


UTS: ENGINEERING & INFORMATION TECHNOLOGY

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ASSESSMENT ITEM NUMBER/ TITLE Assessment: Project Report and Presentation			
<p> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> I confirm that I have read, understood and followed the guidelines for assignment submission and presentation on page 2 of this cover sheet. </p> <p> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> I confirm that I have read, understood and followed the advice in my Subject Outline about assessment requirements. </p> <p> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> I understand that if this assignment is submitted after the due date it may incur a penalty for lateness unless I have previously had an extension of time approved and have attached the written confirmation of this extension. </p> <p> Declaration of Originality: The work contained in this assignment, other than that specifically attributed to another source, is that of the author(s) and has not been previously submitted for assessment. I understand that, should this declaration be found to be false, disciplinary action could be taken and penalties imposed in accordance with University policy and rules. In the statement below, I have indicated the extent to which I have collaborated with others, whom I have named. </p> <p> Statement of Collaboration: All parties contributed equally </p> <p>  Nathan Ibarcena, Carlos Urriago, Abdelraouf Younes </p> <p> Signature of Student(s) _____ Date <u>02/06/2020</u> </p>			

Major Travel Company CMC

Objectives

A major travel company would like to improve the operation of their in-house call management centre. To meet this requirement, a web application, MyCMC, is to be developed with the intention of meeting the following objectives:

1. Provide multiple relationship managers with concurrent access to a user-friendly web interface
2. Gather, store and analyse personality profiles for both relationship managers and customers to improve compatibility between those buying and selling
3. Provide a more streamlined sales process for relationship managers
4. Improve customer satisfaction for both inbound and outbound clients when interacting with a remote relationship manager
5. Maintain sales data sets to improve functionality for future iterations of MyCMC

Stakeholders

- Travel company
- Employees of travel company
- Customers of travel company
- In-house Call Management Centre (CMC)
- Relationship Managers (RM)
- Accommodators of holidays planned by the travel company (hotels, cruises, tours, airlines etc.)
- Telecom Provider
- Direct financial beneficiaries of the travel company (shareholders/owners)
- Travel company recruiters
- Travel company database management team
- Travel company IT support
- Owners of commercial real estate used for travel company offices
- Travel company database hosting service
- Travel company competitors
- Travel company website management team

Assumptions

When developing the following system, a number of assumptions were made to fill in lacking knowledge regarding, the existing system, context and its users. To prevent miscommunication, the following assumptions should be taken into account when considering any work models:

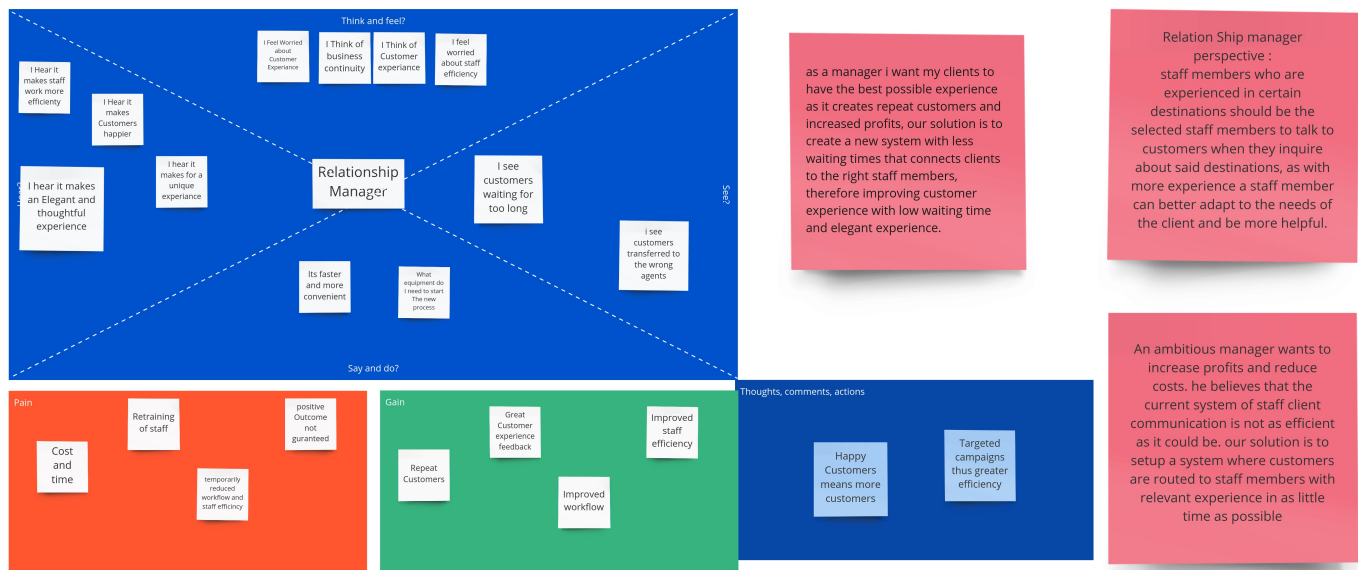
1. All relationship manager have an active, consistent and fast connection to an external network and phone system
2. The external phone systems linked the MyCMC is capable of basic actions (call, hang up, hold, call waiting, etc.) and has an interface compatible with a web system including the retrieval of basic information such as hold times
3. Outbound customer data is provided to the system meaning there is no requirement for the system to gather basic customer details (name, number, etc.) from an external service
4. All relationship managers and customers and comfortable filling a questionnaire as there is no allowance for either user in the system without a profile
5. System products (e.g. holiday packages) are readily available and include data regarding likelihood of purchase considering a customer

Empathy Maps

Empathy maps provide a stakeholder's perspective of the context in which the system should operate. This information provides a foundation for the definition of user requirements by outlining essential interactions and outlooks.

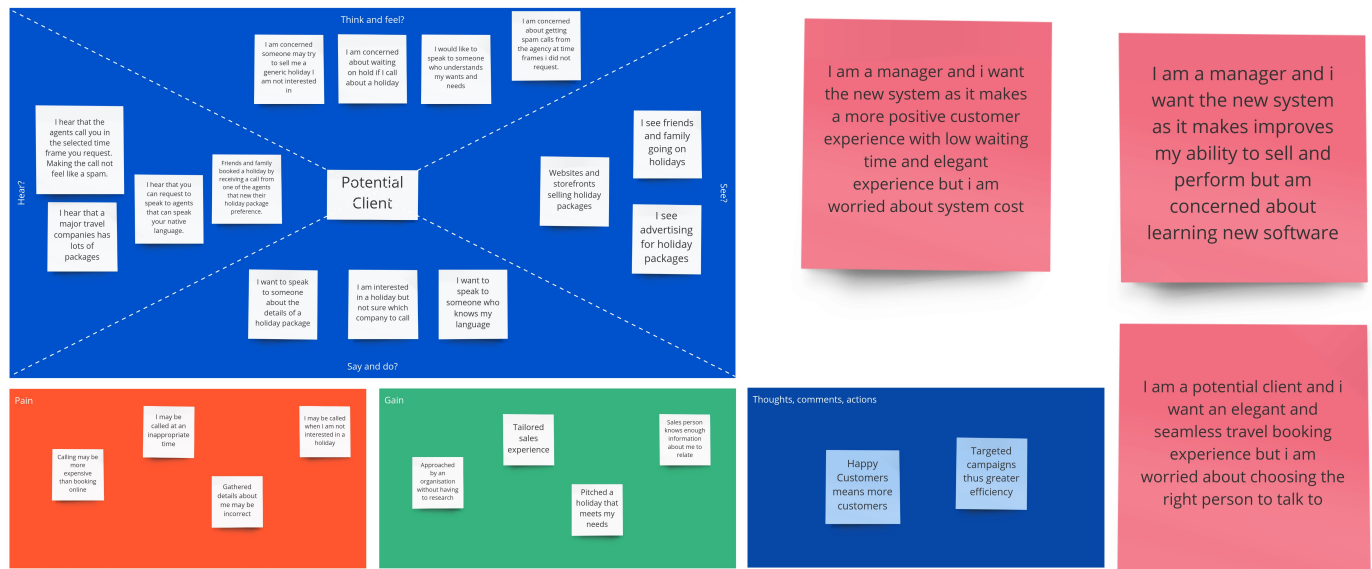
Relationship Manager

A relationship manager is an existing role in the major travel company that is responsible for the sale of holiday packages.



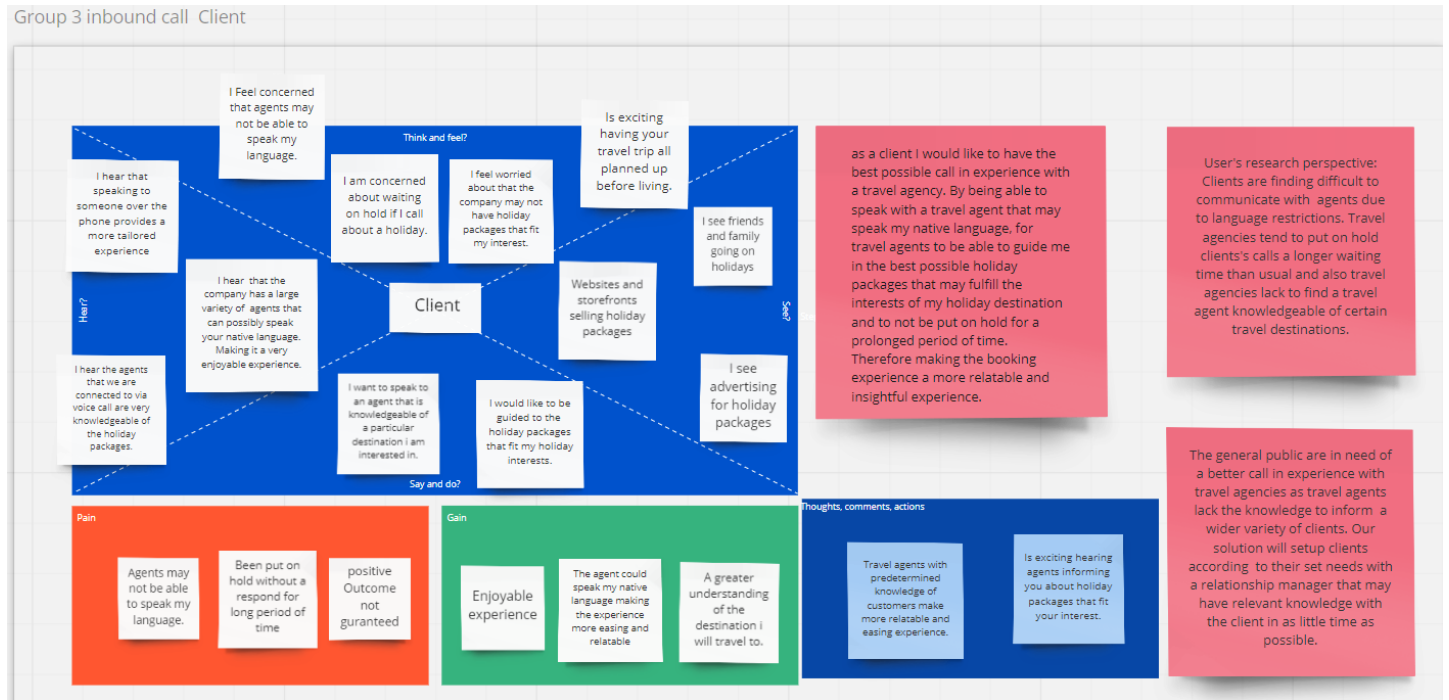
Outbound Client

An outbound client is a customer whose information has been sourced externally and is to be contacted by the major travel company.



Inbound Client

An inbound client is a customer who approached the major travel company independently, likely sourced from advertising.



Ideation Map

During the Design thinking process of assignment development a few assumptions were made about the final product and its over all requirements, these assumptions were made as a result of the the empathies and define sections of the process.

For the empathies section of the process, us the developers assumed the roles of each of the system stake holders, these roles ranged from the RM, to Outbound and inbound client. during which we simulated the roles of each stakeholder and used the simulation to gather empathise with the requirements of the task and gather assumptions about the system.

This led us to the second part of the design thinking process where we used the assumptions made during the empathies portion of the design thinking process to define our assumption and requirements from the system, during this section we were able to come up with most of our functional requirements but it proved most useful in helping us gather our non-functional requirements, it is during these sections that we decided a relationship manager shall always sound energized and active to encourage positive customer interaction and as such incorporate voice enhancements in our system, it is also here that we wanted the customers to not be held on the line for more than 3 minutes and for them to be provided with useful information regarding the most popular travel destinations at the time, we also assumed that all outbound customers have a detailed information section made about them before contacting them to increase efficiency to the maximum amount possible

User Stories

These statements capture a feature of the CMC system from the perspective of a critical stakeholder. This collection of statement provide the foundation of functionality for the final system.

Relationship Manager Profiles

As a relationship manager I want to profile my skills and attributes digitally so that I can be directed to the most effective customers and packages

As an outbound customer I want to speak to a relationship manager who is knowledgeable about the product I am interested in so that I can gain information I require

As an outbound customer I want to speak to a relationship manager who I can relate with so that I can more easily communicate my needs and wants

Outbound Call

As an outbound customer I want to be contacted directly at a time that is convenient to me so that I am not interrupted

As an outbound customer I want to remove myself from the call list so that I can stop receiving calls if I am not interested

Inbound Call

As an inbound caller I want to provide basic details about my enquiry so that I can clarify my intentions

As a repeat customer with recent sales history I want to be prioritized when making an inbound call so that I am more likely to make a purchase.

Calls

As a relationship manager I want calls to be made automatically so that I can increase my call and sale performance

As a relationship manager I want to see detailed information regarding the customer as I call so that I can tailor the sales experience

As a customer I want to wait for the shortest possible time so that I am less inclined to hang up

As a relationship manager I want a script that I can quote while calling so that I can optimise the likelihood of a sale

As a relationship manager I want a list of products that the customer may be interested in so that I can provide them with options they are likely to purchase

As a relationship manager I want see a score that represents how likely a customer is to buy something so that I can tailor my sales pitch

Questionnaire

The following questionnaires are utilised to gather key information about **Relationship Managers** and **Clients** that will be translated into personality profiles. This profile information provides the CMC system with ability to match an Relationship Managers to Clients or Client to products.

Relationship Manager

1. How many Languages can you speak and whats your fluency in each language, 1 being poorly familiar and 10 being extremely fluent?

Replies could include:

- I am able to speak two languages fairly fluently english and spanish, english with a rating of 7/10 and spanish with a rating of 10/10, Thus making me an excellent consultant for people of spanish backgrounds or individuals wanting to visit any spanish speaking country.

2. How many countries have you visited and what sort of traveller were you?

Replies could include:

- I have been to 3 countries in total australia, spain, france providing me with excellent knowledge to these countries, france being the one visited as a student tourist on a low budget, thus i got to experience the true life style of a student traveler and a budget oriented tourist providing me the ability to empathies with such travelers.

3. how do you time manage and plane your activities?

Replies could include:

- Travel consultants require excellent time management skills and as such i have built a strict habit of planing all my activities ahead of time and following such plans, i use apps like MS Calender in order to not only manage my future activities but also to manage my daily and hourly tasks.

4. Are you a peoples person? and are you confident at speaking?

Replies could include:

- Having conducted many presentations in the forms of public speaking to a diverse audience of different age groups, genders backgrounds and interests i believe it has caused me to develop an extreme confidence when speaking with people and easily understand there needs.

5. How strong are your computer skills?

Replies could include:

- as someone who utilizes the internet for all my career needs, ranging from conducting research to blog writing to general browsing and as someone who uses a suit of apps to manage time and task flows i believe i have a strong knowledge when it comes to technology.

6. Why do you want to enter the travel industry?

Replies could include:

- Having always wanted to travel the world i find my self taking an interest towards countries causing me to continuously read and research about the worlds different countries and the experience's of a traveler, thus giving me a strong passion towards travel and helping people choose the right experience.

7. How strong are your geography skills?

Replies could include:

- As i have taken several geography related subjects at university and received a distinction average in most of these subjects i believe i have excellent knowledge when it comes to geography.

Client

1. Which countries have you traveled?

Replies could include:

- I have been to a total of two countries Britain and australia. Britain being the visited country as a tourist, in which i visited many destinations around london.

2. What Did you enjoy most in your travels?

Replies could include:

- Meeting new people in london and experiencing this new culture and seeing its many similarities and differences to the australian culture.

3. what sites did you visit in your destinations?

Replies could include:

- I visited numerous historical attractions and museums.

4. what budget have you previously allocated to your travels and what budget are you allocating now?

Replies could include:

- I have not allocated a strict budget for my previous travel and was flexible with my spending, i ended up spending somewhere in the range of 5K and i am planing to roughly spend the same amount this time.

5. what type of experience do you wish to enjoy during this travel

Replies could include:

- I wish to view more historical sites and experience a more diverse culture.

Use case Narratives

Each system use case narrative outlines an interaction between a key stakeholder and the system, including requirements, exceptions and alternate flows considering external circumstances.

Use Case Narrative 1

Use Case Name: Relationship Manager Profiles

Use Case ID	UC101: Relationship Manager Profiles
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Use Case ID	UC101: Relationship Manager Profiles
User Story	As a relationship manager I want to profile my skills and attributes digitally so that I can be directed to the most effective customers and packages
Goal	For the relationship manager to be directed to an outbound call with a customer that will most likely buy a holiday package
Priority	H
Actors	Primary Actor — Relationship Manager Secondary Actor — Potential customer
Pre-conditions	The potential customer has access to the Online CMC Company system. The Relationship manager profile is uploaded in the database of the CMC system
Post-conditions	he Relationship manager calls the customer with the highest sales likely score
Trigger	Potential customer launches the online CMC system
Main Flow	<ol style="list-style-type: none"> 1. The potential customer undergoes questionnaire relating to the destination and holiday package of interest, full name, postcode, preferred language ...etc. 2. The CMC system saves the information and creates a sale likely score for that customer. 3. The CMC system will then match the request of the customer to the profile of relationship managers which have attributes to handle the requested travel destination or holiday package. Depending how many relationship managers have similar attributes to the requested interest of the customer they will all be assigning to the task but according to likely score of sale between customer and relationship manager. Relationship managers will range rankings of low/medium/high priority, for better efficiency. 4. A relationship manager will 'select' the 'list of assigned customers to call'. 5. The CMC System will display the list of customers from high priority to low priority likely sale score, of the certain relationship manager. 6. A relationship manager will 'select' on 'enquiry of holiday package menu script' for the highest rank customers only. 7. holiday package menu script is provider by a CMC staff member then the relationship manager will proceed to call. 8. The use case ends.
Exceptions	Exception1. Step 1 — If the CMC system in not available and the system is down.
Includes/Extends/Inherits	<p>Includes 1: "As a relationship manager I want to see a score that represents how likely a customer is to buy something so that I can tailor my sales pitch."</p> <p>Includes 2: "As a relationship manager I want a list of products that the customer may be interested in so that I can provide them with options they are likely to purchase"</p> <p>Includes 3: "As a relationship manager I want a script that I can quote while calling so that I can optimise the likelihood of a sale"</p>
Supporting Information	Relationship Manager profile of attributes, Potential customers holiday package of interest, all customer and Relationship manager's information needs to be stored on a central server.
Non-functional Requirements	<p>Performance: Web page loading time.</p> <p>Security: hashing of personal details of customers and staff in the CMC systems' database.</p>

Use Case Narrative 2

Use Case Name: Repeating customer makes an inbound call

Use Case ID	UC102: Repeating customer makes an inbound call
User Story	As a repeat customer with recent sales history I want to be prioritised when making an inbound call so that I am more likely to make a purchase.
Goal	For main priority customers (recent buyers) to be put on a minimum hold period, until they are being attended by a relationship manager.
Priority	H
Actors	Primary Actor – Customer Secondary Actor – Relationship Manager, CMC Company retail staff and Relationship manager
Pre-conditions	1. The customer has previously contacted the CMC Company. 2. The customer has made a recent purchase of holiday package.
Post-conditions	The customer has connected with a relationship manager having to wait a minimum hold period.
Trigger	The customer is currently contacting the CMC Company via voice-call (inbound-call).
Main Flow	<p>1. The customer will address the CMC staff about their full name, postcode and desired destination or holiday package of interest.</p> <p>2. The CMC Company staff will search for the customer in the systems database, only based full name and postcode.</p> <p>3. The CMC system successfully displays the customer's recent purchase history, also displaying the relationship manager that manage the sale and simultaneously the system will automatically show other relationship managers with similar attributes.</p> <p>If the customer is not in the system refer to Alternate Flow 1.</p> <p>4. If a suggested relationship manager is available, the CMC staff will successfully re-direct the customer to the selected relationship manager.</p> <p>If there is no availability within the relationship manager's suggested by CMC system refer to next step or refer to Alternate Flow 2.</p> <p>The CMC staff will input the destination or holiday package of interest in the system.</p> <p>The CMC system will calculate and mix the results of the customer previous ale and holiday package of choice, in order to increase a wider variety of relationship managers that have attributes alike to the customer's request.</p> <p>From the wider variety of suggested relationship managers that are now able for selection. If they are able the CMC staff will re-direct the line to a selected relationship manager.</p> <p>If there is no availability within the relationship manager's suggested by CMC system refer to Alternate Flow 2.</p> <p>The use case ends.</p>
Exceptions	Exception1. Step 1 – If the call line signal is down and the call does not come through. Exception2. Steps 1-4 – Customer decides to hang up the call for any reason. The Call will end. Customers information will be saved depending at which step they hanged up.

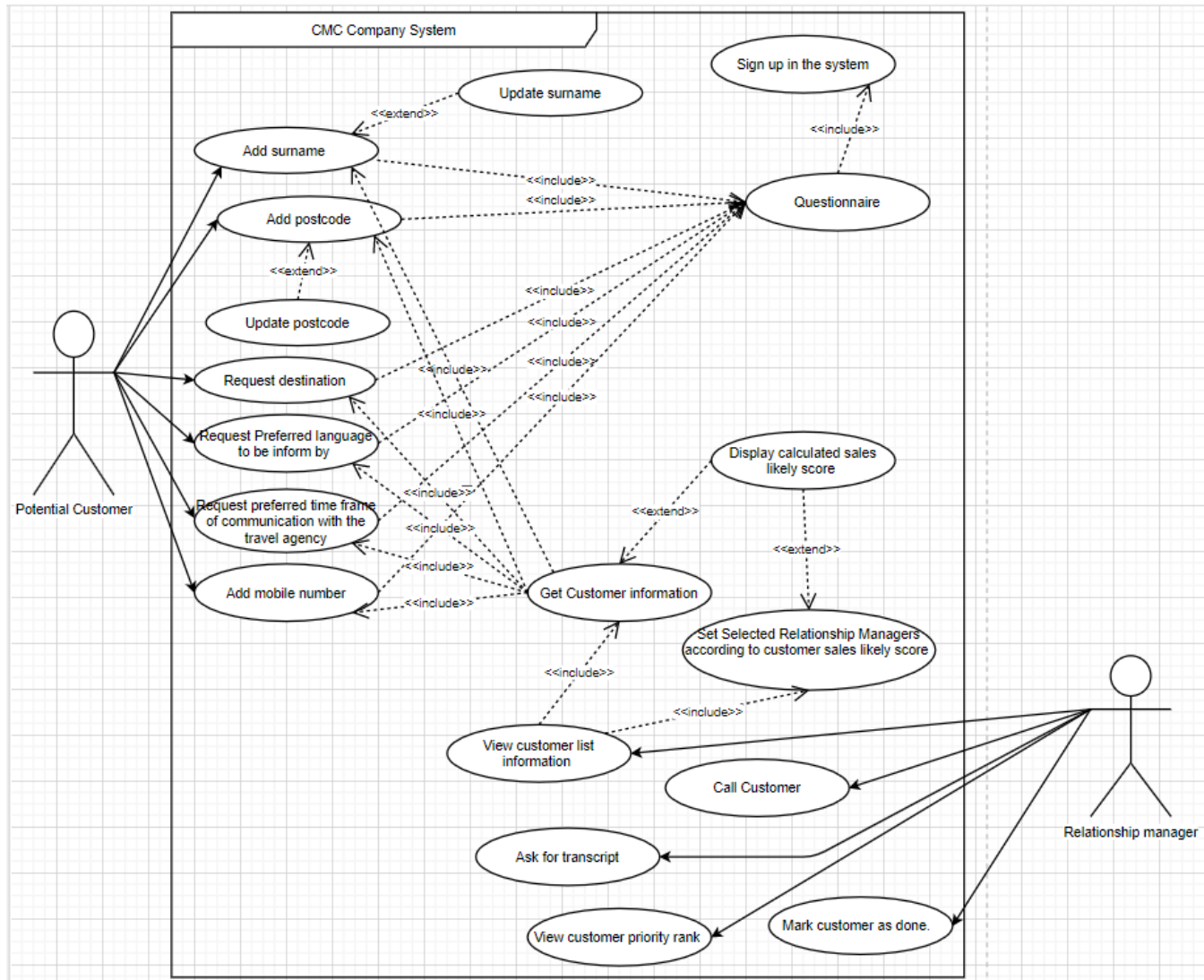
Use Case ID	UC102: Repeating customer makes an inbound call
Includes/Extends/Inherits	<p>Includes1: “As a relationship manager I want a script that I can quote while calling so that I can optimise the likelihood of a sale”.</p> <p>Includes 2: “As a relationship manager I want a list of products that the customer may be interested in so that I can provide them with options they are likely to purchase”.</p>
Supporting Information	Customer, Previously Purchased a Holiday Package, Customer information is already stored in the system.
Non-functional Requirements	Performance: The call signal lags.

Alternate Flow 1	“The customer is not in the CMC Company system’s database.” Or “First Time caller”
Trigger	The CMC system does not have the customers information. Such as likely score sale, holiday package of interests, Full name, and postcode...etc
Step	<p>1. The CMC staff and customer will undergo a questionnaire.</p> <p>2. CMC staff will save the information in CMC system.</p> <p>3. The CMC system will create a likely sales score, will suggest a variety of relationship managers according to the that similar attributes according to the customer’s request and will lastly display the suggested relationship manager’s availability.</p> <p>4. If a suggested relationship manager is available, the CMC staff will successfully re-direct the customer to the selected relationship manager.</p> <p>If there is no availability within the relationship manager’s suggested by CMC system, refer to Alternate Flow 2.</p> <p>5.Use case ends.</p>
Post-conditions	The customer has connected with a relationship manager having to wait a minimum hold period.
Exceptions	Exception1.Step 1-4 – Customer decides to hang up the call for any reason. The Call will end. Customers information will be saved depending at which step they hanged up.

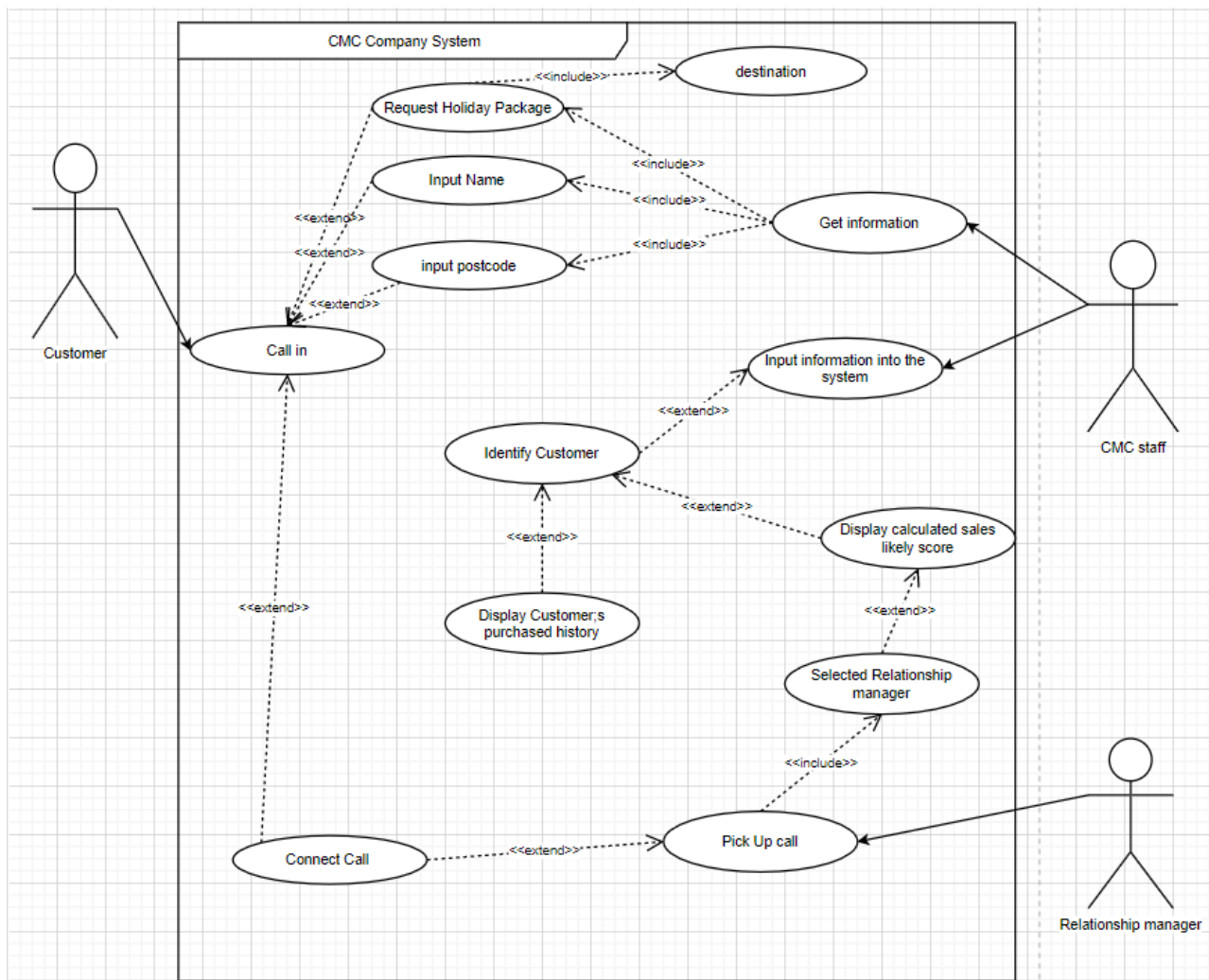
Alternate Flow 2	“There is no available relationship manager at the moment, which was suggested by the CMC system”
Trigger	There is no available relationship manager at the moment, which was suggested by the CMC system.
Step	<p>1. The CMC staff will re-direct line to a hold queue for only the suggested relationship managers suggested by the CMC system.</p> <p>2. The customer will be put on hold for a temporary period.</p> <p>3. As soon one the relationship managers suggested by the CMC system are available, the relationship manager will then be able to enter the call on which hold queue.</p> <p>4. Use case ends.</p>
Post-conditions	The customer has connected with a relationship manager having to wait a minimum hold period.
Exceptions	Exception1.Step 2 – Customer decides to hang up the call because the hold period is taking too long. The call will then end but the customer’s information will be saved.

Use case diagrams

Relationship manager; Relationship Manager Profiles

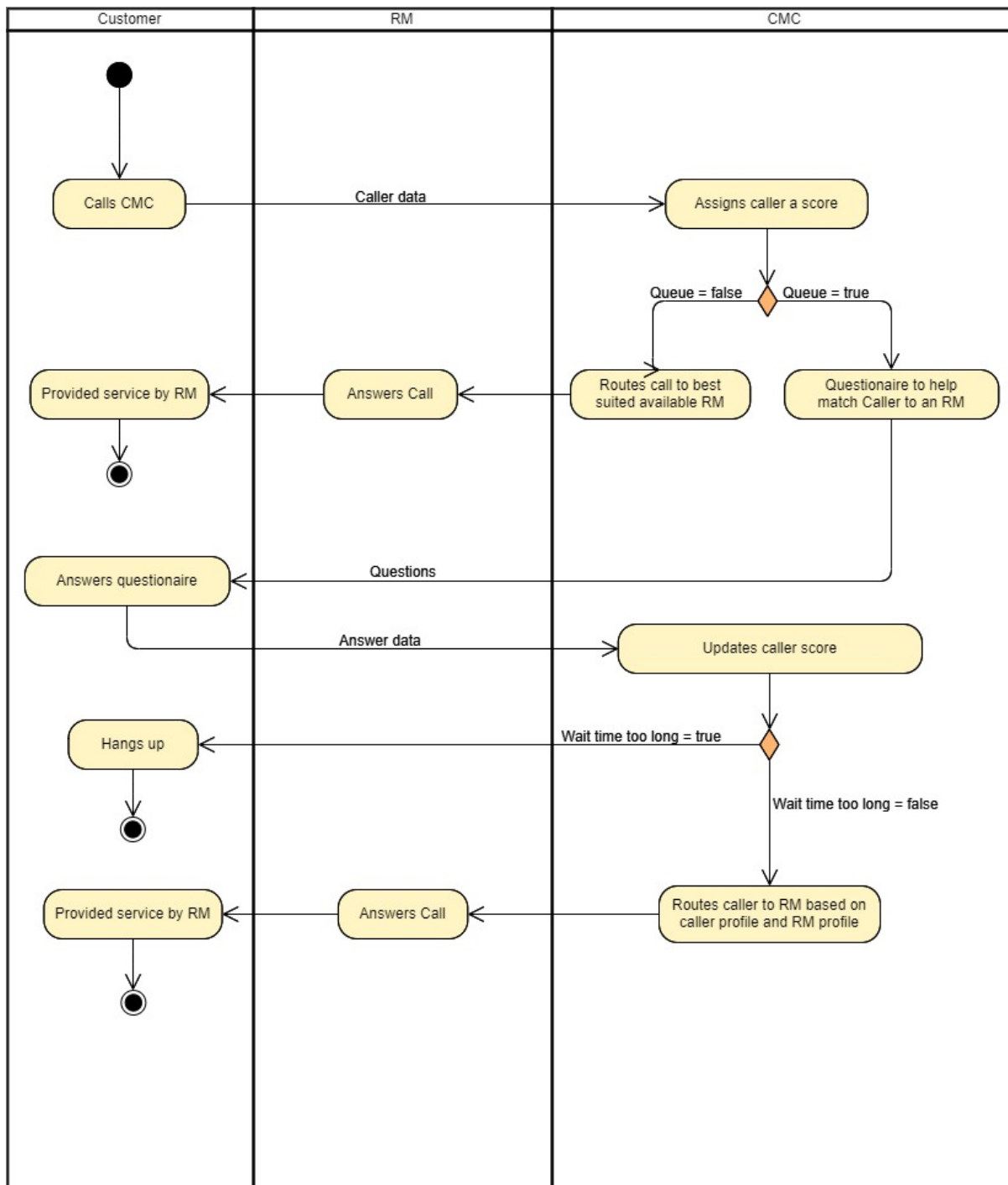


Repeating customer makes an inbound call

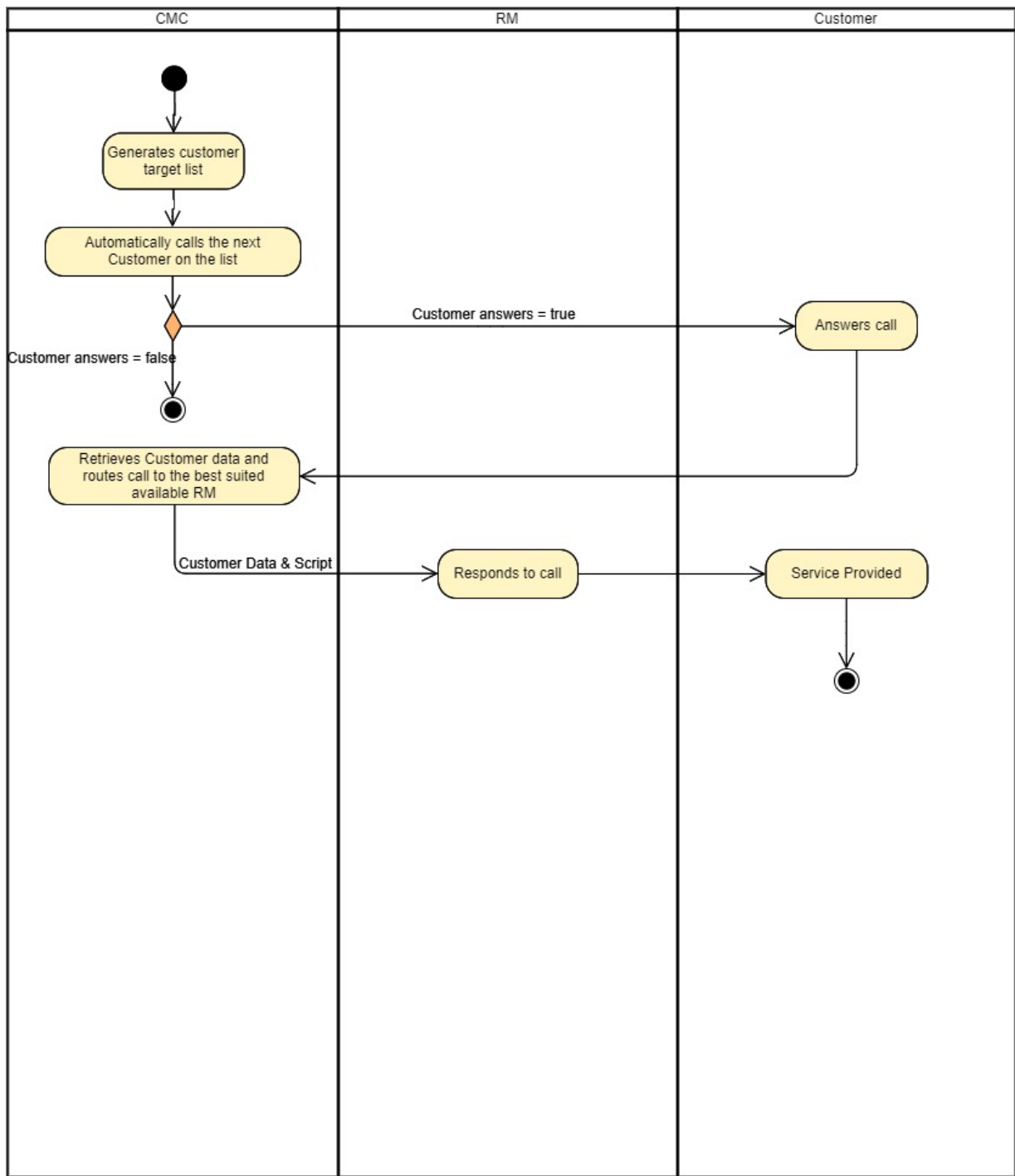


Activity Diagrams

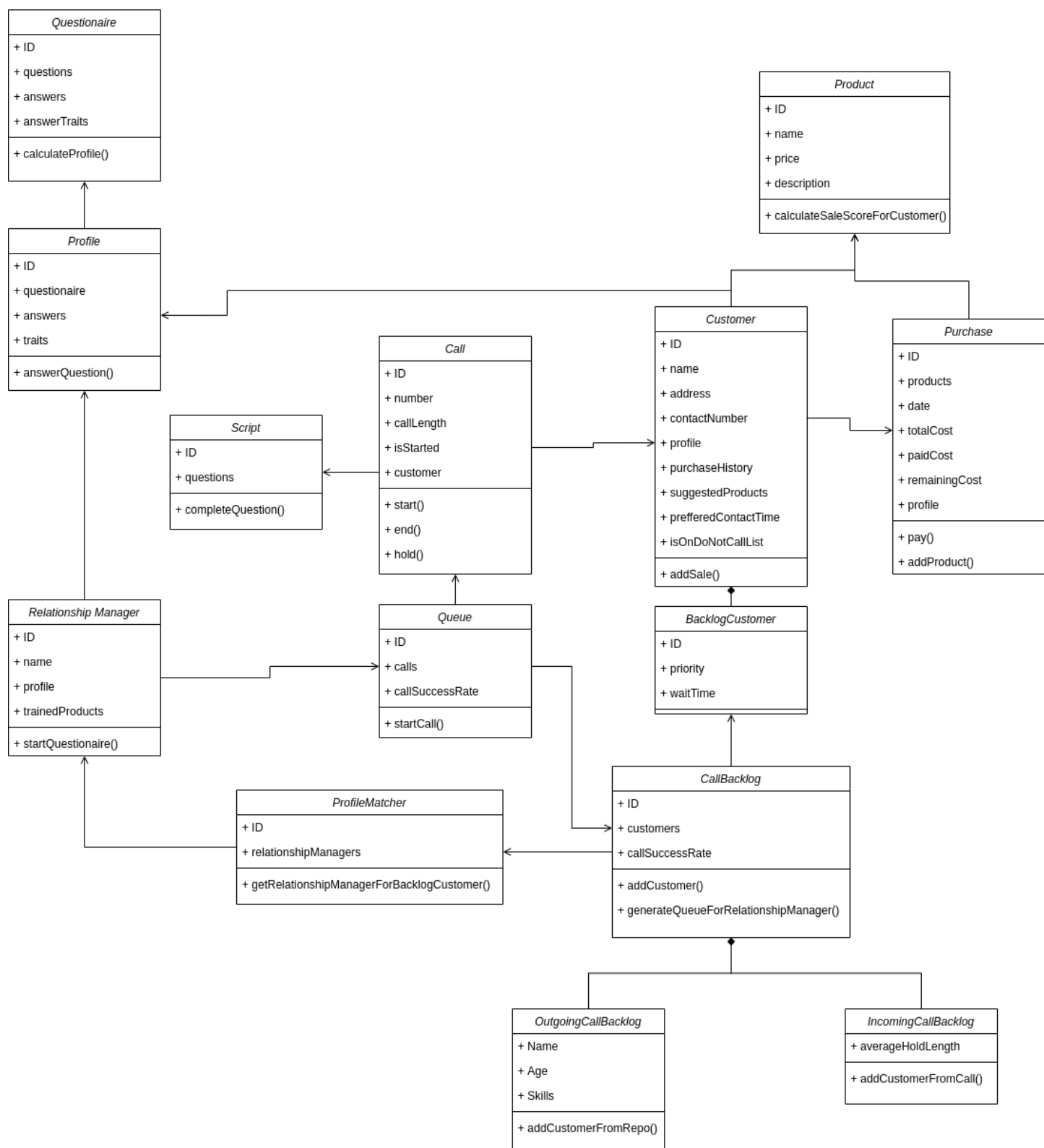
Inbound Calls



Outbound Calls

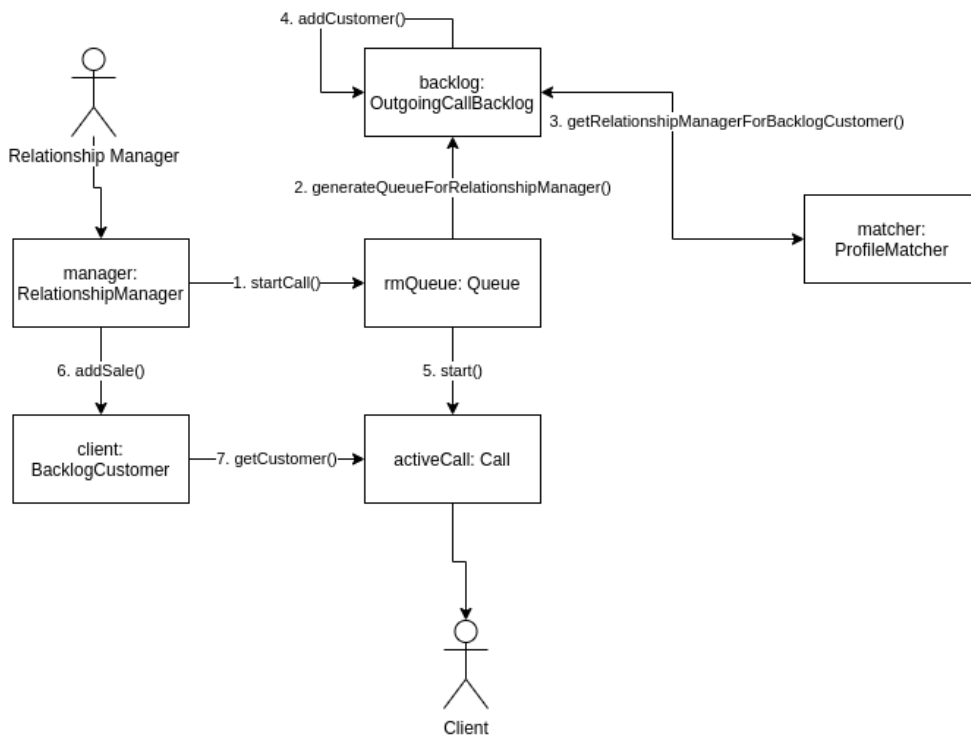


Class Diagram

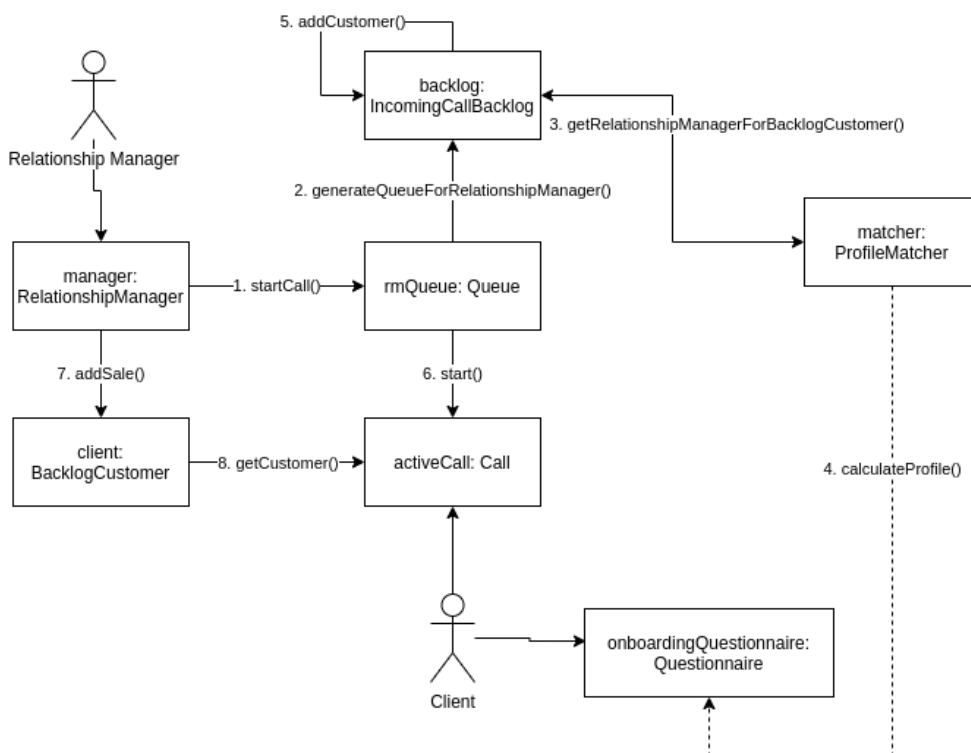


Collaborative Diagram

Outbound Call



Inbound Call



Application Prototype

App Landing

MyCMC

Search MyCMC

Next call: Jane Doe

Steve Smith

Notes

Interested in holiday on the 6th of July

First Name

Steve

Last Name

Steve

Address

Lorem Ipsum

Home Phone

Lorem Ipsum

Mobile Phone

Lorem Ipsum

Email

Lorem Ipsum

Website

Lorem Ipsum

Tags

Previous purchase

Tropical Locations

Call History

Friday (18:09)

1/1/18 (18:09)

12/06 (18:09)

11/06 (18:09)

Purchase History

Tropical Package

Greeting

Updates

New Packages

Lorem Ipsum

Product 1 (160)

Product 2 (99)

Product 4 (60)

Product 1 (8)

Product 1 (8)

Product 1 (8)

Product 1 (8)

Ongoing call with Steve

16:24

Call Queue

MyCMC

Search MyCMC

Next call: Jane Doe

Call: Sam Smith

Call: Sam Smith

Call: Sam Smith

Call: Sam Smith

Call: Sam Smith

Call: Sam Smith

Call: Sam Smith

Call: Sam Smith

Call: Sam Smith

Competitive advantages and possible effects if the project fails E.g. Potential benefits to the call centre (in terms of reducing cost and being able to carry out more effective calls).

As this project is aimed at improving and automating the current workload of the call centre, its main advantages will revolve around improvements to the overall efficiency of the workflow, and in case the project fails its main disadvantages will revolve around the time and cost it took to develop the project.

The main advantages of carrying out this project are:

1. Increases in overall efficiency

- Customers will no longer be put through to random staff members, and with the new system all customers are routed to the most experienced staff members for their selected destination and as such customer talk time will decrease increasing the available time to serve other customers and creating a more efficient workload.

2. Reduction in cost

- As the new system will be more efficient, and will require less time for customer staff interaction it will reduce costs and maximize profits.

3. Reduction in time taken to conduct sales

- Customers will be placed on hold for a maximum of 3 minutes when the new system is deployed and since the new system knows all the information it needs about the customer beforehand it knows how to best direct him to the most experienced staff member for the required destination and as such customers will be on call for a minimum amount of time and will purchase their destination packages in the shortest time possible.

4. Improved customer experience

- Since the new system is able to predict customer behaviours and is able to predict requirements, it is able to increase efficiency and reduce times on hold and waiting and as such customer satisfaction is boosted.

5. Increase targeted customer efficiency

- As the system is able to build profiles for customers based on their location and background it is able to efficiently and effectively target customers.

If the Project fails the main disadvantages are:

1. Money Wasted

- Money spent building the new system and implementing it will be wasted, that money could have been dedicated to improving efficiency via other means.

2. Time Wasted

- If the project fails all the time spent implementing it will be wasted, the staff training and infrastructure upgrade time is wasted.

3. Staff confusion

- If the project fails it will cause intense staff confusion and cause a huge setback for the overall project.

Presentation

[YouTube link to presentation](#)