Development of Supply Chain Management for Perishable Products using Android Application

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Abstract: Farming is backbone of Indian Economy. Here through this paper we tried to find out a new way of marketing so that there will be value addition to present quality of product with services for users and more proper returns for farmers. Other than climate changes there are high post harvest losses about 20 to 40% for Developing Countries. This application will provide knowledge of supply chain, orders and demands, market values of products while being user friendly. In this process we are going to reduce present gap between demand and supply of vegetables by building robust physical infrastructure, information sharing and the service required for quality improvement of the supply chain of veggies.

1. Introduction

Vegetables, fruit, milk products, edible items are highly perishable i.e. with short life span. Farmers invest their money and efforts in farms from seedling to harvest and therefore expect good returns. Farmers could not attempt all his profit due to post harvest losses which are major causes of waste; fluctuate with season and area post harvest losses are 20-40% and 2-20% in respectively developing and developed countries. Developed countries have alternatives to overcome difficulties in maintaining its quality there are huge losses in case if packaging ,transportation ,marketing are not properly taken care of ; causing damages and rapid decay . this decays and losses in fresh products leads to the farmer increasingly facing poverty to come out of this situation marketing must be well planed supply chain management plays an important role in keeping business cost minimum and profitability as high as possible, and balancing between societies.

In this processes we are going to take help of internet and advanced technology by developing android application which will play important role in customer and producer (i.e. farmers) there is need to give professional supplements so that they could find out new ways to restore their glory and prosperity. This application will provide knowledge of supply chain orders and demands, market values of products while being user friendly. Shopping had changed its look, today everything is just a click away. It is basically acquiring vegetables directly from farmers and delivering next to your door step on demand. Vegetables are having very short lifespan they get degradation in their qualities after specific time period.

Keywords: Supply chain management, android application, Perishable Products.

Supply chain management is an integrated management of various functions in the areas of materials, operations, distributions, marketing and services after sales. Supply chain management helps in providing the best customer service in a cost efficient manner. Which represents the management of entire set of distribution, production, manufacturing, transformation, and marketing activities by which a consumer is supplied with a desired product is called as supply chain management. Supply chain management = logistic management. Supply chain adds values in sustainable development of employment generation, added value, minimization of product losses.

2. Methodology

The project work is divided in the five basic parts.
1. First step is to study detailed survey of Market; which will help in deciding the location of Plant and nature of market.
2. Second step is to survey of consumers; this introduces with the customer behavior and need.
3. Third step of List of Available product Range; Join us with current market state.

5. Fifth step Designing tool for Supply Chain Management Provides access to android application to ease process.

3. System Design

Module hierarchy Diagram:

Module specifications:
There are 2 main modules which consist of the following sub modules.
1. Administrative module:-
Administrative module is provided for the sake of administrators to manage the site and update the content at regular intervals, the major operations included in this module are
   - Create and update category and product list.
   - View the customer list and orders placed.
   - Send notification
   - Update status of order.
2. Customer module:-
   This module is meant for customers, where a user logging into his/her owns account will view this panel. The major operations included in this module are
   - View all category including various products, cost details and products availability.
   - Place order / add to cart.
   - Receive bill.
   - Send feedback.

Class Diagram:

A class diagram in the Unified Modeling Language (UML) is a type of Static Structure diagram that describes the structure of the system by showing the systems classes, their attributes, operations (or method), and the relationships among objects.

4. Results and Discussion

Figure 2. Class diagram.
This project is aimed at developing an android application, useful for online marketing and shopping of perishable products.

- Manual work has to be reduced.
- It uses concept of user friendliness.
- To speed up the operation.
- Managing and maintaining data becomes easier.
- Provide convenience to consumers.
- It decreases manpower and high cost.
- It reduces middle linkages, results in reduction in price of product.

5. Conclusion

There is a huge waste during the post-harvest storage and handling due to improper bagging without carting, lack of temperature controlled vehicles and improper forecasting of demand results in enormous losses to the nation. The supply chain can be made efficient with cold chains and proper transportation facilities. With influence of software or IT tool it is easy to predict demand of product in market. This will help in better management i.e. modern supply chain with view to benefit both farmers as well as ultimate consumers.

1) This application is helpful for both farmers and consumers.
2) Provides information to farmers about customer’s requirements in advance.
3) This allows consumers to view products and order online or by direct voice call.
4) It saves time of customers also provides platform for farmers to get a good value for their products.

6. References

[09]Samir dani “Food Supply Chain Management and Logistics” April, 2015.