Optimized Routing: The Future of Logistics

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Background
The company that our team decided to build a system for is Will Foods, formerly known as Will Poultry.

Will Foods is currently the largest locally owned, full line beef, pork, poultry, seafood, kosher, and institutional food distributor in the Western New York area.

The warehouse covers over 120,000 square feet and is capable of storing as much as 15 million pounds of dry, fresh, and frozen products at a time.

The plant employs a full staff to custom cut specialty orders. The facilities give the ability to service large accounts, independent stores, as well as all types of restaurants, hotels, and schools.

With over 40 refrigerated delivery trucks, Will services a 21 county area of Western New York as far east as Syracuse.

Our Plan
Introduce an application enabling us to input all of the product information, such as weight, dimensions and where it has to be delivered, in order to create a unique route for each truck.

The software will use this information to create a specially-designed, optimized route - enabling the dispatcher to create a more efficient and cost-effective plan to deliver all of the product on time.

Another feature of this system will give us the ability to send the optimized route directly to the smartphones in each truck.

This will show each truck exactly where to go using GPS and Google Maps as well as give management the ability to track the location of each truck so that they know where they are at all times.

Methods
Analyze each customer address to ensure accuracy.

Send addresses through a geo-locator machine which marks the location of the customer with a GPS signal.

Re-input all of the Geo-located addresses back into our database system.

Install the route optimization software into our phones and the database system.

Mount each device in the trucks.

Start running orders through our newly upgraded system!

Sample Customer Master File

<table>
<thead>
<tr>
<th>ID</th>
<th>Name</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip</th>
<th>Contact</th>
<th>DelTime</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Buffalo University</td>
<td>21 Canoe Hall</td>
<td>Amherst NY</td>
<td>14226</td>
<td>Udata</td>
<td>9am-5pm</td>
<td>692-2222</td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Common JB Commons</td>
<td>500 Lee Entrance</td>
<td>Amherst NY</td>
<td>14228</td>
<td>Comm</td>
<td>9am-5pm</td>
<td>692-2222</td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>Manas</td>
<td>School of Management</td>
<td>Affero Center</td>
<td>Amherst NY</td>
<td>14228</td>
<td>Manage</td>
<td>9am-5pm</td>
<td>692-2222</td>
</tr>
</tbody>
</table>

Expected Results
The time it takes for our product to reach the customer will decrease exponentially.

The accuracy of what will be put onto the trucks will be increased resulting in fewer returns.

We will save money by reducing transportation costs.

We will be able to service a greater amount of customers more efficiently.