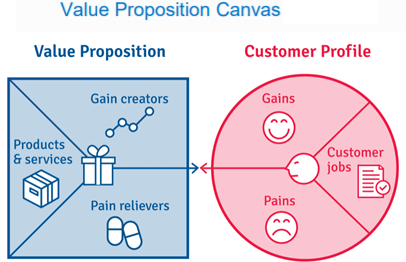
# Project Analysis

## Introduction & Brief Project Outline (Done2)

Following the covid-19 pandemic, restaurant owners are facing an uphill battle against the prospect of their future financial success. The skyrocket global unemployment rate has led to rising anxiety amongst individuals to spend money in restaurants. Furthermore, we are likely to observe a decline in the supply of waitering jobs given the uprising number of University graduates every year and the aging developed countries. To support restaurant owners through this difficult time, an interesting software project – Hi! – has been pioneered, a web-based platform that primarily takes orders and payments for restaurant customers.

## Requirement Statements (Doing)

Although the ability to take orders and payments via a web app is a sufficient business concept, it is still an ideal practice to examine the full scope of the project in the context of a restaurant. To analyse all the possible requirements of the project, we will adapt the standard industrial practice - Value Proposition Canvas (2014).



VPC defines all the possible tasks each restaurant stakeholder (customers, chefs, waiters, owners) wants to accomplish and their gains (solutions) and pains (issues) when using the software. We will also define gain creators, pain relievers and products & services (features).

### Customers

|  |  |
| --- | --- |
| Customer Jobs | Gains, Pains, Gain Creators, Pain Relievers, Product & Services, Essential Points |
| Feel wanting to eat out | Add register users to the email list and inform them new offers to stimulate their interest to eat out  Collect the phone numbers of the registered users and text them relevant offers too  Advertise our app through social media (Facebook Ads), web ads or letters if we can collect their home address with a takeaway service  Have YouTube Influencer to promote our app – we can have loyalty points (£10 discount for £100 spending/ discount special days to promote user to eat out |
| Find a restaurant they want to go online | We can display all registered restaurants based on proximity, price, type of food, size, atmosphere, reviews, car park costs and availability  Adapt search engine optimisation for Google search  Give discount if registered users promote our app using their Facebook and Instagram  Give discount if registered users post the food and drinks, they ordered onto our platform. This will improve the profile picture of the restaurants because some restaurants may not know or want to post their meal pictures up due to laziness or not knowing this functionality. We can provide a template for business owners to create a professional profile  We can have the reviews displayed under the restaurant’s name (thumb up, OK, thumb down)  Post our logo onto a visible place in the restaurant so people can see the menu even they are outside the restaurant. They can also order food and drinks even when they are not seated  Some people may not iterate with the use of a phone. We can provide easy guidance (speed tutorials) to improve their user experience |
| Find the location of the restaurant | People may find the restaurant using the google map function in our platform  For each restaurant, we will have an address and postcode that links to Google Map so they can see the approximate location of the restaurant in a wider scope  Some users may not know this functionality if it is not clearly displayed. We will add a “click” sign to show that the address and postcode are clickable  We can ask the restaurant owner to post the surrounding of the restaurant at the front page so customers can identify the restaurant easily. |
| Reserve a table | We can have an online booking system  Telephone, Platform (e.g. OpenTable, 5pm), go without reservation |
| Go to the restaurant | Driving (Google Map), walking, cycling |
| Go inside the restaurant and wait for a waiter | Wait until a waiter notices, use a seat allocation robot |
| Waiter takes customers to a table | Waiter may need to find an unreserved empty table with a table management software |
| Take a seat | The app can record the occupied and reserved seats. |
| Take the menu | The app can display all the food and drinks the restaurant offers.  The customers may find the images too small to read.  The customers can see the images of the food and drinks offered instead of words  We can use a QR code to direct user to our web-app. |
| Discuss the food and drinks they want with their friends and family | The app can display popular food and drinks first. The app can display the food and drinks available at the restaurant and the food and drinks they have clicked to maximise the size of the images. |
| Come up with the food and drinks they want as a group | Customers can add and remove the food and drink they want as they go through the menu. |
| Wait for the waiter to come up | Using our app, customers can order the food and drinks they want once they have been seated. |
| Listen to waiter’s meal recommendations | Our app will place popular meals first. |
| Tell waiter the food and drinks they want to have | The customer can click and discard the food and drinks they want to order |
| Get asked whether they want the food to come separately or together | After the customer pays for their bills, a notification will pop up asking whether they want the meals to come together or separately |
| Have a conversation and wait for the food and drinks to come | The customer will be redirected to our all-restaurants platform so they can chat about other good restaurants  Have ads for our platform  Introduce multi-go discount- if the app user go to the specified three places (restaurant, pool centre and attraction), they can get a 10% off discount for all. We can track their activity using their phone number.  Related restaurants (based on the city, food, popularity, price, review) will be ranked and higher-ranking restaurants will be displayed first. |
| The food and drinks are served | We can adapt an AI system to analyse the time taken for each meal. This will predict when the meals are ready to serve.  We can have a sound notification to inform the customer when the food and drinks are cooked after the chefs click food ready. |
| Have the food and drinks | We can create a system to analyse the average time taken customers take to finish a meal to help seat allocation. |
| get asked whether they like the food | We can post a feedback notification about the last restaurant they visited after the customer has paid for their food. |
| Finish the food and drinks | - |
| Have the waiter to collect the plates | The restaurant can adapt a sushi belt (e.g. Yo! Sushi) to deliver food and drinks. |
| Ask for the bills | The app will facilitate the payment process. Remember their bank details based on their phone number using their history setting. However, this will give customers discomfort about security.  We can have a camera card scanning function to auto-type the bank details for the customers.  We will explicitly states that your card details will not be stored into our system. |
| Get the bills | - |
| Pay for bills | The customer will get a succeed notification after the payment is approved. |
| Give a tip | The system will allow customers to type in the tip they want to give to the restaurant at checkout. |
| Leave the restaurant | We can have a progress record to show every user the number of customers are in the restaurants and the time they would need to wait before they can have their meals. |

### Chefs

|  |  |
| --- | --- |
| Jobs that needs to be done | How can i-Waiter help? |
| Receive an order |  |
| Pick out relevant ingredients |  |
| Cook the food |  |
| Put the food to the tray |  |
| Put the food out for the waiter |  |
| Inform waiter the food is ready |  |

### Waiters

|  |  |
| --- | --- |
| Jobs that needs to be done | How can i-Waiter help? |
| If there are customers waiting at the door, approach and greet them |  |
| Take them to the table |  |
| Tell them how to order food and drinks (go to the waiter section, ask for a waiter to come) |  |
| Walk away from the customers to give them time to decide for the food and drinks |  |
| After a few minutes, go back to the customers and ask what they want to have for food and drinks |  |
| Take out ordering paper/ machine |  |
| Listen and note down what the customers want to have |  |
| Give the order to the chef OR tap the food and drinks they want to have to send it to the chef |  |
| Clean the restaurants |  |
| If the meal is for takeaway, give it to the driver |  |

### Restaurant Owners

|  |  |
| --- | --- |
| Jobs that needs to be done | How can i-Waiter help? |
| Recruit chef |  |
| Recruit waiter |  |
| Develop a restaurant website |  |
| Advertise the restaurant via platforms such as OpenTable and 5pm |  |
| Decide on the shifts for the staff |  |
| Pay them daily/ weekly/ monthly |  |
| Taste chefs’ food |  |
| Monitor waiter and chef performance |  |
| Train waiter |  |
| Train chef |  |
| Recruit an Accountant for managing tax and legal issue |  |
| Purchase insurance |  |
| Maintain the decoration of the restaurants |  |
| Purchase new kitchen appliances |  |
| Purchase restaurant furniture (tables, chairs) |  |
| Go to a business wholesale supermarket to buy raw materials every 3-5 days |  |
| Design and print menu with a printing company |  |
| Deliver menu to the neighbourhood door by door |  |
| Calculate daily revenue for accounting purpose |  |
| Calculate cost of food, staff |  |
| Pay gas and electric bills monthly |  |
| Think about offers and discounts to attract customers, especially during quiet hours |  |
| Purchase covid-19 equipment (hand sanitizer, masks, wipes) |  |
| Ensure social distancing rules (put stickers on each table) |  |
| Greet health inspection officer |  |
| Greet tax inspection officer |  |
| Register for a food licence (selling, cooking, storing, preparing and distributing food) from the local council |  |
| Ensure the expire dates of the food and drinks |  |
| Ensures the food are cooked properly |  |
| Ensures the food are stored properly |  |
| Obtain feedback from the customers |  |
| Deal with customer’s complaints |  |
| Obtain a premise licence for selling alcohol, hot food and drinks between 11pm and 5am or if they provide entertainment such as film screening, sporting events, live music, recorded music, dancing facilities or facilities for making music |  |
| Obtain a TV licence if they put a screen in their premises |  |
| Obtain a leaflet licence if they decide to distribute flyers from local businesses, newspapers and other printed materials |  |
| Awareness of food hygiene and health and safety regulation |  |
| Have a repairer contact in case something is broken |  |
| Legal contracts – restaurant ownerships |  |
| Pay monthly rent |  |
| Think about how to improve the restaurant in terms of the above elements |  |

### Requirement Evaluations

questions asks our users

what users will you ask

sign by supervisor

## Test Driven Development using User Stories (Done2)

To prioritise the different software components, we cluster all the requirements into portions that must be completed before March 2021, the minimal viable product; and those that will be achieved after the launch of the project, the future work. We will discuss the future work in the evaluation section.

### Minimal Viable Product (Done2)

This section will examine the minimal deliverables that must be completed before the end of the project in March 2021, in terms of the restaurant owners, customers, chef and waiter.

# Software Design

## Product Paper Prototype

## Product Digital Prototype

# Product Coding

# Evaluations

## Requirement Evaluations

## Test Evaluations

## Product Paper Prototype Evaluation

## Product Digital Prototype Evaluation

## Future Work

# Bibliography

VPC (2014) Value Proposition Design: How to Create Products and Services Customers Want, John Wiley & Sons.