ISDM Project Report

Sereena Caro, Cong Van, Ta-Seen Islam, Alberico Antico, Alexander Bell

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Executive Summary

A travel company aims to adopt a new information system to improve the services provided by its call management centre (CMC). This report will evaluate on the current problem the company is facing, explore the potential impacts and benefits of the proposed solution, and finally conclude if the new system should be adopted.

Project Definition

Problem

A major travel company is experiencing troubles with providing customers with suitable relationship managers, that can help provide suitable holiday packages toward the customer.

Objective

Our objective is to help improve the operation of the travel company's in-house call management centre (CMC). To achieve this, we will be designing and implementing a system that can help adjust the call flow rate and match customers to suitable relationship managers that can provide suitable holiday packages for them.

Stakeholder Identification

- Relationship Managers
- Customers
- Business Executives
- System Developer

Compiled Assumptions

Based on the project description, the following assumptions have been made to assist in analysing and providing a potential solution to the problem. The assumptions made were catered towards the needs of the Relationship Managers, Outbound Customers and Inbound Customers as they are heavily involved stakeholders in the project.

For the Relationship Managers, the assumptions made were to clarify the impact the new system would have on the current training and skills of the Relationship Managers. The following are the assumptions that have been made for the Relationship Managers:

- Current system is inefficient;
- Clientele is inaccurately assigned;
- Relationship Mangers are unsure about the change or if it will be beneficial;
- Concerns about sales and profiles needing to be re-evaluated.

For the Inbound Customers, the assumptions made were to define the potential reasons of becoming a customer for this company and to assist in the creation and improvement of the profiling tool that will be implemented. The following are the assumptions that have been made for the Inbound

Customers:

- Customers calling in will want help with planning their holiday;
- Customers want someone with knowledge with where they want to go for their holiday.

For the Outbound Customers, the assumptions made were to assist in filtering potential customers for the Relationship Managers to contact in hopes of making a sale. The following are the assumptions made for Outbound Customers:

- Outbound Clients may not know about the company (Cold Leads);

- First calls would be to profile, then transfer to someone with specialised knowledge.

Design Thinking Approach

In our design thinking approach, we started developing two empathy maps, one for inbound calls customers and one for outbound calls customers.

All three of the empathy maps (shown below) are provided with a Pain and Gain section so we can have a clear view of the situation, and the outbound call empathy maps have a small section as well with assumption. This empathy phase helped us to gather important insights that will help us to solve the problem because we can easily define it. We created a section for the problem definition based on the feedback gathered from the previous artefacts, so we could define the objective.

Empathise has been the most powerful tool that we used to understand and define the problem, design thinking helped us with looping phases and gather the best information from it.

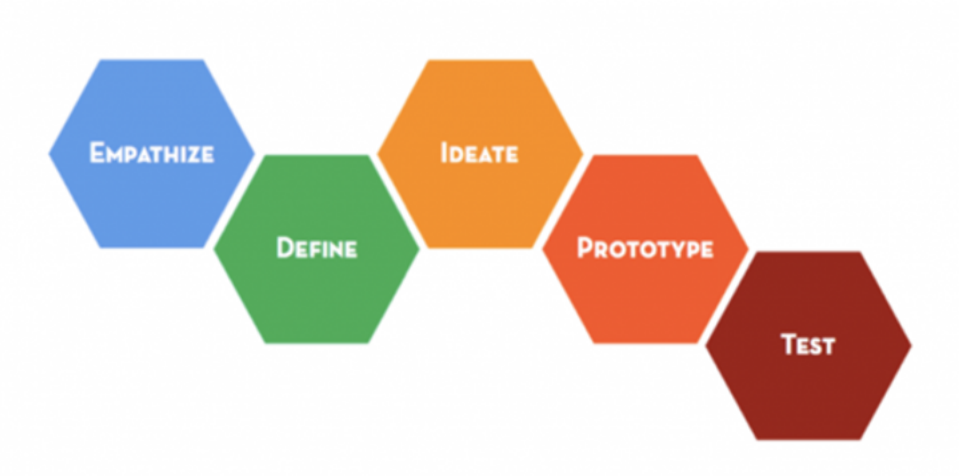

Figure 1: design thinking approach

Prototypes and Models

Activity Diagrams

Inbound Customers

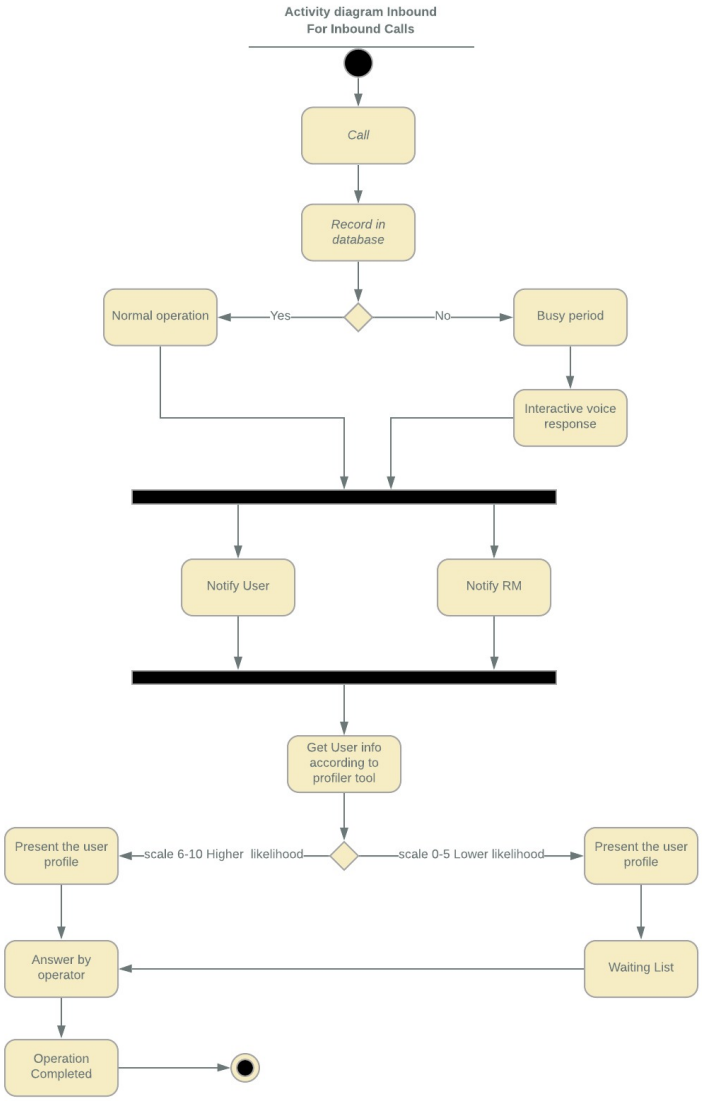

Figure 2: Inbound Customers

Outbound Customers

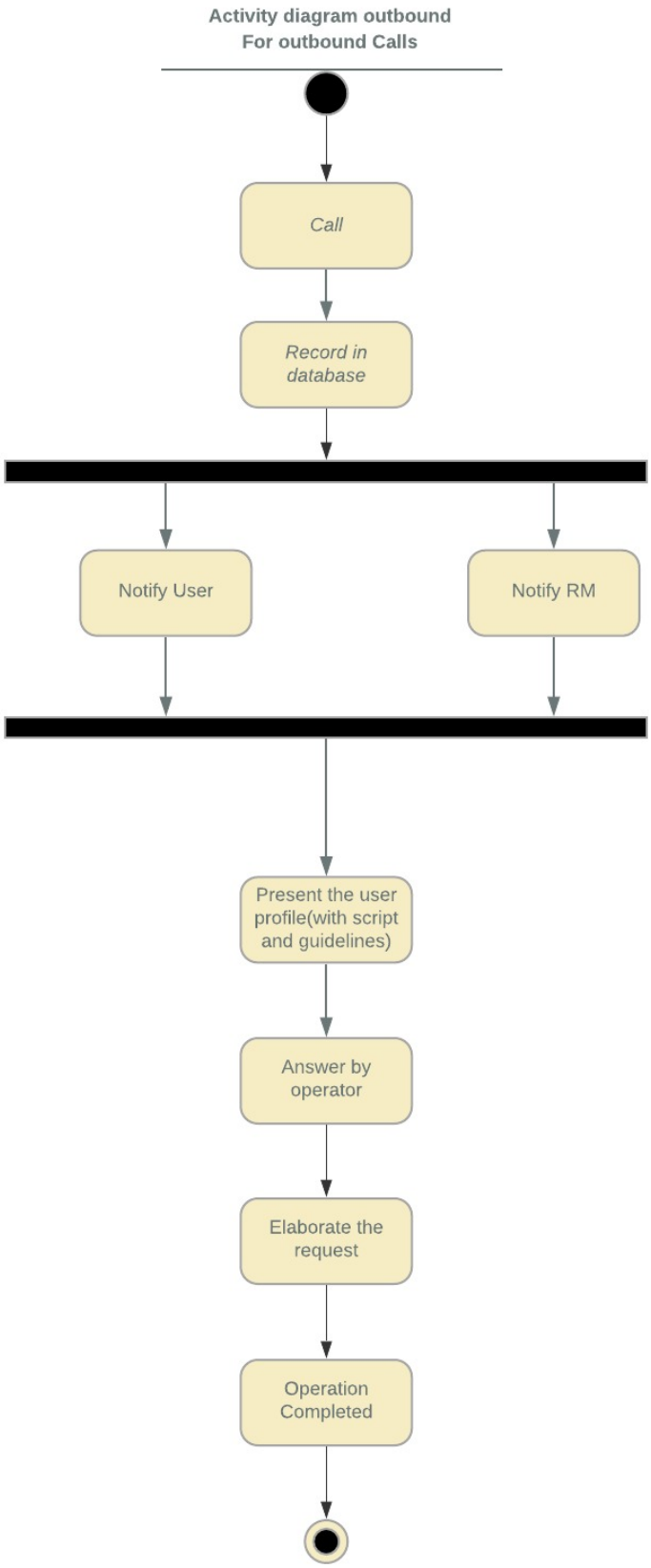

Figure 3: Outbound customers

Use Case Diagrams

Inbound Customers

Figure 4: Inbound Customers

Outbound Customers

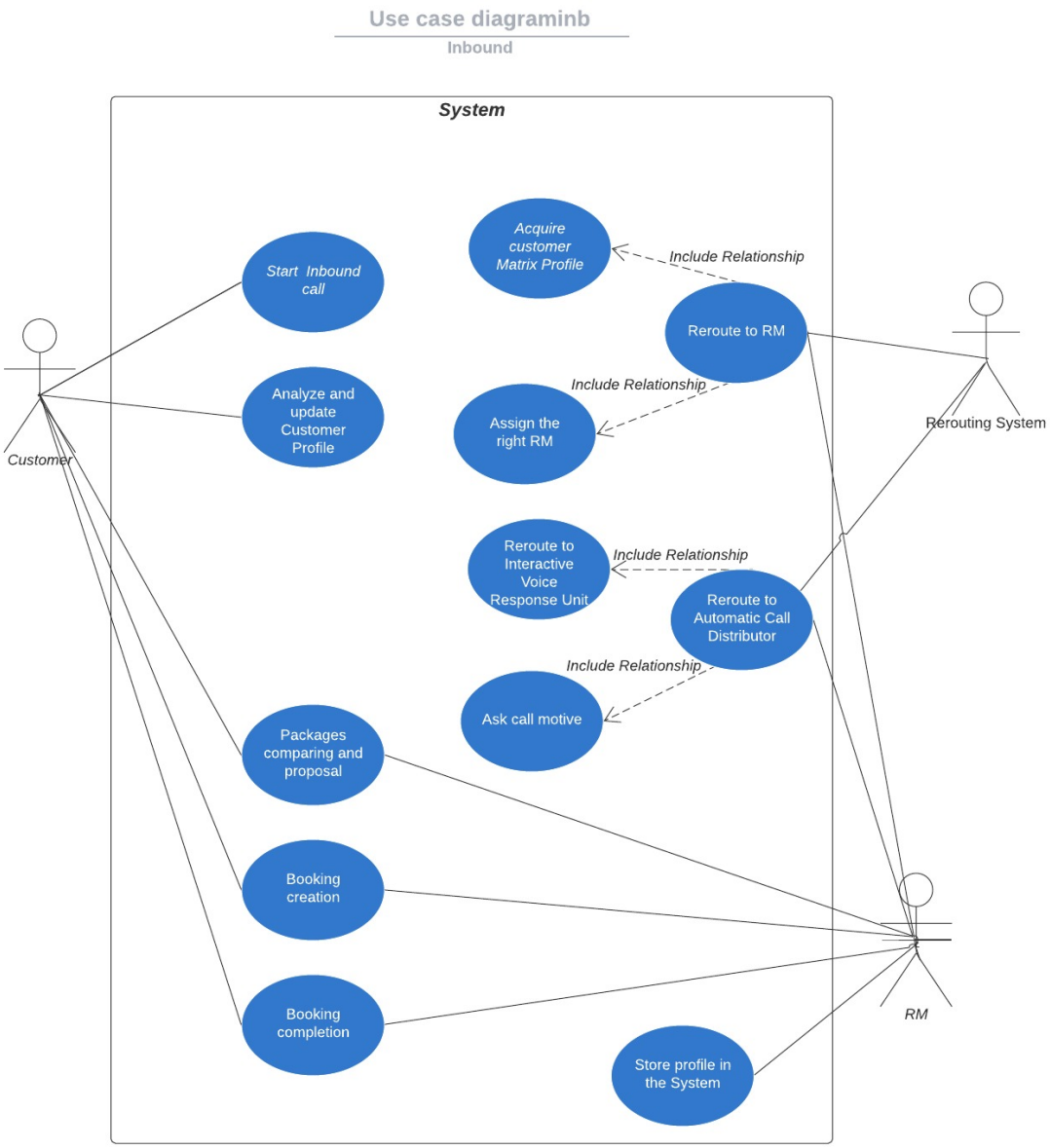

Figure 5: Outbound Customers

Class Diagram

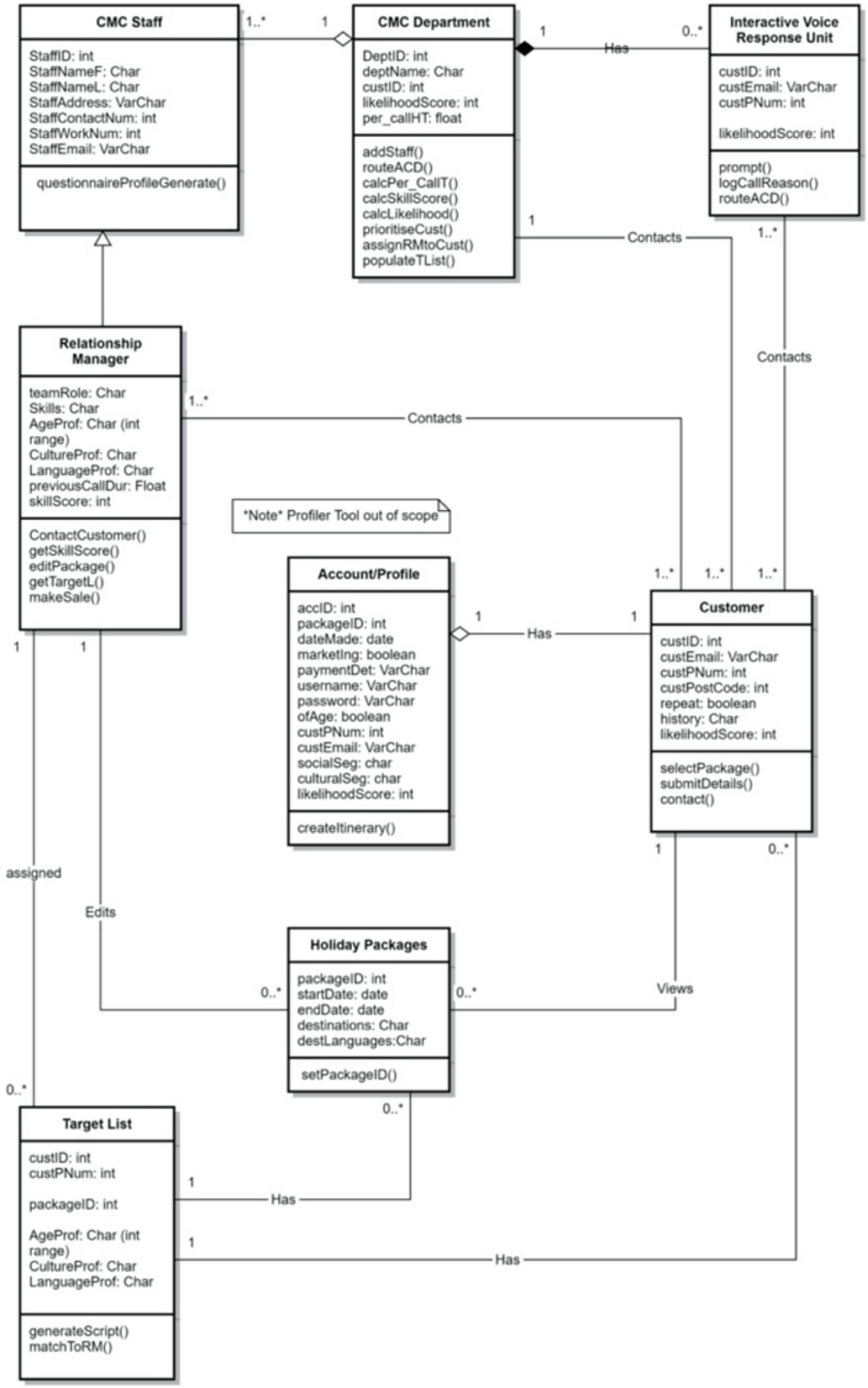

Figure 6: Class diagram of the software solution for the development of an information system to improve the operation of CMC-RM sales.

The collaboration diagram focuses on the interaction and structure of objects in the system. A key emphasis was put on showing the visibility since it is important that there is a distinct limitation on what customers are able to interact with in the system due to security and privacy concerns.

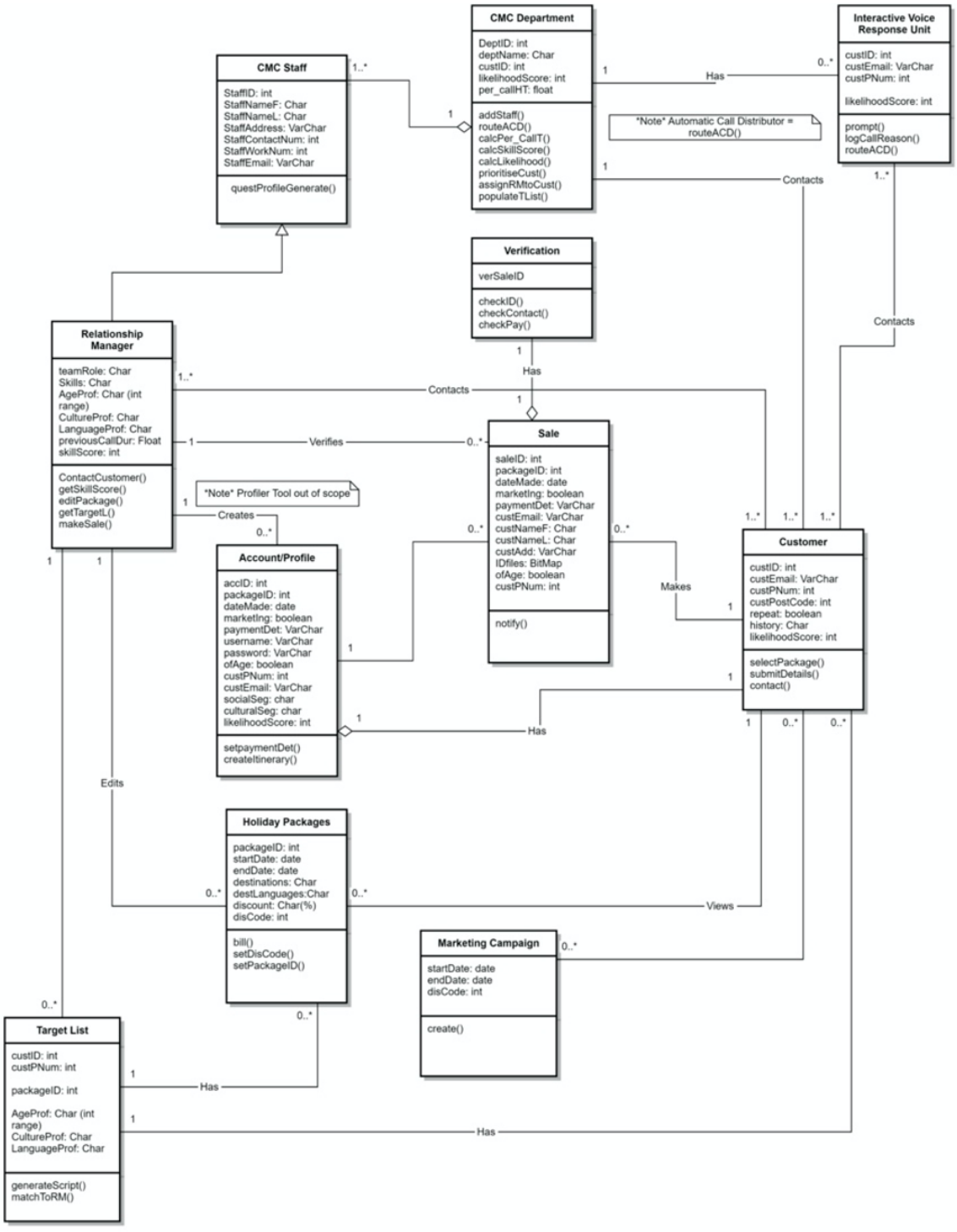

Figure 7: Global diagram of a proposed software system incorporating the CMC-RM as a complete business solution.

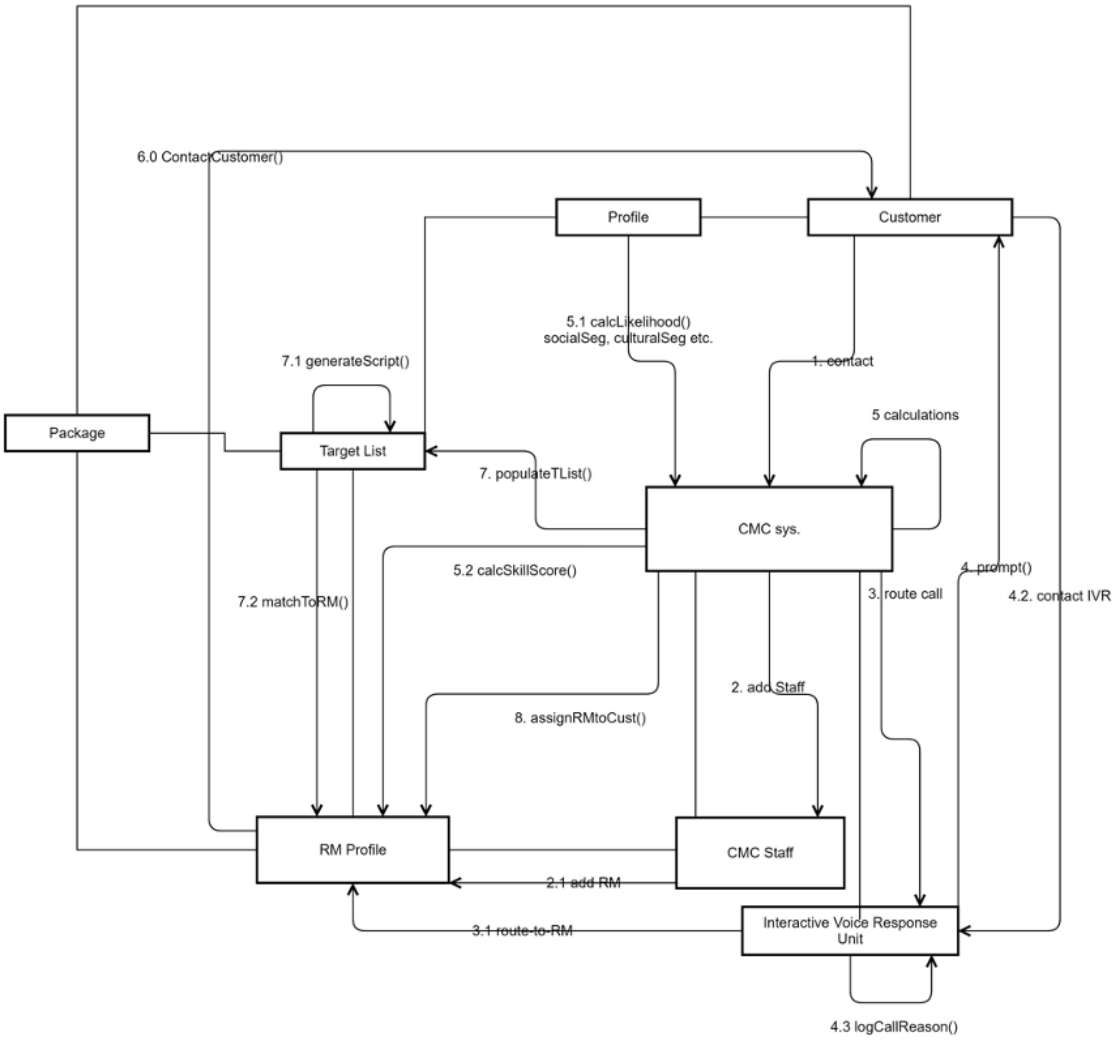

Figure 8: Collaborative Diagram of a proposed software system demonstrating the interactions and structure of the objects in the system.

Sequence Diagram

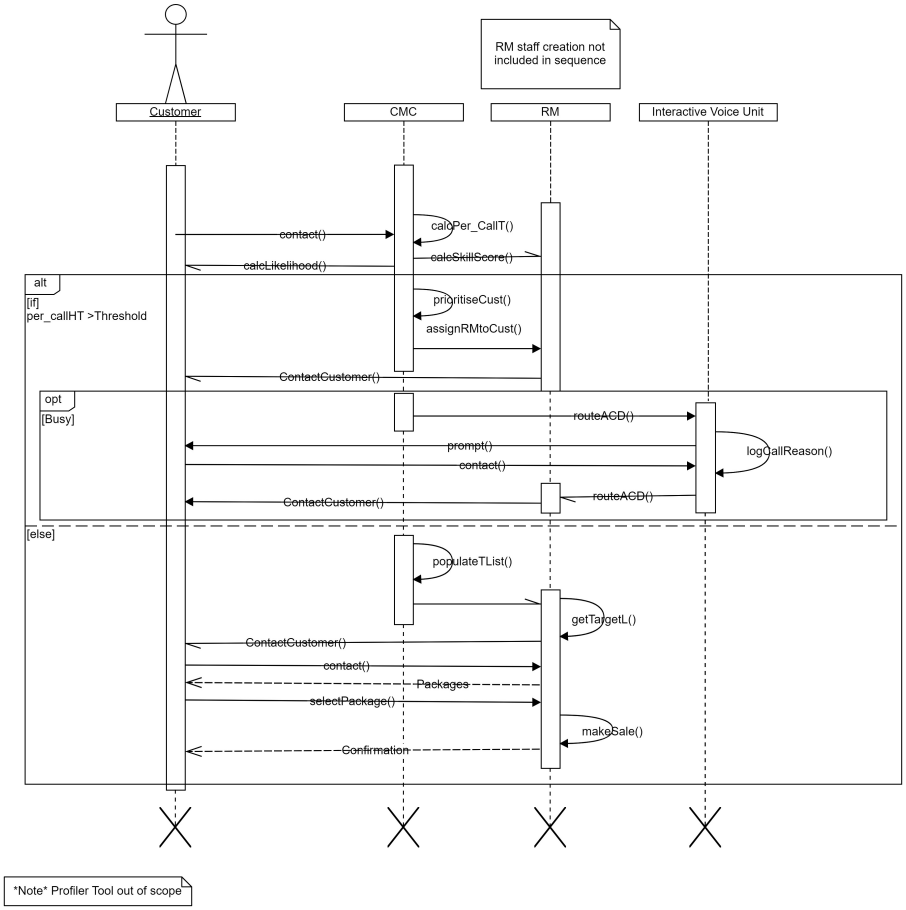

Figure 9: The sequence diagram demonstrates the sequencing of inbound and outbound call routing use cases. It does not cover the entire system.

Competitive Advantages and Possible Effects If Project Fails

The new CMC system aims to improve the current call flow rate through the routing and prioritising of both incoming and outgoing calls. To do this, the system will adopt an accurate and efficient profiling tool that will match customers to suitable relationship managers. In comparison to the old system, it lacked such a profiling tool, and thus didn't provide accurate matches between customers and relationship managers.

With a profiling tool being used, the customer service aspect of the relationship manager role is likely to also improve. With less time spent on trying to determine the customer's needs or desires, the relationship managers can spend more time answering questions of concern or address any finer details of the holiday packages being sold. This will increase sales and likely decrease potential conflicts.

This will also allow the company to compile a more efficient and organized client list. Which will enable the company to use the data in an aim to understand the market and cater their packages towards trending locations or common travel periods. With this data, the company can assess their clientele and ensure their employees are trained accordingly.

Through incorporation of an interactive voice system that will allow customers to choose their reason for calling, the system will be able to reroute the incoming call to an appropriate relationship manager. This will assist in cost reduction as it saves on workforce and time.

This new system will also improve the relationship that customers have with the relationship managers. This means that the rapport building skills of the employees will likely increase, which will improve customer interactions and potential sales. With a higher customer satisfaction rate and customer service, it will also enhance the company's image. An enhanced company image will in turn increase potential customers and potential sales. This image will also increase marketing value through word of mouth which will possibly reduce costs spent on advertising.

However, there is still potential for project failure. In this instance, project failure would result in an increase of unsatisfied customers, lowered morale amongst relationship managers and a negative impact on the company's image. Mismatched customers and relationship managers can result in a loss of sales and a negative review from the customers. With an increase of mismatches or sales loss, it can also lower morale and efficiency of relationship managers. This will eventually affect the company's sales and customer service image.

GitHub and Scrum

Over the course of the past few weeks, our team has utilised the agile methodology of Scrum to document and implement the CMC system. We chose to adopt Scrum because of its ability to promote early feedback, collaboration, and cooperation due to its iterative nature. With it, every member was able to contribute to the project in a continuous manner, as well as be self-organised and flexible in what parts we work on. Ultimately, Scrum has allowed us the opportunity to work in a team while being flexible, adaptable, and most importantly, agile.

Roles

Before working on the report and related documents, we had to identify the everyone's roles in Scrum. We identified the following roles:

- Product owner: Travel Company CMC
- Scrum Master: Sereena Carol
- Development Team: Alberico Antico, Alexander Bell, Cong Van, Ta-Seen Islam

Activities

Before starting on the project, we began sprint planning. We identified our tasks in the Product Backlog using a Kanban board (using GitHub's Project tab). All tasks were categorised in one of three columns: To do, In progress, or Done. During the sprint, we moved these tasks around to their appropriate columns, reflecting their current progress as we worked on them.

As we progressed through the sprint, we held stand-up meetings in private team calls on Mondays. In these meetings, the Scrum Master asked for the team's current progress, what went well in the past week, and what went wrong. After the meeting, we continued working on the tasks that were left to do.

We used GitHub's issue functionality to iteratively develop on our documentation, such as our diagrams. For example, an opened issue was accompanied with a member's current draft of their diagram, and all other members gave feedback on it. This continued until the diagram is satisfied, where the issue was then closed. Other members worked on their respective section on a Markdown file, submitting commits and merge requests as they progressed.

Video Link

https://youtu.be/NNs7Gzhm-V0