

Online Advance Virtual Store for E-commerce

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Introduction

Online e-commerce is developing and users are readily adopting the platform to make purchases. It is mandatory for Apparel Industry to maintain online presence. Lee, Lee, and Lee (2012) identifies that personalization can solve many issues for e-commerce companies as consumer can not feel the actual product before they buy hence remains a hurdle in purchase decisions. The innovation discussed in this project proposal is a virtual try room for American Eagle Outfitter. The idea is to personalize the process for user and enhance user experience. Using these new feature consumers can actually try their cloths before they buy.

Company Description

American Eagle Outfitters

American Eagle Outfitter (AEO) is a US based clothing brand that provides clothing for male and female in casual ware, jeans and under garments. The target market are the young age segment (aged 18-30) (Thompson, 2010). AEO also operates the clothing brand Aerie which specializes in under garments American Eagle Outfitter have 949 stores in the USA. AEO also operates stores in Asia, Europe, Africa, Canada, Mexico, Puerto Rico, Columbia and Panama.

Revenues

AEO sells clothes and apparel and make revenue from the sales of the clothes. During 2014-15 fiscal year the company made revenue of 3.49 billion dollars and registered growth revenue of 7.9%, with a gross profit of 1.3 billion dollars. Sales include men and women clothing and undergarments (Trebilcock, 2007).

Outsourced HR

In order to consistently satisfy these clients the firm has outsourced its HR to JBC Style Inc. American Eagle Outfitters employees are around 39,600.

According to Nambisan (2002) Virtual environments can be used to design new products as well as better gauge the needs of the customer, this is also consistent with the research of (Füller & Matzler, 2007). In regards to enhance the system performance and improve customer experience in online apparel shopping, a virtual Shop created in order to allow customers to visit and shop just like real-time but while sitting at their homes in any part of the world.

Cost and Future Prospects

This would allow AEO to increase its customer base with very little marginal cost per customer added once the system is set up. The system would cost \$60000 and would be completed in 8 months. The implementation of the new system would require 1 person from AEO and a team of 12 developers for designing the system.

Phase I: Scope

Major Deliverables

- Online Virtual Store
- Redesign Online Shop
- Friend based collaborative shopping experience

Phase II: Problem Analysis

Proposed Concept Innovation

As of now online customers can order clothes online and then get it delivered at their doorstep. Before they order they can even try it on their virtual self to see if. However this method suffers from a few characteristics that are undesirable and can be improved upon through system improvement objectives. Please refer to table 1 for the problems and their proposed improvements/solutions.

S #	Problem Statement	System improvement objectives
1	The current system is not live in nature as the order tracking is over the mail.	Create a live tracking system that works over multiple platforms of mail, Mobile apps on both Android and Apple IOS. The online system will be integrated with said platform and exclusive try room will be available to customers.
2	The way the customer interacts with the website is generic in which the customer is presented with a list of items	Create an interactive environment, which would host the placing of items on the shelves in a virtual environment. To extend it further the consumer can select an item and can try it on to see if it fits on them. They can even consult their friends for suggestions.
3	Fewer of the senses of the customer are being engaged than can be possible. Furthermore according to Hultén, Broweus, and Van Dijk (2009) The more the senses that are used the greater the marketing of the firm.	Create an experience that uses sound, visuals and the feeling of moving to create a deeper customer experience. The personal reflection of consumer within the online store will enhance their engagement with the product.

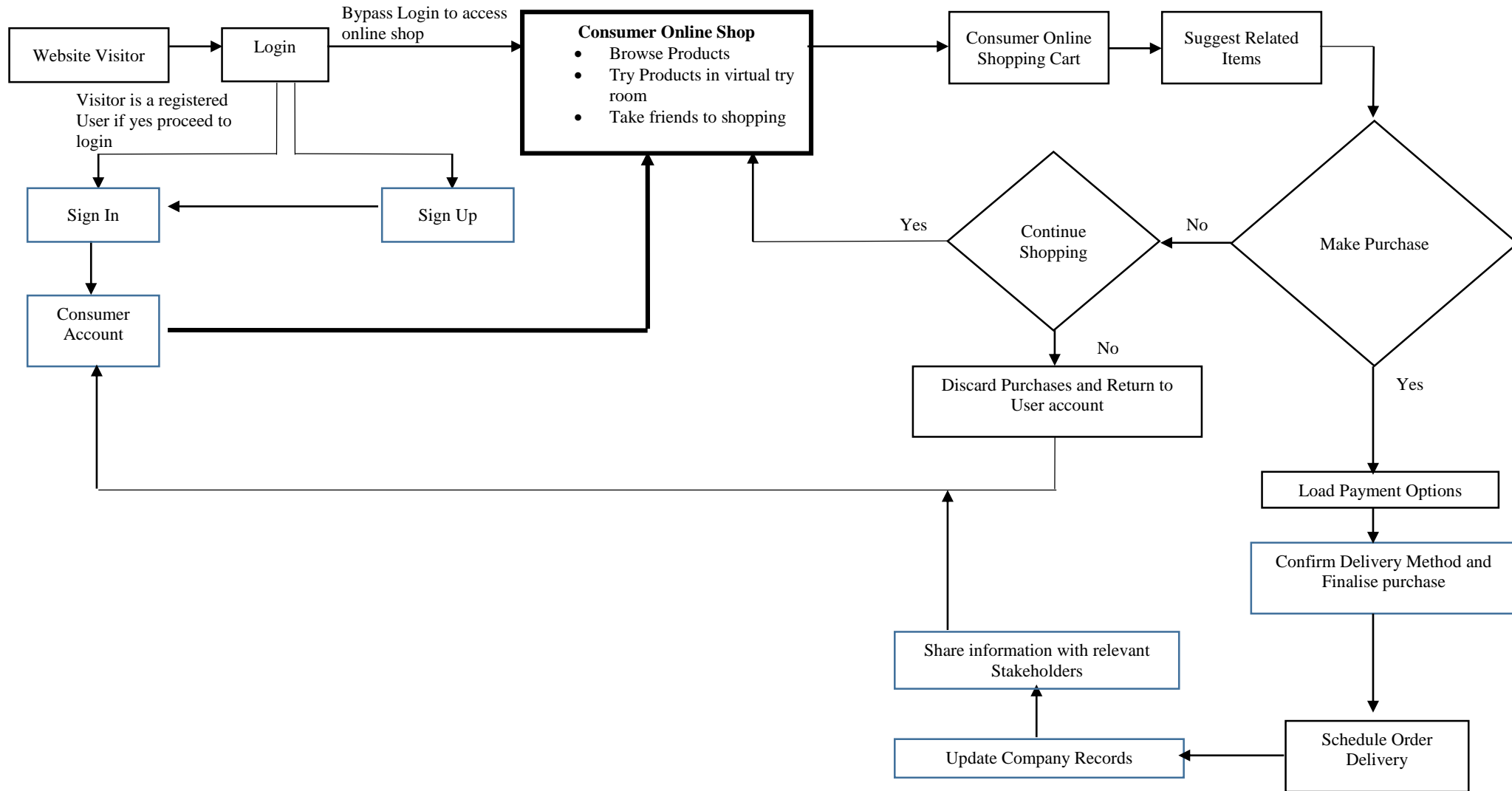
4.	The environment of the website is not one that is given by the shops	Create a virtual environment that is consistent with the one provided by the physical shops
5.	No information on the suppliers in order to present the ethical side to the customer.	Create a system in which the customer should be able to view the supply process with one click.

Phase 3: Requirement Analysis

The customers of this new system should be able to view complete information regarding the clothing from packaging each destination the product will go in order to reach client will be visible to the client etc. The customer will have the ability to track their package. The requirement for this project is to give a real feel of shopping experience to the consumer where they can share the emotional bonding of friends and family while they make purchases. The innovation will solve inventory management issues for the organization. The stakeholders require close to real life shopping experience.

In regards to AEO itself, the system is designed to act as administrative assistant where it provides options to gain post purchase experience of client. It will also provide statistics such as how much time did an individual customer spent on a particular product. The system will make partnering with organizations easier for supply chain requirements. The system should also allow AEO to measure the quality of its operations by giving it the average time taken for an order to be delivered to the customer. The maintenance team would present the management with the average times in order for management to take action in case of falling response times. Allowing the customer service pre-purchase and post-purchase experience to improve multiple folds.

Phase IV: Logical Design



Phase V: Decision Analysis

Process

For the operational feasibility, the customers would be given beta versions of the virtual reality system and input would be taken and suggestions integrated into the final version of the software.

Evaluation

The new system won't affect the operations of the physical shops and the website shop management would be retrained into maintaining the virtual reality set. Retaining the old team is cheaper than hiring a new team because of the team's familiarity with the organizational culture and technical knowledge of the online payment mechanism.

Implementation

The implementation would be in parallel running (with the website shop) for 2 months post launch in order to take out all the bugs in the system. The only resources that would be disturbed would be the website maintenance team, which would work reduced hours at the end of the project in order to get trained into using the system.

Resistance

Resistance among stakeholders is natural. Website maintenance team is suspected to resist the change since the innovation would change their job description greatly. To control the resistance would be convinced through giving them free skills training.

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Internal work environment for the organization won't change addition of new skills would require new training sessions and lots of information regarding new system will be shared to reduce any resistance to change.

2 months post launch would be kept for evaluation of the system, which would most likely involve additional training and bug fixing in the software.

Economic feasibility is as following

Notes: All values are in US dollars and all values are in per annum unless mentioned otherwise.

Furthermore Values are per 10,000 transactions

Benefits of the project

Benefits	Amount In USD
Expected increase in revenue due to customer shopping	50,000
Expected reduction in costs due to better appropriation of logistics	30,000
Expected increase in revenue due to better customer analytics	10,000
Total	90,000
Costs	
One time cost of development	(60,000)
Per year cost of maintenance	(10,000)
Total	(70,000)
Net Benefits for the first year of operation	20,000
Net Benefits Forecasted 2 nd year (Assuming cost remains constant)	80,000

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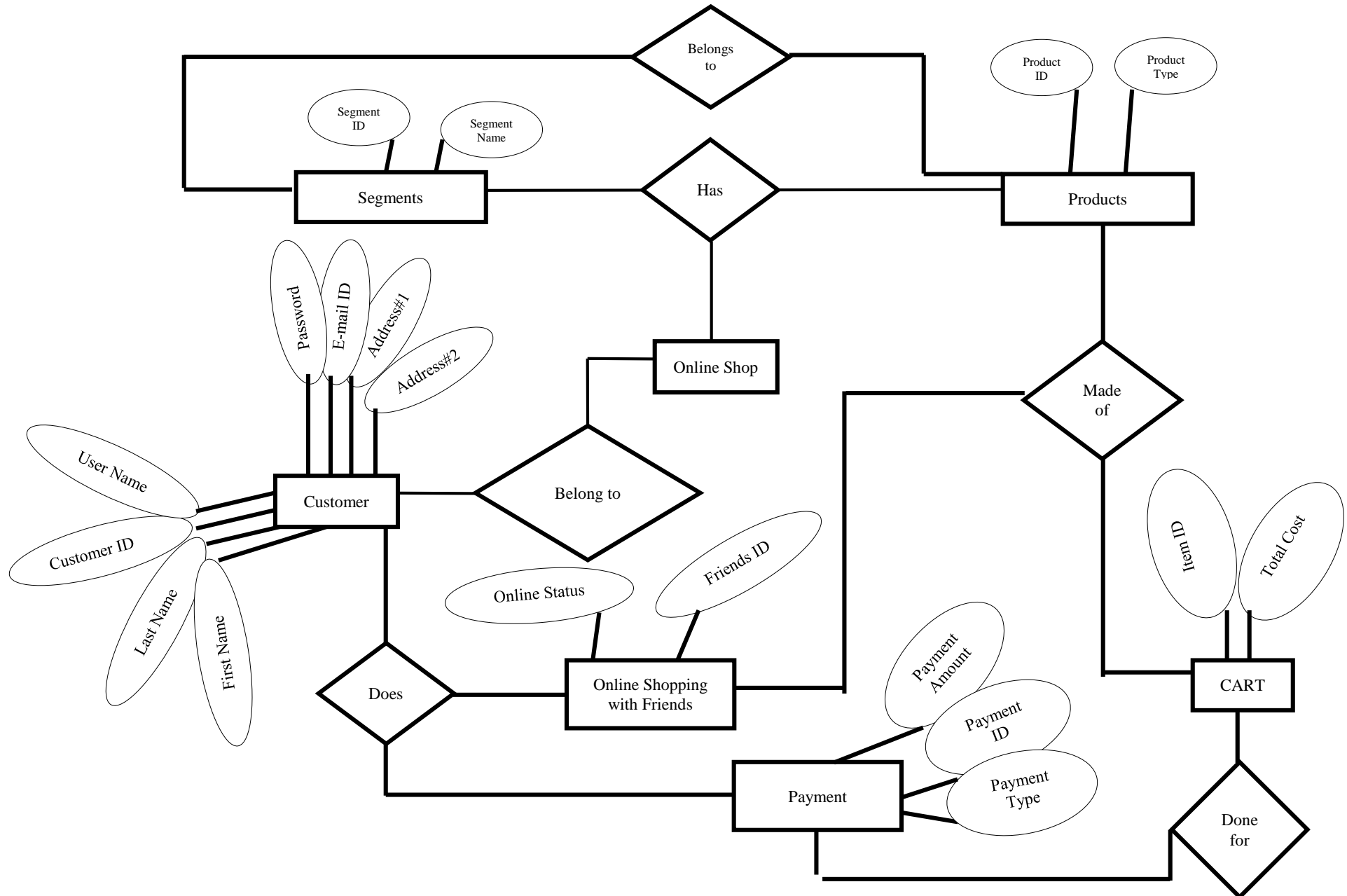
Schedule feasibility:

With 8 months starting March 2017 there are 960 days for completion of the project

Work breakdown Structure

ID	Task	Predecessor	Duration	Time start	Time end
0	Virtual Shop		960	09/05/2016	25/12/2018
1	Planning Phase		75	09/05/2016	23/07/2016
2	Scope Statement		75	09/05/2016	23/07/2016
3	Meetings with Stakeholders (1-3 sessions)		15	09/05/2016	24/05/2016
4	Design WBS	3	40	24/05/2016	03/07/2016
5	WBS Approval	4	5	03/07/2016	08/07/2016
6	Scope Approval	5	15	08/07/2016	23/07/2016
7	Design Phase	2	322	23/07/2016	10/06/2017
8	Prepare Blue print	6	72	23/07/2016	03/10/2016
9	Prototype	8	120	03/10/2016	31/01/2017
10	Design of the virtual system	9	75	31/01/2017	16/04/2017
11	Finalizing design virtual system	10	55	16/04/2017	10/06/2017
12	Implementation Phase	7	206	10/06/2017	02/01/2018
13	Implement the Designed Project	11	90	10/06/2017	08/09/2017
14	Coding of the system	13	50	08/09/2017	28/10/2017
15	Test Phase Launch of System	14	66	28/10/2017	02/01/2018
16	Evaluation Phase	12	308	02/01/2018	06/11/2018
17	Demonstrations of the system to the senior staff	15	45	02/01/2018	16/02/2018
18	Beta testing & final testing	17	77	16/02/2018	04/05/2018
19	Training the staff in maintenance of the system	18	120	04/05/2018	01/09/2018
20	Buffer time	19	66	01/09/2018	06/11/2018
21	Closure	16	49	06/11/2018	25/12/2018
22	Record Lessons Learnt	20	9	25/12/2018	03/01/2019
23	QA- Audit	22	12	03/01/2019	15/01/2019
24	Client Acceptance	23	13	15/01/2019	28/01/2019
25	Sign Off Project	24	15	28/01/2019	12/02/2019

Phase VI: Design and Integration



Phase VII Construction and Testing

The customer would expect two features of information on clothing and coverage of the delivery of the package. The product information context would be tested via using the system in as many combinations as possible during the testing phase. In order to test the route tracking feature test goods would be ordered and it would be checked if the nearest logistic route has been forwarded to the logistic team.

The supplier is expected to have the features of free promotion and give supplier intimation of low stock. The supplier information feature would be tested through making sure that the supplier information for every product is correct. . Tests would be performed with dummy data to verify that suppliers are properly intimated.

AEO should have the features of recording customer behavior and give AEO of geographical logistics requirements. Testers posing as customer and recording their own behavior and then checking if the software gives the same results would gauge the customer behavior measurement. Testing team would send dummy orders in testing phase and keep count of the orders to given areas to test if the count is correct.

In terms of operations quality measurement, AEO needs to have the features of measuring reaction time to an order placed by the customer and help in customer feedback. Testing would be done manually for order times. The reviews service would be tested by have testers pose as customers and give feedback to the company and gauge if the response was adequate.

Phase VIII: Installation and Delivery

The customer would expect two features out of the new system. The first is information on clothing with the second being coverage of the delivery of the package. The information on the product would be used as a marketing strategy for the firm and is part of the final product delivered to the customer. The focus will be on marketing real time shopping experience with friends and family. Improved customer services by increasing transparency to the business and offering consumer more visibility of supply chain.

The supplier is expected to have two features. The first is free promotion of the supplier's product and the second is intimation to the supplier about low stock. This would add value for our suppliers in maintain relations with our business as they are being promoted by brand such as American Eagle. The low stock intimation would reduce information transfer lag and give the supplier more time to meet the demands of AEO. This would allow suppliers to see our stocks in real time as well view complaints regarding their product

AEO would be given two features. The first feature would record customer's behavior and the second feature would give AEO its logistic requirements on the basis of geography. Customer behavior measurement would allow firm to further analyze the segments of the market and help in the decision making in future product propositions. The geographical logistic analysis would allow AEO to sign contracts similar to "take or pay" with logistic firms, hence saving on costs.

In terms of operations quality measurement AEO needs two features. First of all, AEO needs to have the features of measuring time taken from the customer placing the order to customer signing of the deliveryman at his doorstep. Secondly AEO should have increased

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abilities in terms of customer feedback. Increased ability to integrate customer feedback would allow continual improvement of the product and serve as a counter check on the supplier's quality and our customer service.

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