3 Pillars of SCM

Supply Chain Planning

- Order Management
- Production Scheduling

ERP
- Order Promising
- Purchasing

WMS
- Picking & Packing
- Order Fulfillment
- Warehouse Yard Operations
- RFID

TMS
- Load Optimization
- Shipment Planning
- Track & Trace
- Electronic Proof of Delivery

Supply Chain Information Management
Route Planning Type of Problems

- Pure delivery
- Pure pickup
- Mixture pickups & deliveries

Multi-stop routes
With Delivery and Pick Up
Transportation and Warehouse Operation and RFID

D-1: 18:00
**Customer, Route, DO, Driver, SO, Truck**

Email/FAX

D-0: 8:00
**Customer, Route, DO, Driver, SO, Truck**

D-0: 10:00

**DO, SO, JO, Truck**

Inward Weighting

Arrival

Pick

Load

Outward Weighting

Depart

Gate
Factory, WH, Agent & Customer on the MAP
One Click Route Planning with Optimization

Truck Dimension
Product Dimension/Weight
Time Window
Load / Unload Time
Cost
One Click Route Planning with Optimization

In One Click
Route Planning & Route Optimization
Delivery & Pick Up in One Route
Truck & Driver Assignment
Cost Calculation
Real Time Performance Management
Dashboard Monitoring

Best Customer Service
Truck Optimal Utilization
Cost per Route
Cost per Stop
Cost per Kilometer
Cost per Cube
Cost per Weight
Backhaul Revenue
## Route Summary: Open Schedule

### Schedule Details:

<table>
<thead>
<tr>
<th>Route</th>
<th>Vehicle</th>
<th>Stops</th>
<th>Start Time</th>
<th>End Time</th>
<th>Peak Volume</th>
<th>Peak Weight</th>
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### Specific Route Details:

**R0000020 - 12FT-3**

- **11.81 Hours**
- **50.26 Kilometers**
- **$273.48**

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## Route Summary: Profile

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### Route Profile

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TMS & WMS

One Job
One Truck/Route
One Wave

WH Wave Picking Truck Appointment at the Door
Technology options

- RFID
- GPS
- GPRS
- On-board computers
Site Type and Dock types

Defining a site type is a way to arrange sites into meaningful groupings, which can be used to better understand the site or to allocate resources to it. Each site type is associated with a particular site type.

For example, you can create site types for different areas or regions and whether a particular site type is a depot. If you choose to set up sites, you can use the site types to configure which sites are used to calculate these regions here.

If you have not already set up your site types, you might want to do so now.

Dock types are site types that define the types of vehicles that can reach them. If you have not already set up your dock types, you might want to do so now.
Route Properties and restrictions

- **Vehicle Enforcement**
  - Capacity of cubic feet
  - Capacity of pounds
  - Capacity of pallets
  - No revisiting of work zones

- **Mateability Enforcement**
  - Dock type to vehicle type
  - Work zone to vehicle type
  - Product to vehicle type
  - Product to product

- **Order Groups**
  - Enforce order group requirements

- **Time Windows Enforcement**
  - Pickup windows
  - Delivery windows

- **Resequencing**
  - Limit to distance-improving routes

Prioritize based on:
- Farthest distance
- Most cubic feet
- Shortest pickup time window span
- Shortest delivery time window span
- Latest pickup time window close
- Latest delivery time window close

Note: If the Priority field exists on the order file, it will override these settings.
Compatibilities when Scheduling

- Vehicle/Trailer Type to Site
- Vehicle/Trailer Type to Work Zone
- Order Type to Vehicle/Trailer Type
- Product to Product on a Trip or Route
- Tractor Type to Trailer Type
- Named Driver(s) &/or Skills to Tractor Type
- Named Driver(s) &/or Skills to Vehicle/Trailer Type
- Number of Vehicles/Trailers to Number of Docks at a Site