1. Outline the *objectives* of the project and *define the problem* (Steps 1 & 2 of Design Thinking Methodology).

Design Thinking is considered to be a process that makes use of the aspects of being empathetic, innovative, creative as well as analytical skills to be able to solve a established problem and provide all reasonable solutions. This methodology keeps the end customer or user in mind to create solutions that are useful. It is also considered to be a cycle that can be repeated until an effective and efficient solution has been produced. The design thinking methodology is made from 5 steps, empathize, define, ideate, prototype, and the test.

The first step is empathize where it revolves around the motive to understand a distinct problem from the perspective of the end- customer. The main purpose of the first step is to have a general viewpoint of the situation as a whole to better understand what the lacking aspects are.

Within the next step define, the knowledge and important information that is obtained from the empathize phase is analysed and is interpreted. The reflection of the problem has been prioritised and established to be able to create a distinct plan on how to provide a viable solution for this problem. This set is focused on being able to translate the information into a more refined plan.

In the next phase ideate, this step make use of a creative mindset where it used to create and determine a more innovative solution for the problem. In this phase the solution is now being imagine via a creative mind and extensive research is now being conducted on how to produce a certain reality from the image created. This also considered the creative phase where the mind is used to figure out the finer details of the proposed solution.

During the prototype step, a more tangible and physical solution is produced. In this phase, the creativity that was formed in the ideate step is now applied. This results in creating a prototype which is real, tangible as well as authentic. The solution is also being brought to life while being able to keep the end-customer in mind.

In the last step test, the prototype that was created is now reviewed and feedback is given. Minor or major adjustments may have to be conducted. Within this phase, finalising the solution has become a priority where the solution will be the one to be used as well as provided to the end customer. This step also promotes for a more fine-tuning and detailed modifications as well as final testing procedures to be implemented. This si to ensure that the prototype is meeting the standards of the end-customer.

While in the testing phase provides a reasonable solution to the main problem, this entire process may be required to be repeated until the solution provided is as perfect and exact as possible. Returning to the beginning step and repeating the entire methodology may be needed to yield more successful results, as this process is often given the impression where it is cyclical. This results in the end product to be able to serve the needs of the end-customers.

Step 1 Empathize (Understand the problem)

Step 2 Define (Analyse and interpret and plan)

1. Identify stakeholders

Travel Company (Call Management Centre(CMC))

Relationship Managers (RM)

End-Customers/Potential Customers

Employees

Potential buyers/potential customer

Inbound Customers

**Discussion Topic:**

A major travel company would like to develop an information system to improve the operation of their in-house *call management centre* (CMC). The system will adjust the call flow rate to suitable Relationship Managers (RM). Relationship Managers (RMs) perform sales of holiday packages. To provide improved call routing and dynamic call flow control for both inbound and outbound calls, the information system will provide assistance to RMs in serving their end-customers (or potential customers) and will match RMs and end- customers according to RMs skills and customers profiles.

The system operation is complicated by the varying number and nature of holiday packages offered by the travel company. One way to improve the call flow rate is to match customers based on RM performance and product knowledge. For example, in selling particular travel packages, the system would do well in matching end-customers to well informed RMs with appropriate knowledge about the destination and its traditions.

A typical RM matching technique is segmenting customers into social and cultural segments according to their postcodes and surnames. For the purpose of this assignment, assume a supporting tool to create customer profiles exists, *Profiler Tool*. A corresponding RM profile may depend on the age, sex, culture, language proficiency, experience and product knowledge. The system sought will be used as a skill matcher between end- customers and RMs based on their profiles. This makes RMs more convincing to a customer and increases the chance to achieve a sale or provide a service.

RM profiles are initialized at hiring. Employees initially take a 10 minutes questionnaire which gets used to build a profile and a skill matrix. These will provide initial RM profiles for the system. The system will adjust according to RMs subsequent performance in selling packages and in serving customers effectively and efficiently.

In targeting potential buyers with outbound calls, the system dials numbers automatically according to a customer target list generated by the system. The system retrieves customers details from a database. It then displays the details and provides the RM with guidelines and a script to help in providing an improved service to the end-customer. For the outbound calls, the system will create a *target list* for each RM based on their skills and profile. A target list is essentially a list of tuples of the form *<potential customer, product proposed>*.

For Inbound calls, customers dial a number reaching the CMC which has its own private automatic branch exchange to route the calls. A call routing and distribution routine that minimizes inbound call costs by reducing per-call handling time. A skill score is calculated based on the RM’s previous call duration and profile. A score from 1-10 based on the likelihood to purchase the product is given to a customer according to some preloaded criteria (e.g. repeat customers may have a higher score, customers from particular postcodes may have lower scores, etc..). Customers with the highest scores are served first. Their calls are directed to RMs based on skill levels and best match. The schedule of dialing end-customers and the estimated call duration vary according to a RM’s skill level and previous performance.

During busy times, inbound customers can be directed to an Interactive Voice Response unit prompting them for options, and may even ask for call reasons in a few words and then redirect the call to an Automatic Call Distributor routing the call to the first available appropriate RM. Customers may hang up when they suffer from a long wait time.

*Note:* Where you are unable to provide information, identify questions you would need to ask to be able to resolve those issues. ***Please also expect that the customer will be in touch during your project (your tutors will relay their messages)!***