

CEBD 1260 – Spring 2019 – Team Project

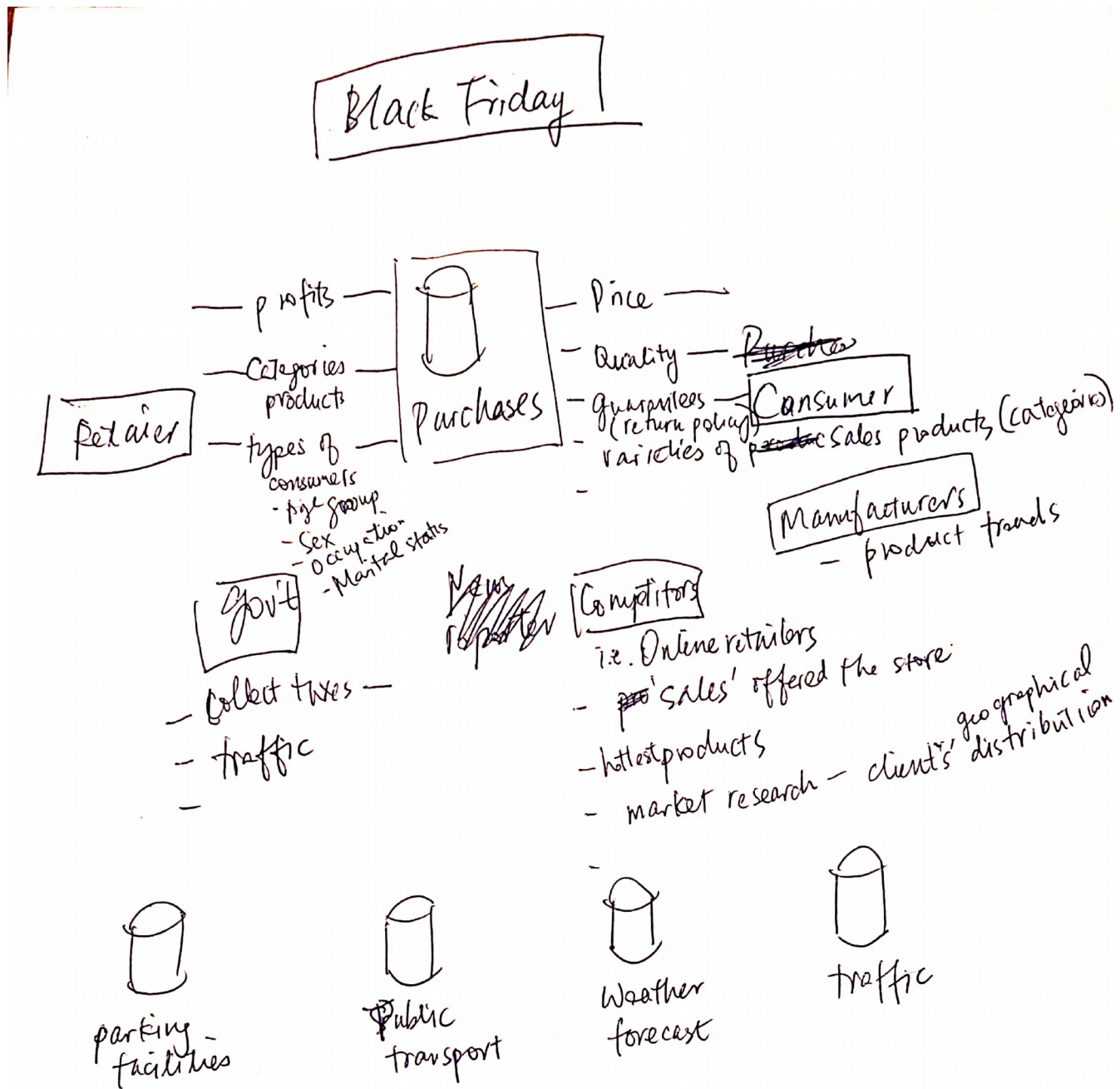
Functional Map, Use Cases and Mockup

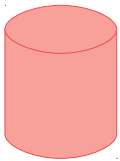
Team Members

Ho Tak So (Frank)

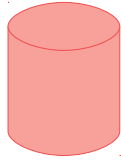
Ricardo Luis da Costa Rocha

Functional Map

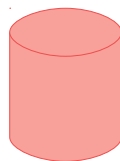




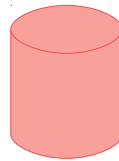
Parking
Facilities



Public
Transport



Weather
Forecast

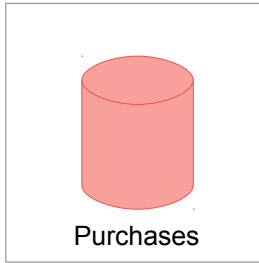


Traffic
Information



Retailer

Profits
Categories
Types of Consumers
Age Group
Sex
Occupation
Marital Status



Price
Quality
Guarantees
Categories



Consumer



Government

Collect Taxes
Traffic

Sales
Offered

Hottest
Products

Geographic
Distribution

Products
Trends



Manufacturers



Competitors

List of Use Cases

USE CASES	
<u>Taxes</u> <ul style="list-style-type: none"> - Expected revenues in collected taxes 	<u>Products Details</u> <ul style="list-style-type: none"> - 'big ticket items' - sales products varieties - hottest items - complimentary products - manufacturers/brands
<u>Profit</u> <ul style="list-style-type: none"> - How profitable with increased foot traffic at a reduced price 	<u>Price</u> <ul style="list-style-type: none"> - if ppl wants for huge sales til purchase → price is normally set too high?
<u>Store</u> <ul style="list-style-type: none"> - opening store hours - accessibility 	<u>Client demographics</u> <ul style="list-style-type: none"> - sex - age group - Occupations - marital status
	<u>Customers</u> <ul style="list-style-type: none"> - worth the hassle - best price possible all year! - can they - which store to go to for the best deal - traffic - store reputations - need vs want products - accessibility (big TV?)

TAXES	0
Expected revenues in collected taxes	
PRODUCTS DETAILS	2
Big ticket items	
Sales products varieties	
Hottest items	
Complementary products	
Manufacturers/Brands	
PRICE	0

If people wait for huge sales until purchase some products
--

PROFIT	0
If people wait for huge sales until purchase some products	

CLIENT DEMOGRAPHICS	2
Sex	
Age group	
Occupations	
Marital Status	

CONSUMERS	2
Worthy the hassle?	
Best price possible all year?	
Which store to go for the best deal?	
Traffic?	
Store reputations?	
Need vs Want products	
Accessibility (Big TV?)	

STORE	0
Opening Hours	

Mockup

Data application

To develop the most effective sales strategy for Black Friday sales

Objective

To predict the purchase amount based on sex, age and marital status using regression. As well, to predict the purchase amount for a specific product group per area using classification. Based on the two predictions, we would make recommendations to the retailer as to how to target their sales efforts to their customers in various area.

Audience

- Procurement department
- Operations / Logistics

Dashboard and Metrics

Descriptive analytics

To show the purchase amount based on sex, age and marital status of customers. Alternately, customer can see the sales distribution for a particular category of product (based on product_id coupled with category1_id) by regions.

Diagnostic analytics

To present to the department manager the profitability and demand of each product category sold by region.

Predictive analytics

To predict the demand of each product category to be sold by region for next year's Black Friday.

Prescriptive analytics

To present the possible product categories (along with its complementary products) which have the highest purchase amount to anticipate demand.

Retailer Perspective

Which products have the highest purchase amount to anticipate Demand? ☐ Depto

city ☐

CATEGORY ☐

AGE ☐

SEX ☐

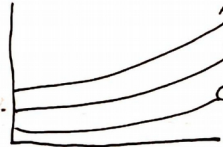
Purchase Trends

Purchases

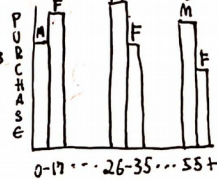


☐ Cat. A ☐ Cat. B ☐ Cat. C

City



Customers Info



For the next Black Friday the products with highest demand will be...

City A

PRODUCT X

City B

PRODUCT Y

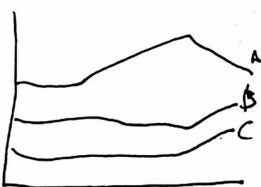
City C

PRODUCT Z

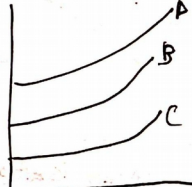
Demand

CATEGORY ☐

Purchases



City

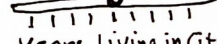


Profitability Trends

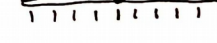
Customer age range



Customer Occupation



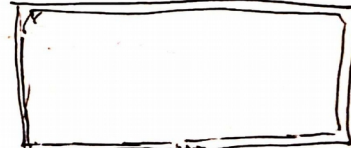
Years living in City



Recommendations
INCREASE DEMAND



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