Objective

Problem Statement

Using mobile and in-person orders.

A final order will be placed in a clearly identified "Tapingo" Pick Up location to prevent confusion between using their device, the order will move past any customers in waiting in line, as well as time spent in the opportunity to decide whether to order in person or on their mobile phones. If they choose to order, it will affect the daily flow of customers through UW's cafés & restaurants. Customers will have the opportunity to decide whether to order in person or on their mobile phones.

The following Process Flow Map is a sample of how the mobile ordering application, Tapingo, will affect the flow of customers through various UW cafés & restaurants.

Selection Criteria

Based on the data collected and provided by UW HFS via the flow criteria, the following four dining locations have the most potential room for mobile ordering:

- Suzzallo Library Starbucks
- HUB Starbucks
- Orin's Place
- By George Café

UW Map: Selected Dining Locations

Choice of Locations

The Department of Industrial & Systems Engineering will conduct thorough analysis on all those locations. To provide quality over quantity, a decision was made to select locations based on the following criteria:

- Customer Volume
- Revenue
- Team Size
- SPACE
- Hardware
- Software
- People

Process Flow Map

The following Process Flow Map is a sample of how the mobile ordering application, Tapingo, will affect the flow of customers through various UW cafés & restaurants. Departments will have the opportunity to assess whether or to order in person or on mobile phones. If a choice is made using their device, the order will move past any customers in waiting in line, as well as time spent in the opportunity to decide whether to order in person or on their mobile phones.

Queueing Layout Modifications

The Process Flow Map is a sample of how the mobile ordering application, Tapingo, will affect the flow of customers through various UW cafés & restaurants. Departments will have the opportunity to assess whether or to order in person or on mobile phones. If a choice is made using their device, the order will move past any customers in waiting in line, as well as time spent in the opportunity to decide whether to order in person or on their mobile phones.

FMEA Documentation

Failure Mode & Effects Analysis

Failure Modes & Effects Analysis is a step-by-step approach for identifying all possible failures in a design, a manufacturing or assembly process, or a product or service. Every identified potential failure was categorized in the following ways:

- Equipment
- Hardware
- Software
- People

Model Verification

The Model Verification phase is to confirm that simulation models are implemented correctly with respect to the conceptual model. Experiments are conducted based on any possible combination of ordering demands (Coffee | Food | Coffee & Food).

Simio Verification Models

Simio Models are implemented in a separate Simio software environment. These Simio models are categorized into three categories: Coffee, Food, and Coffee & Food.

Recommendations & Opportunities

Recommendations & Opportunities

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