High-Level Requirements Document

by

TOne Solutions Inc.

ECSE 326 Software Requirements Engineering-Fall 2019

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Contents

1.0 Vision Statement

For Montreal Eaton Center customers with mobile devices who want an improved shopping experience at the Montreal Eaton Center, the Eaton Center App is an online mobile application for iOS and Android that utilizes the Eaton Center's wi-fi to allow Eaton center store employees to send notifications to shoppers containing information specific to Eaton Center stores. The app encourages shopping in the Eaton Center and its stores by introducing a points and reward system to shoppers who purchase items in Eaton Center stores. Unlike other mobile shopping applications which encourage brand store loyalty, our product encourages shopping and loyalty towards the Montreal Eaton Center specifically.

2.0 Project Scope

The MECD Customer Experience Improvement System shall aim to focus its project scope on three factors primarily:
1. Increase sales of the shops in the center
2. Increase returning customers count in the center
3. Build a better public image

The system will achieve this goal by building a mobile application for android and iOS and sending a notification to the customers when they are in the vicinity of the center. The customers will require wi-fi to access the app, but for this project, the scope is limited to assuming that anyone with a mobile device has access. Making a tablet version is outside the scope of timeframe of this pilot project, while the web version will have limited access by the administrators of the system. The website will not be hosted on server, but on cloud for a 6-month trial period.

Due to budgetary restrictions, the system shall not hire outside staff but retrain the current technical staff to work as admins for the project. The shop owners will track their returning customers individually, and the system shall interact with these shops to summarise the data on the app. The system shall be developed in such a way that it is accessible to everyone, including visually impaired users, and provides a different interface for the customers and shop owners to login and utilize respective app features. The system will follow in an iterative development pattern prioritizing core features in the initial development and making subsequent changes as the project progresses. The final system must be such which is beneficial both for the customers and the center.

3.0 Context Diagram
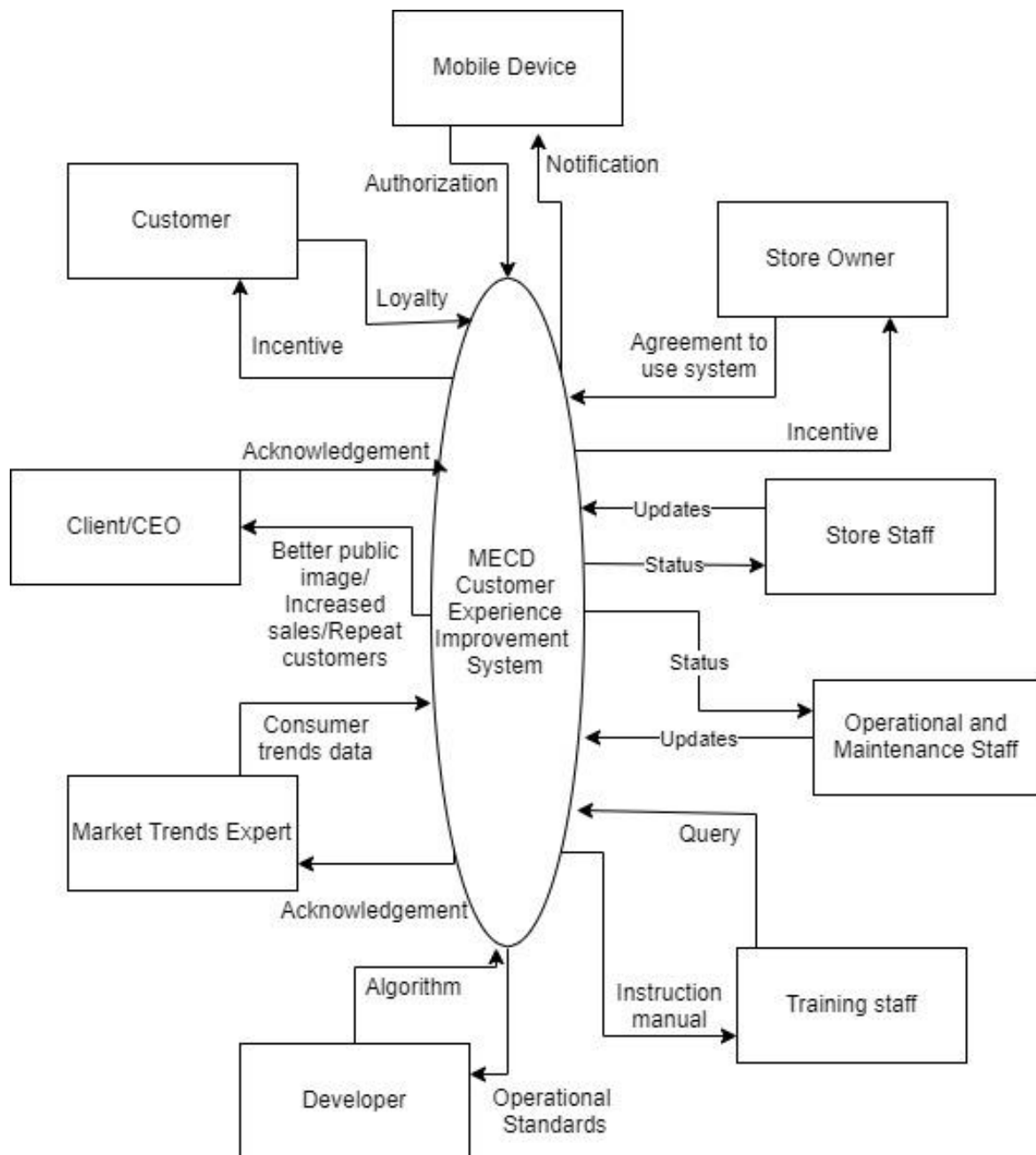
4.0 Business Requirements

B1 The Eaton Centre shall increase its quarterly gross sales revenue by at least 10% within the first quarter after the system is made operational.

B2 The Eaton Centre shall increase its monthly average Net Promoter Score by at least 10% within the first 6 months after the system is made operational.

B3 The Eaton Centre shall increase its number of repeated customers by at least 10% within the first year of the system being operational.

B4 The system shall be ready for deployment in 6 months.

B5 The system shall not require the hiring of new employees at the center for its operation and maintenance.

B6 The system shall not require more than eight hours of operational and maintenance training for current employees at the center, who are all computer-literate and have one or more years of IT services experience.

5.0 Stakeholders

5.1 Montréal Eaton Centre Development Company (MECD)
This is the entity behind the request of the system and provides the main business objectives to the developers.

Values: wealth, ambition, preserving public image

5.2 Customers
These include first-time and regular shoppers. MEDC ultimately aims to get more customers to shop repeatedly at the center, and to spend more money there. Thus, they are the main target users of the system.

Values: pleasure, self-indulgence

5.3 Operations and Maintenance Staff
These are existing employees at the center who will deploy, operate and maintain the system and make sure it runs smoothly. They will also help with the set-up when a store decides to opt-in to participate in the system.

Values: responsibility, capability

5.4 Training Staff
These are existing employees at the center who will facilitate the training of the operations and maintenance staff when the system is first introduced.

Values: helpfulness

5.5 Store Owners

These are owners of the franchises and stores within the center, who could choose to opt-in to participate in the system.

Values: wealth, success, preserving public image

5.6 Store Staff

These are employees, not of the center itself, but the stores. Upon receiving approval and instructions for using the system from the store owners, they will familiarize themselves with the system and answer customer queries about it and help them opt-in to use the system.

Values: helpfulness, politeness

5.7 Developers

These are engineers who will develop the system. They will familiarize themselves with the goals of the MECD and understand the needs of all users and stakeholders. They will use that information to design and develop a system that provides optimal value.

Values: creativity, intelligence, success

5.8 Market Trends Experts

These are experts who understand the trends of the market and consumers and have the knowledge about best marketing strategies. They will provide relevant information to the developers to help them design an optimal solution.

Values: creativity, curiosity, intelligence

6.0 Personas

6.1 The Typical Shopaholic
By Paul Attara

The Typical Shopaholic

Tiffany / likes to shop in her free time

"I want to shop without being disturbed."

Tiffany is a frequent shopper from Montreal. She studies psychology at Concordia University. In any free time that she has, she loves to go to shopping malls to be able to visit as many stores as possible. She doesn't like to exit any store without purchasing an item. She likes to use a credit card and tries to reach her monthly credit limit. She enjoys jewelry, designer bags and makeup.

Patience:
2/10

Attention span:
10/10

Phone usage:
8/10

Typical Activities   1 2 3 4 5 6 7 8 9 10
Shopping…………………………………………………………..
Talk to friends about recent purchases…………………………..
Post on Social Media latest outfits...………………………………..

Drivers	Goals	Pain Points
- Wants recognition for her purchases	- Wants to wear an article of clothing at most once - Gain as many followers on social media	- Doesn't like to be distracted while shopping - Doesn't like to try new things

6.2 The Kid with the iPhone 11 Pro
By Jay Abi-Saad

The Kid with The iPhone 11 Pro

Jordan / Having my iPhone 11 **Pro** fully charged at all time is my top priority.

"I love to spend daddy's and mommy's money, but my problem is that I don't know where to spend it."

Jordan is a high-school student at the prestigious Lower-Canada College. He enjoys playing golf with his dad and riding one of his 18 horses on weekends. For his 13th birthday, Jordan got a shiny new 512GB iPhone 11 **Pro,** and an increased allowance of $10,000 per month. Jordan likes to shop in malls rather than online because he can show off his designer shopping bags to his peasant friends. However, he still wants to use his new iPhone 11 **Pro (512GB)** as his main shopping tool when looking for his next purchase.

Gaming:
8/10

Wealth:
10/10

Smart:
5/10

Typical Activities   1 2 3 4 5 6 7 8 9 10
Overspending………………………….……..…………………..
Follows the newest fashion trends………..…………………….
Constantly says "You can't sue me my dad's a lawyer"………..
Adding value to society……...…………………………….…..

Drivers	Goals	Pain Points
- Spend as much money in the least amount of time.	- Have the latest toys - Show off his purchases on social media	- Long waiting lines - Big crowds of peasants - Dogs in malls

6.3 The International Student
By Younggue Kim

7

The International Student

Brian/ looking for winter clothes & be trendy

"It would be great if a shopping center tells me where I can find good deals and shows fashion trends in Canada."

Brian has come from Korea to study Engineering as an undergraduate in Montreal. He hears the winter in Canada gets very cold that he wants to purchase winter clothes. He searches for good deals using his iPhone. He expects a good experience on the mall mobile app because he uses iPhone a lot. Brian is also passionate about fashion and wants to check clothing trend in Canada. He spends a lot of time in the mall.

Financial Standing: 8/10

Western clothing shops knowledge: 4/10

Phone Usage: 10/10

Typical Activities
Using iPhone to discover clothing shops that have good style
Using social media and apps
Finding good deals when shopping
Spending time in the mall

1 2 3 4 5 6 7 8 9 10

Drivers
- Wants to learn more about the clothes trending in Canada
- Wants to spend the winter warm and stylish

Goals
- Finding trendy canadian clothes
- Finding good deals on winter clothes

Pain Points
- Not knowing what's trending in Canada
- Not knowing where the good deals are

6.4 The Shopper with the Impaired Vision
By Ketan Rampurkar

The Shopper with Impaired Vision

Rosie/ looking for secure mall utilities access

"I want easier accessibility with minimal phone usage."

Rosie comes from Calgary, Alberta and works as a social activist focussing on issues in Quebec. She has limited vision, and needs to visit the Eaton Center for visiting the clinic for regular treatment and grocery shopping. She has a smartphone, but isn't up-to-date with most basic features. However, she knows how to use the Guide app for navigation for blind users.

Hearing power and alertness: 10/10

Social influence: 7/10

Phone usage: 3/10

Typical Activities
Organizing social campaigns………..………………………..
Visit to clinic…..……………………………………………...
Shopping…..…………………………………………………

1 2 3 4 5 6 7 8 9 10

Drivers
- Wanted to be treated with respect

Goals
- Increase accessibility for shopping utilities

Pain Points
- Limited vision
- Needs company for basic utility access

6.5 The "Day One" Store Owner
By Sean Smith

The "Day One" Store Owner

Hank (the Tank) / wants to survive in the market, and believes he can

"My father taught me the 10 rules of business, which he learned from his father, who learned from his father, who learned from his father..."

Hank opened his store the day the Eaton Center opened in 1990. His business has survived through multiple economic hardships and an ongoing technological revolution due to his business-savvy and widely-needed products. He broke even on his store a decade ago and soon after became very profitable using old fashion budgeting and accounting techniques, without the use of technology or help. His business is his only source of regular income and he works 6 days a week, while his one and only other employee works the 7th day of the week.

Business Savvy:
9/10

Technologically inclined:
3/10

Smart:
10/10

Typical Activities   1 2 3 4 5 6 7 8 9 10
Budgeting……………………………………………………………
Ordering Products……………………………………………………
Getting Assistance with his Business……………………………

Drivers	Goals	Pain Points
- Hank is old and retiring soon, so the more money he makes, the better.	- Hank wants to be the most profitable store in the Eaton Center - Wants to retire with half a million dollars in the bank	- Is weary of technology and outside help. - Has an iPhone, but often gets stressed out when using it.

6.6 The Senior Employee
By Misha Jehangir
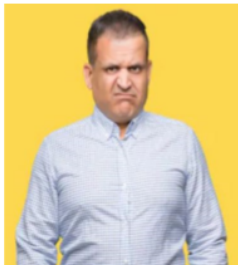
The Senior Employee

Gregory / borderline grumpy employee wary of finicky technology

"If I had a dollar for every time the owners implemented fussy changes to my system, I could retire early"
Gregory, now a senior IT administrator, has been an employee at the Eaton Center Montreal for the past 21 years. He is a serious employee who gets his job done nicely on time but tolerates no fuss. He is a status-quo man who does not welcome change in his day-to-day operations. He only thinly attempts to hide his annoyance when asked "too many" questions by co-workers or subordinates, and has occasionally been described as frightening when angry.

IT experience:
9/10

Inclination to new technology:
3/10

Commitment to job/company:
7/10

Typical Activities   1 2 3 4 5 6 7 8 9 10
Maintenance of IT systems………………………………………
Providing IT support to stores at the center……………………
Managing and training IT staff ……………………………………

Drivers	Goals	Pain Points
- Wants to get through the day with minimum disruptions	- Ensuring that all systems at the center run smoothly	- Does not welcome change - Unhappy about training staff for a new system