Canteen Ordering System for Unilever

Simplilearn Project for CBAP

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Project Overview & Break down (illustration)

Company

- Present in **190** countries
- **1500** employees
- **12** floors building (in particular location mentioned- UK Office)
- **2** canteens floors

Canteen Specifications

- Seating capacity -150 per floor (***300 seats in total***)

Problem breakdown (Company side)

- Preferred Lunch time = 12pm – 1pm (**1 Hour**)
- Time Break down

  - 30min – 35min – wasted in que/grab table
  - 10min – 15min – time spent eating
  - 10 min – reaching and coming back

  ~ **60 minutes total**

Total Number of Employees = **1500**

Total seating capacity = **300**

No: Turns required = 1500/300 = **5**

***Changing turns to hours can be made
into a rough calculation of ~3.5 hrs a day***

Observations

- ➤ **Employee Complaint –** Employees don't always get the food they want.
- ➤ **Canteen problem –** throws away significant amount of food if not sold in time.
- ➤ **Employee request –** To create an online system to order meals, and delivered in desired timeslot.

Business Objective & Success Criteria

Objective – [1 – 2] (*Canteen Operations*)

- Reduce food waste **>= 30%** (in 6 months)
- Reduce canteen operating cost to **15%** (12 Months)
- Scale value of food thrown away
  - Previous – **25%** wasted
  - Must plan for **<15%**

Objective – 3 (*Work Efficiency*)

- Increase average effective worktime by 30min per day from each employee (in 3 months)

Objective – 4 (*Online System*)

- Make Ordering process automated
- Deliver food to user workstation

***Canteen can function with less
manpower.***

Program Environment

Java Script – Doesn't go through much change & if done right won't need much maintenances.

Objective Based Outlook (Breakdown)

No: of Employees = **1500**

Hours used (Collectively by 1500) = **3.5** = 3hr 30min [*logical rough approximation from turns (5)*]

Hours used in month = **3hr 30min** x **26 days**

$$= \textbf{91 hours} \text{ per month}$$

Increase worktime average in future = **30min** per day

Collective employee lunch time reduction = **3.5 – 0.5**

$$= \textbf{3} \text{ hrs}$$

Productivity increase per month = **91 hrs** – (**3hrs** x **26 days**)

$$= \textbf{13 hours} \text{ per month}$$

Solution explanation (*Used general assumptions and approximations to create a model*)

The approximation and logic used shows an approximate **13hrs extra productive worktime is achievable** in a month which can be optimized and improved in later stages for the company.

Project Task:

1. Identifying stakeholders – Create a list of stakeholders (as taught in Business Analysis Planning and Monitoring Knowledge Area)

2. Identify the problem statement in this system.

3. Identify objectives of the new Canteen Ordering System.

4. Create as-is and future process map (using flowcharts). You can use any of the popular tools in the market like Microsoft Visio, Lucid Chart, Creately, Pidoco, or Balsamiq

5. As a Business Analyst working on this project, find out the scope of the Canteen Ordering System. To find the scope you can use the case diagram (UML) or context diagram for the same.

6. Write down the main features that need to be developed.

7. Write the in-scope and out-of-scope items for this software.

8. Draw an activity diagram for the system.

9. Draw an ER diagram of the system.

10. Write out the business requirements, both the functional and non-functional requirements.

11. Draw wireframes or mock screens for any two of the features namely Menu Creation and any other feature as deemed fit by the student. (Use the technique prototyping or wire framing that is taught in the Training). You can use any of the wireframing tools like Microsoft PowerPoint, Microsoft Word, Balsamiq, Sketch, Adobe XD, Adobe Illustrator, Figma, UXPin, In-Vision Studio, Invision Freehand, or Moqups.

Business Analysis Core Concepts

CHANGE:

Uniliver UK office has a total of **1500 employees** working in 12 floors of a building and have 2 canteens with maximum seating capacity of 300. ***Since most employees prefer to have lunch between 12pm – 1pm and their meal preferences kept changing***. But the capacity to accommodate remained same.

NEED:

This 1hour preferred time between 12pm -1pm along with the time taken to reach, que up, order and eat the meal with 300 max capacity stated **carving into** the **productivity** and **working hours** of the employees.
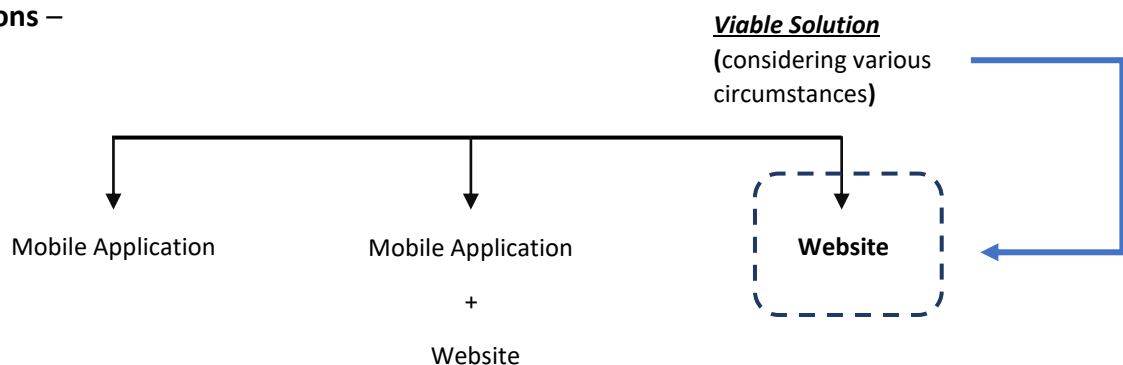
Need outline: - (*breakdown explained above* [hypothetical])

- Rush hours
- Employees losing worktime
- Overall productivity decrease
- Employee dissatisfaction (preferred meals are either un available or already over)
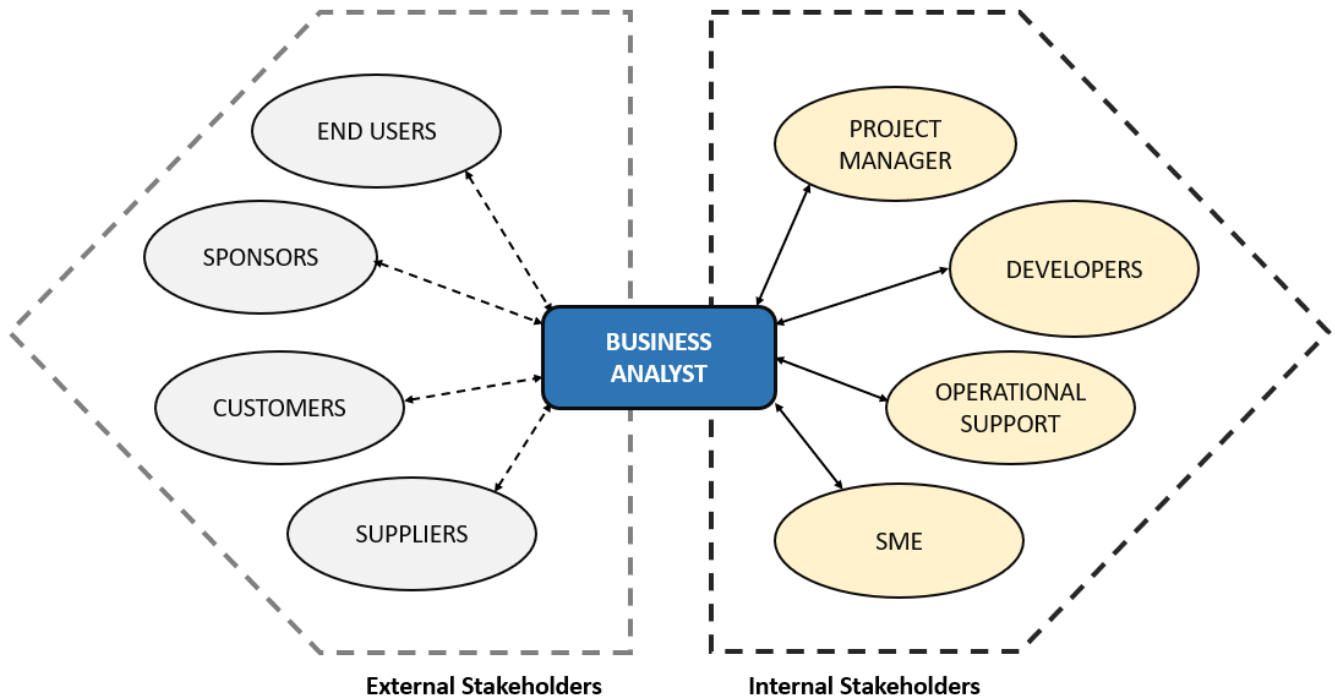- Uncertainty in tracking meal preferences leading to wastage.

SOLUTION:

Build an **online canteen ordering system**. Which will in turn create a supportive room for increase in productivity and decrease in wastage along with other benefits.

Solution Options –

Viable Solution (considering various circumstances)

Mobile Application   Mobile Application   **Website**

+

Website

STAKEHOLDERS:

- Sponsors-Company Management/Operation manager/ other managers
- customer -Canteen Management/operational support/Chef
- Business Analyst

- Suppliers
- Delivery persons
- End User-Employees
- Developer
- SME
- Project Manager

END USERS

SPONSORS

CUSTOMERS

SUPPLIERS

BUSINESS ANALYST

PROJECT MANAGER

DEVELOPERS

OPERATIONAL SUPPORT

SME

External Stakeholders   **Internal Stakeholders**

VALUE:

Online canteen ordering system has its direct impact on **3 core factors** _worktime increase_, _reduce wastage_ and _employee satisfaction_ which in turn collectively increase the overall efficiency and productivity of the company.

Minute factors aiding the improvement-

- Employees can avoid ques and moving time.
- Order what they want.
- Increase worktime and productivity
- Decrease food wastage.
- Decrease in canteen operational cost.
- Formulate food preparation patterns and improve quality by feedback.

(_Detailed objective and expectations discussed in Business Objectives & Success Criteria_.)

CONTEXT:

Platform is to be created in using **_java script._**

Reasons –

- Ease to maintain
- No drastic changes in program language for long time.
- Compatibility with systems
- Cross platform usability

Project Evaluation and Review Techniques (*Speculated overall time period of core objectives*)
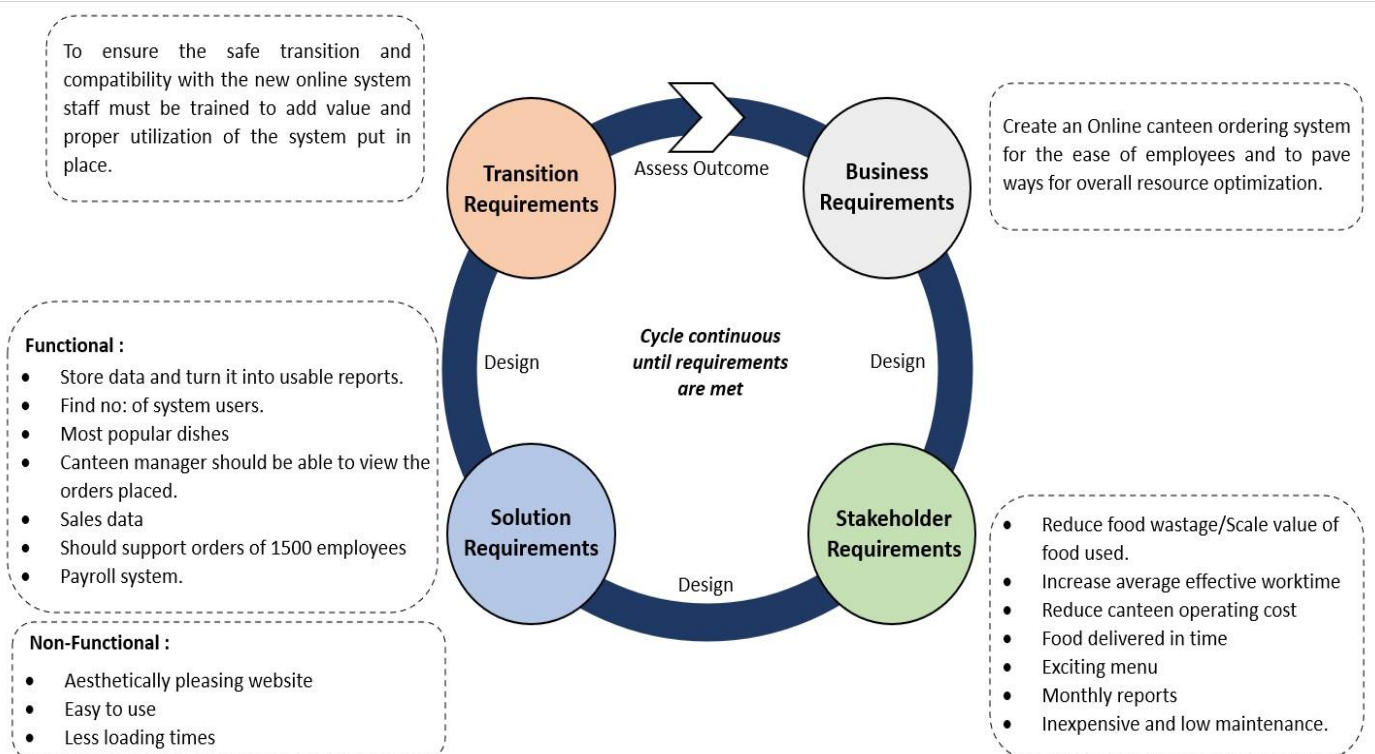
Triangular Distribution

Optimistic   = **3** months (*average worktime*)

Most Likely   = **6** months (*reduce food wastage*)

Pessimistic   = **12** months (*operating cost reduction*)

$$PERT = \frac{3 + (4 \times 6) + 12}{6}$$

$$= \underline{\underline{6.5}}$$

Approximately it will take 6.5 months for the 3 core objects to be put in place and come into effect

$$\text{Standard Distribution} = \frac{\text{Pessimistic - Optimistic}}{6}$$

$$= \frac{12 - 3}{6} = \underline{\underline{1.5}}$$

Requirements Classification Schema

To ensure the safe transition and compatibility with the new online system staff must be trained to add value and proper utilization of the system put in place.

Create an Online canteen ordering system for the ease of employees and to pave ways for overall resource optimization.

Transition Requirements

Business Requirements

Assess Outcome

Design

Design

Cycle continuous until requirements are met

Functional :
- Store data and turn it into usable reports.
- Find no: of system users.
- Most popular dishes
- Canteen manager should be able to view the orders placed.
- Sales data
- Should support orders of 1500 employees
- Payroll system.

Non-Functional :
- Aesthetically pleasing website
- Easy to use
- Less loading times

Solution Requirements

Design

Stakeholder Requirements

- Reduce food wastage/Scale value of food used.
- Increase average effective worktime
- Reduce canteen operating cost
- Food delivered in time
- Exciting menu
- Monthly reports
- Inexpensive and low maintenance.

Requirements and Design Cycle was utilized to illustrate the different solution schemas and how they are interlinked and aids to reach most appropriate outcome.

In Scope and Out of scope (scopes pointing at core objectives briefed)
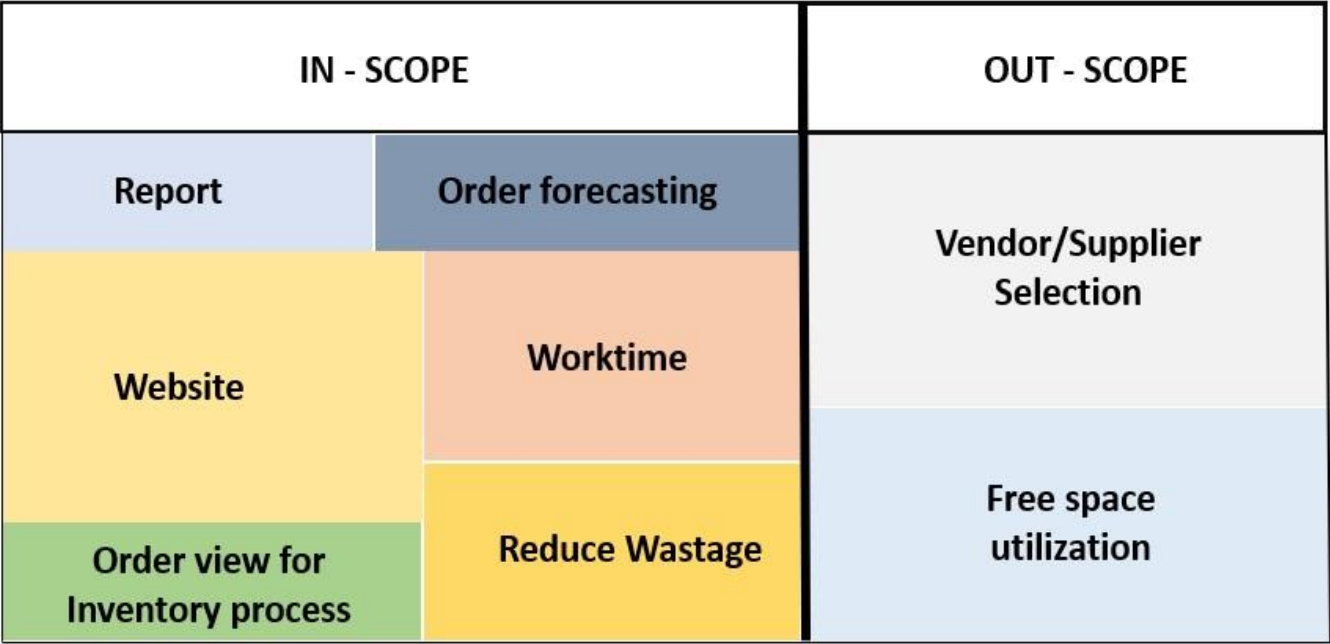
The tiles show the core and differentiations between the scopes. In-scope is elaborated in the objectives and requirement classification schema vividly and classified accordingly.

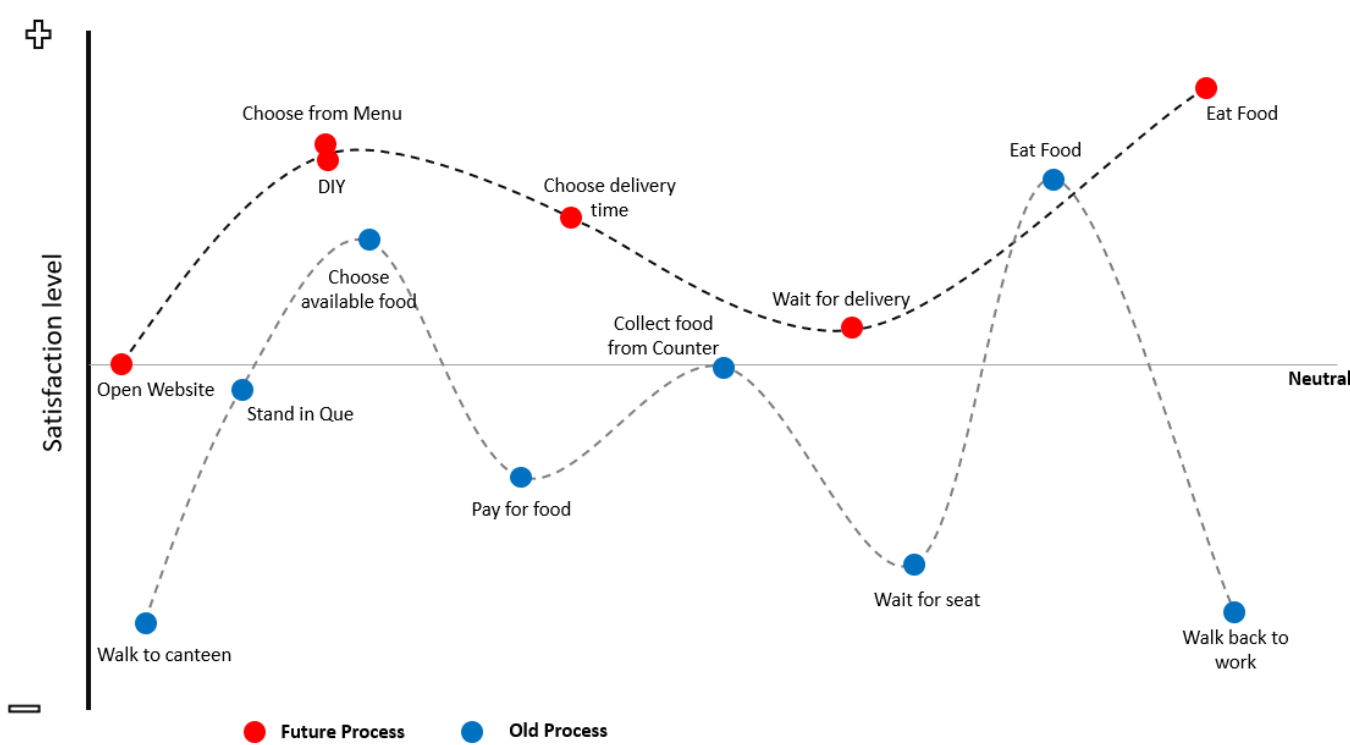# Future and Old System Process/Journey (As is & To be)

 Diagram portraits a vivid picture of how the old process (as is) and Future process (To be) looks like and also depicts how this system change will affect the involving end user. As it shows the old process was tiring with

too many contact points and wastage of time which in turn effects the satisfaction level of the involved parties. But the new system completely eliminates all contact points except delivery and takes the wastage of time to a bear minimum which leads to maintain a higher satisfaction level.

Context Diagram
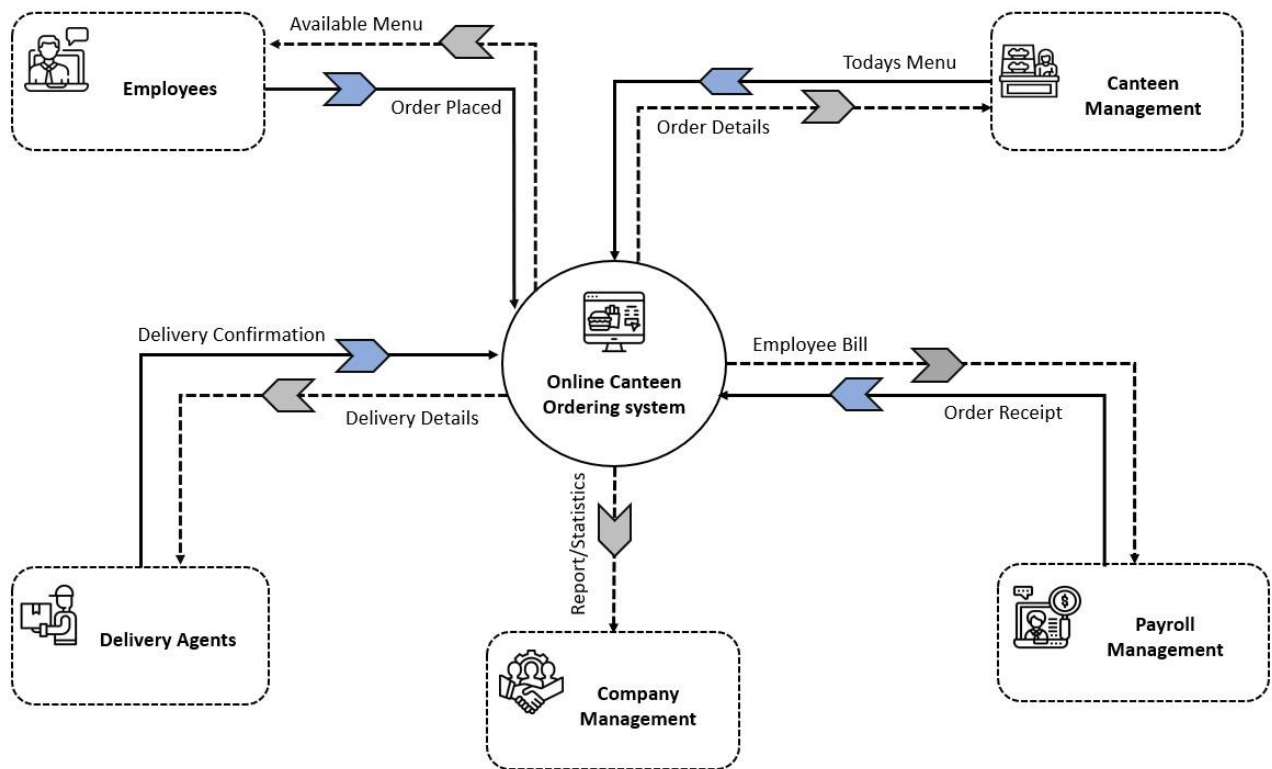
Context diagram gives a bird's eye view on the entire system and the data flows within. It shows how each section acts and how they transform data which they receive as input and give out as output for the next section or process point to carry out.

Online canteen acts as a centre hub for all the data to flow and transform into their respective forms and flow into the next sector. Even when this is a loop, the centre acts as a storage (mostly temporary) the initial trigger comes with the input from the employee side which triggers other entities even when it comes to the report generation at the end of each month (continuous process for continuous improvement and monitoring).

Stakeholder Matrix

Stakeholder Matrix grid helps in identifying the degree of involvement and influence of each stakeholders, which helps in identifying and structuring the processes forward. Especially deciding on ways to interact and collect requirements and segregate the participation in terms of the stages of new system solution setup. Other stakeholders who were not explicitly included are:

- Chef | Website maintenance | Operational Support | Employee representatives.
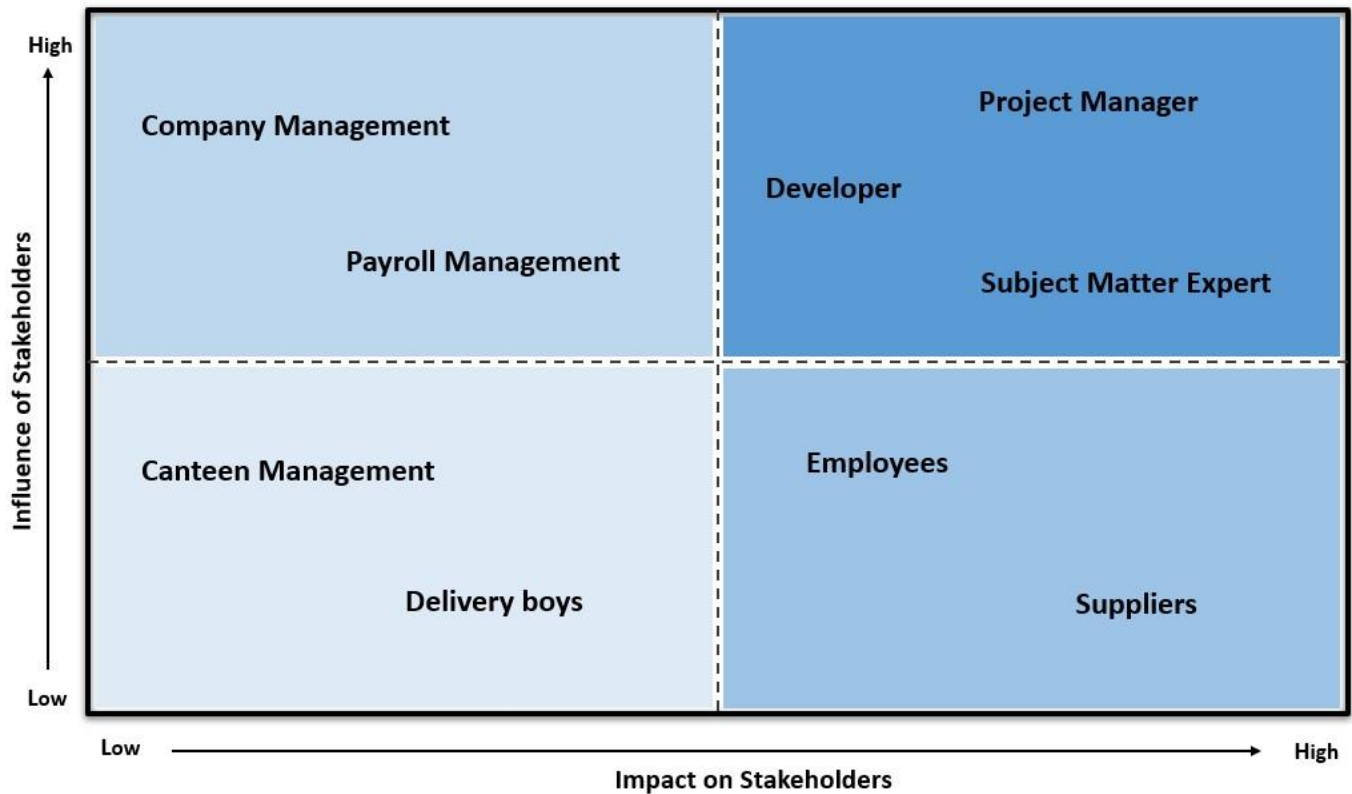
Knowledge areas explicitly used

- Business Analysis Planning and monitoring.
  - Plan Business Analysis Approach
  - Plan stakeholder engagement
  - Plan business analysis information Management
- Requirement Lifecycle Management
  - Trace Requirements
  - Prioritize requirements
  - Approve requirements
- Strategy Analysis
  - Analyse Current State
  - Define Future state
  - Define change strategy
- Requirement Analysis & Design Definition
  - Specify & Model Requirements
  - Validate requirements
  - Define requirements architecture
  - Define design options
- Solution Evaluation
  - Analyse performance Measures
  - Asses solution limitations
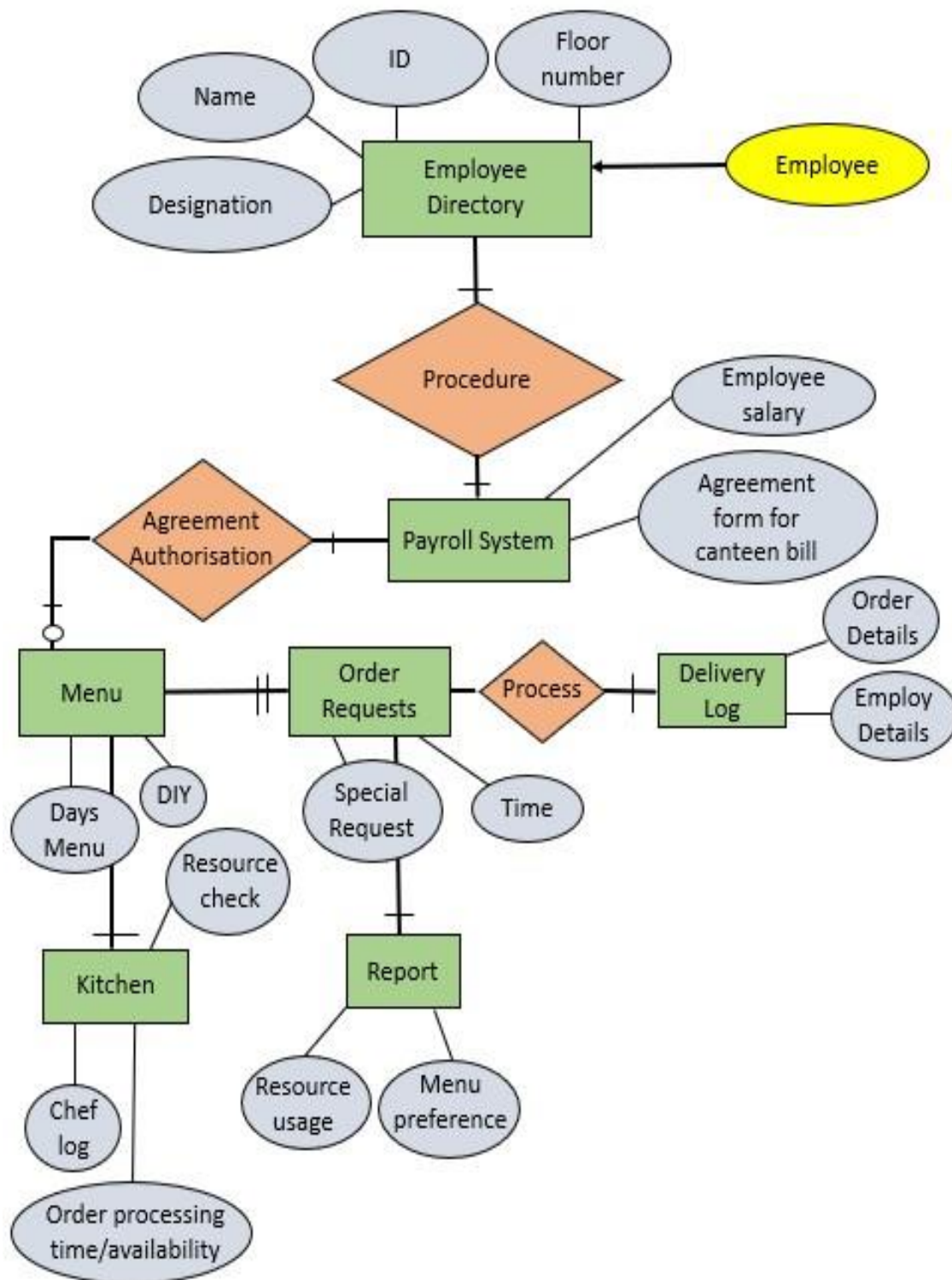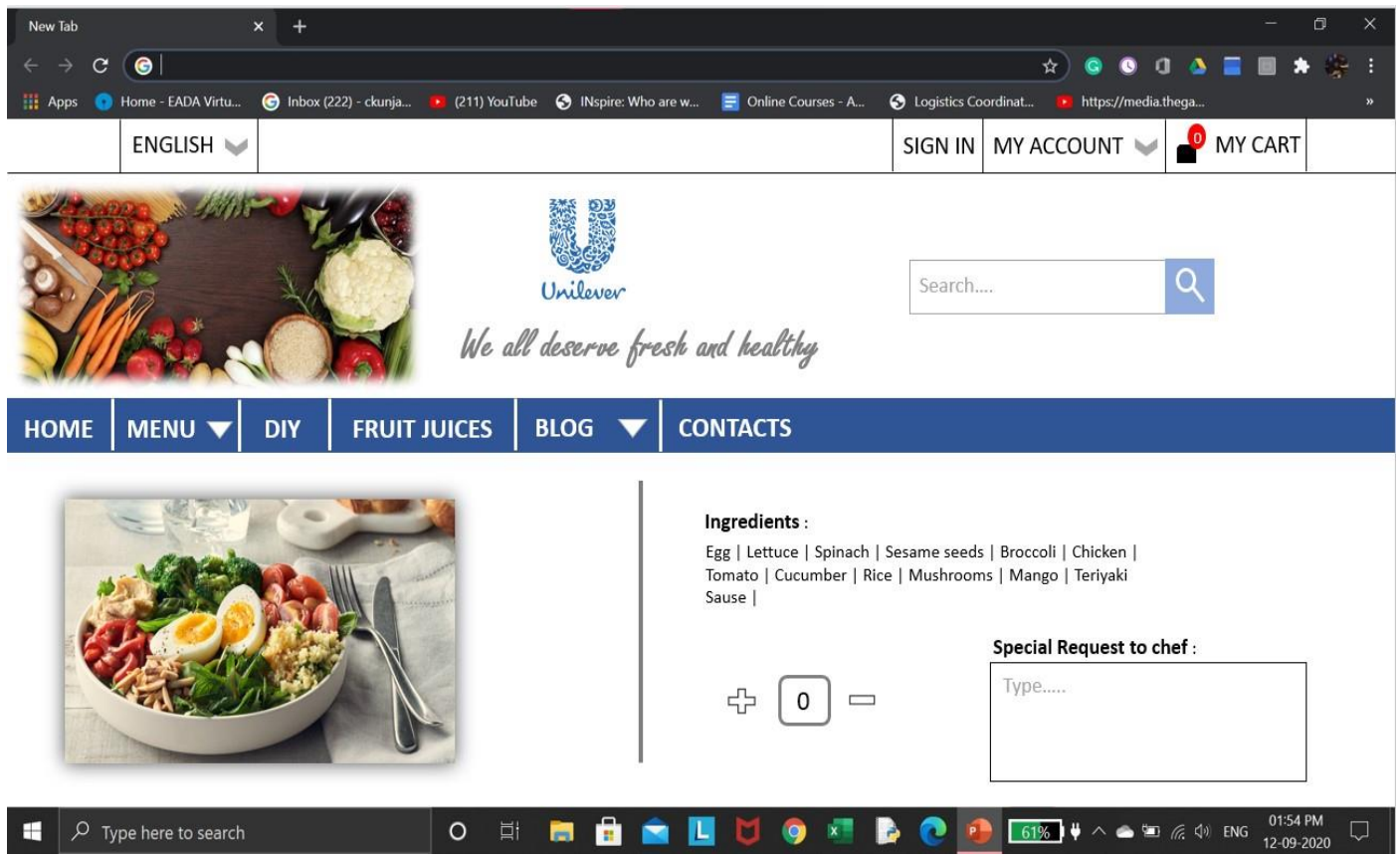 - Recommend Actions to increase solution Value

ER Diagram

Diagram shows the flow structure and the entities that each unit stores and the triggers to activate and process that initiates the actions.

Mock Screen of Online System (Prototype)

Prototype of employee's page view while choosing and ordering a specific dish.