PROJECT CHARTER

Transportation Management Optimization

Project Description

A new small company that produce milk product such as milk, cheese, yoghurt and buttermilk, transports these products to a number of city and district weekly. The company has a truck capable of cooling. This truck leaves products at determined centers (pool points) for each city and district. Then, the other local marketing companies distribute to markets and delicatessens from centers.

When the company leave extra products on centers in order to avoid more transportations, it poses a problem about freshness due to the wasting more time until products come to consumer from the pool points. However, the company would like to service fresh products to consumers. Therefore, the company deliver products according to orders from centers. In this way, the company services more fresh products to customers because there are more deliveries to pool points.

Every pool points may not give an order weekly. Most of time one truck has not a capacity to take all the orders so that truck has to come back manufacturing center and take products again. If it shortens the path, the truck can leave extra products at some pool points on condition that take it later.

At center points (Manufacturing Center and Pool Points), because loading and unloading to the truck with a forklift takes too short time, this action time does not need to be taken into consideration at any operation. It will be assumed that at pool points there always be enough storage space. For delivery of brochures and promotional items, there may be a single truck to achieve transport to all centers.

Objectives

Main purpose of this project is programming of shortest path that truck making way for weekly delivery. In this way, company reduces its expenditure and increases customer satisfaction so that gets more profit.

Team Members

Okan YILDIRIM	R&D Manager
Fatih YILMAZ	Desktop App. Developer
Özgür AKTAŞ	Web Developer
Hasan Emre ARI	Database Manager
Ali UÇAR	Operations & Research Analyst

Stakeholders

- Instructor Asst.Prof.Dr. Ayse TOSUN
- R.A. Bilge Süheyla AKKOCA
- R.A. Müge Erel
- R.A. Beyza Eken
- Team Members

Summary Milestone Schedule

Organizing a meeting about appointments with the team members	Each Wednesday
Developing high level requirements and organization chart	22/9/17
Handling the transportation problem completely and evaluating all possible conditions.	29/10/17
Choosing proper platforms for Manufacturing Center and Pool Points.	4/10/17
Making a brainstorm with the team members about transportation optimization problem solving. Database design and identification of database user roles	11/10/17
Designing interfaces	25/10/17
Testing of interfaces and preparation of user manual	8/11/17
Testing the application with users	15/11/17
Making improvements	22/11/17
Begin to work in real life	29/11/17

Scope

In scope	Out of Scope
• Finding Shortest Path • Service on Time (in 7 days)	• Capacity of Pool Points • Expenditure of Driver • Loading - Unloading Time for Truck • Direct Distribution To Costumers From Pool Points

Preliminary Risks

Customer requests after the solution of the problem can invalidate the problem. This problem can affect the entire project.

Our solution for minimizing path may not be a best solution.

**Attachment 1 – Full Project Description*

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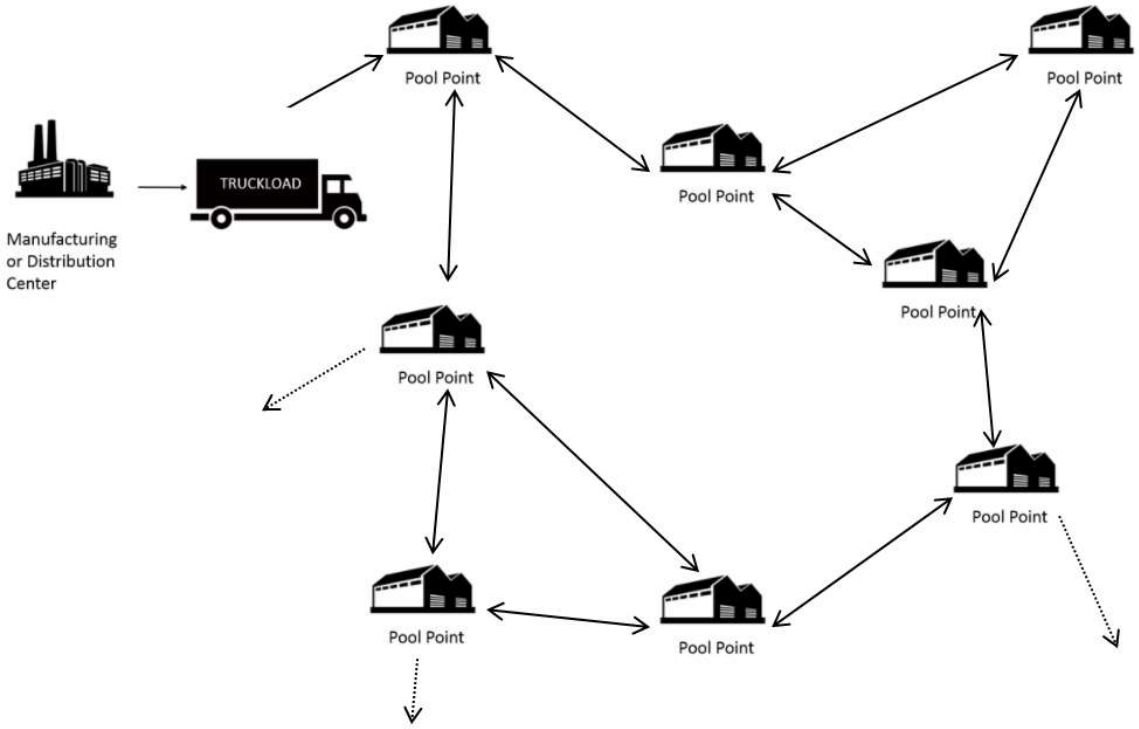

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Project Description

In this Project, managing the orders made from pool points to manufacturing centers and programming the route of the trucks in such a way that the least amount of way passed is carried. The product centers are making their dairy product orders, as large packages that contain a certain quantity and variety.

Each pooling center places orders once a week. In that week the product reaches the pooling center. And these centers may not place orders every week. Each pooling center should be able to add and delete order statuses and also display status and history.

The manufacturing center should be able to view orders and their statuses, and program the route so that the truck will travel the least amount of time.
This can be done if the process of stacking extra items in one or more product centers, taking them in the next pass and taking them to another center is the way to go. Orders from the week will never be mixed with orders from another week. Additional product stacking to a center can be set up for another center's suitable order and product can be taken to the requesting center from where the stacking takes place on the next occasion.

Connection routes and distances between city and districts (A, B, C, D, E, F ..) will be entered into the system by the manufacturer.

Project Scope

This project has to provide the features listed above. Order entry, order display, how many orders can be taken, and pool center operations and the shortest route must be presented.

Process Requirements

Teams can use any development process, although agile methodologies are suggested. All project artifacts must be hosted on a public repository with issue tracking facilities (e.g., GitHub). No particular methodology enforcing sufficient testing is suggested, but the project's functionalities must be thoroughly tested (at least, (near to) full statement coverage), and tests must be systematized using suitable unit testing libraries.

In order to track the project's activity and progress, the following rules should be followed:

- For each major set of development tasks, a milestone characterizing them must be defined.
- For each development task, an issue describing it must be defined, within the corresponding milestone.
- Task granularity is up to the teams. For larger teams a small granularity is better (work units may be method implementations, method documentation/contract provision, unit tests for methods, etc.).
- Prior to creating a new issue, users must check if the same issue has been previously created (important for large teams) to avoid work redundancy.
- The use of branches for working on partial solutions or larger issues is recommended.
- All users must make sure their partial solutions do not break the system (tests that passed before must still pass, project must compile, etc.).

Assumptions and Constraints About Project

There will not be waste of time in the project.

There will be ways to make delivery in a shorter time instead of following the estimated time.

There will remain committed to tasks

Communication will be provided at every level.

Risks

Customer requests after the solution of the problem can invalidate the problem. This problem can affect the entire project.

Benefits

This solution not only reduces transportation costs but also enables the company to deliver the best quality product to its customers.