmp_fctry AS Country
      ,MAX(ci.creditline) AS Creditline
FROM (
      (
            -- W Terms
            SELECT '' AS Empty
                  ,bt.ID
                  ,DebtorNumber
                  ,CreditorNumber
                  ,ValueDate
                  ,AmountDC
                  ,AmountTC
                  ,ProcessingDate
                  ,InvoiceDate
                  ,ReportingDate
                  ,Type
                  ,OffSetName
                  ,PaymentType
                  ,SupplierInvoiceNumber
                  ,CAST(Description AS VARCHAR(400)) AS Description
                  ,TransactionType
                  ,OffsetReference
                  ,OffSetLedgerAccountNumber
                  ,bt.Blocked
                  ,DocumentID
                  ,OrderNumber
                  ,InvoiceNumber
                  ,DueDate
                  ,TcCode
                  ,bt.STATUS
                  ,bt.MatchID
                  ,BatchNumber
                  ,OwnBankAccount
```

```
                ,EntryNumber
                ,bt.LedgerAccount
                ,bt.sysguid
                ,(
                      CASE
                            WHEN ExchangeRate = 0
                                  THEN ROUND(ExchangeRate, 6)
                            ELSE ROUND(1 / ExchangeRate, 6)
                            END
                      ) AS ExchangeRate
                ,bt.Approved
                ,bt.Approved2
          FROM BankTransactions bt
          LEFT OUTER JOIN (
                SELECT HS.ID
                      ,HS.StatementType
                FROM BankTransactions HS
                WHERE HS.Type = 'S'
                      AND HS.STATUS = 'J'
                      AND HS.DebtorNumber IS NOT NULL
                      AND (
                            (
                                  ISNULL(HS.StatementType, '') <> 'F'
                                  AND ISNULL(ISNULL(HS.InvoiceDate,
HS.ProcessingDate), HS.valuedate) <= {d '2016-12-31' }
                                  )
                            OR HS.StatementType = 'F'
                            )
                ) AS HS ON bt.MatchID = HS.ID
          LEFT OUTER JOIN (
                SELECT MatchID
                FROM BankTransactions W
                WHERE W.Type = 'W'
                      AND W.STATUS <> 'V'
                      AND W.MatchID IS NOT NULL
                      AND W.DebtorNumber IS NOT NULL
                      AND ISNULL(ISNULL(W.InvoiceDate,
W.ProcessingDate), W.ValueDate) > {d '2016-12-31' }
                GROUP BY MatchID
                ) AS HW ON bt.MatchID = HW.MatchID
                AND HS.StatementType = 'F'
          INNER JOIN cicmpy ci ON bt.DebtorNumber = ci.debnr
                AND bt.DebtorNumber IS NOT NULL
          WHERE Type = 'W'
                AND bt.STATUS IN (
                      'C'
```

```
                        ,'A'
                        ,'P'
                        ,'J'
                        )
                  AND EntryNumber IS NOT NULL
                  AND DebtorNumber IS NOT NULL
                  AND ROUND(AmountDC, 2) <> 0
                  AND ISNULL(ISNULL(InvoiceDate, ProcessingDate),
ValueDate) <= {d '2016-12-31' }
                  AND (
                        HS.ID IS NULL
                        OR (
                              HS.ID IS NOT NULL
                              AND HW.MatchID IS NOT NULL
                              )
                        )

            UNION ALL

            -- S Terms
            SELECT '' AS Empty
                  ,s.ID
                  ,s.DebtorNumber
                  ,s.CreditorNumber
                  ,s.ValueDate
                  ,(ISNULL(s.AmountDC, 0) - ISNULL(W2.AmountDC, 0)) AS
AmountDC
                  ,(ISNULL(s.AmountTC, 0) - ISNULL(W2.AmountTC, 0)) AS
AmountTC
                  ,s.ProcessingDate
                  ,s.InvoiceDate
                  ,s.ReportingDate
                  ,s.Type
                  ,s.OffSetName
                  ,s.PaymentType
                  ,s.SupplierInvoiceNumber
                  ,CAST(s.Description AS VARCHAR(400)) AS Description
                  ,s.TransactionType
                  ,s.OffsetReference
                  ,s.OffSetLedgerAccountNumber
                  ,s.Blocked
                  ,s.DocumentID
                  ,s.OrderNumber
                  ,ISNULL(s.InvoiceNumber, '') AS InvoiceNumber
                  ,s.DueDate
                  ,s.TCCode
```

```
                ,s.STATUS
                ,s.MatchID
                ,s.BatchNumber
                ,s.OwnBankAccount
                ,s.EntryNumber
                ,s.LedgerAccount
                ,s.sysguid
                ,(
                      CASE
                            WHEN ExchangeRate = 0
                                  THEN ROUND(ExchangeRate, 6)
                            ELSE ROUND(1 / ExchangeRate, 6)
                            END
                      ) AS ExchangeRate
                ,s.Approved
                ,s.Approved2
          FROM BankTransactions s
          INNER JOIN cicmpy ci ON s.DebtorNumber = ci.debnr
                AND s.DebtorNumber IS NOT NULL
          LEFT OUTER JOIN (
                SELECT MatchID
                      ,ROUND(SUM(ROUND(ISNULL(AmountDC, 0), 2)), 2) AS
AmountDC
                      ,ROUND(SUM(ROUND(ISNULL(AmountTC, 0), 2)), 2) AS
AmountTC
                FROM BankTransactions w
                WHERE w.Type = 'W'
                      AND w.STATUS IN (
                            'C'
                            ,'A'
                            ,'P'
                            ,'J'
                            )
                      AND ISNULL(w.InvoiceDate,
ISNULL(w.ProcessingDate, w.ValueDate)) <= {d '2016-12-31' }
                      AND w.EntryNumber IS NOT NULL
                GROUP BY MatchID
                HAVING MatchID IS NOT NULL
                ) AS W2 ON W2.MatchID = S.ID
          WHERE s.Type = 'S'
                AND s.STATUS = 'J'
                AND s.DebtorNumber IS NOT NULL
                AND ROUND(s.AmountDC, 2) <> 0
                AND ROUND((ISNULL(s.AmountDC, 0) - ISNULL(W2.AmountDC,
0)), 2) <> 0
                AND s.ValueDate <= {d '2016-12-31' }
```

```
            )
      ) bt
INNER JOIN cicmpy ci ON bt.DebtorNumber = ci.debnr
      AND bt.DebtorNumber IS NOT NULL
LEFT OUTER JOIN addresses addr ON ci.cmp_wwn = addr.account
      AND addr.Type = 'INV'
LEFT OUTER JOIN classifications cc ON ci.ClassificationId =
cc.ClassificationID
LEFT OUTER JOIN cicntp cp ON cp.cnt_id = ci.cnt_id
WHERE ci.debcode IS NOT NULL
      AND (ci.cmp_type = 'C')
      AND ISNULL(ISNULL(bt.InvoiceDate, bt.ProcessingDate), bt.Valuedate)
<= {d '2016-12-31' }
GROUP BY ci.debcode
      ,DebtorNumber
      ,ci.cmp_name
      ,ci.cmp_type
      ,ci.cmp_status
      ,ci.cmp_fctry
      ,cc.ClassificationID
) AS g
WHERE iAge = 730
```