



FLEET LOGISTICS OPTIMIZER



What is FLO?

- FLO is a vehicle scheduling and tracking system designed to improve fleet utilization and reduce delivery costs.
- FLO finds delivery routes that minimize costs. It then compares the actual route driven to the suggested route using GPS satellite tracking. Any unauthorized vehicle use is automatically identified.
- By improving vehicle routing and reducing driver misuse of vehicles an overall reduction of 10-20% in delivery costs can be achieved.
- FLO keeps up-to-date databases of customers, products and routes by using live links to your back-end databases.
- Size or mass is associated with each product so that FLO can automatically calculate the size of each invoice.
- The database of vehicles has any number of vehicle types and the fixed and variable costs for each vehicle type.
- Regular routes can be downloaded or interactively defined. Master routes can be maintained and each route can be individually optimized.
- Geocoding on vector maps with full street search.
- Plan routes for future days.
- "What-if" planning.

Features & benefits:

- FLO schedules your delivery vehicles, finding the delivery routes that minimize your costs.
- FLO compares the actual routes driven to the suggested routes using GPS satellite tracking.
- FLO audits your drivers, vehicles and deliveries.
- Typically saves 10-20% in delivery costs.



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FLO was designed and developed by OPSI Systems. It is a unique vehicle routing system, developed with tight integration to GPS tracking systems. The jobs for the day can either come from the invoicing database or from a set of regular routes. Master routes can be maintained and each route can be individually optimized. The size of each delivery is calculated directly from the invoices per line item. Specific delivery time windows can be entered for each customer and **FLO** will make sure to honor these windows in the routes that it suggests.

The **FLO** system has an advanced vehicle-scheduling algorithm that, when given delivery jobs, will determine the most cost-effective way of completing the deliveries. Once routes have been created, **FLO** can be used as a routing spreadsheet to drag and drop jobs between routes or create and delete routes. After each change, **FLO** dynamically re-calculates costs, times and distances of all routes.

For warehouse environments, **FLO** facilitates pre-scheduling by creating routes before all orders are finalized. These routes are then updated once all orders have been invoiced.

FLO (Fleet Logistic Optimizer):

- typically reduces your delivery costs by over 10%
- is reasonably priced
- is self-learning (quick to set up and adapts to changing traffic conditions)
- if tracking units are fitted to the vehicle, **FLO** performs automatic driver/vehicle auditing (checks whether the vehicles followed planned routes and detects any unauthorized vehicle use)
- allows analysis of various scenarios through "what-if" planning
- can be used to optimize fleet size and mix by examining plans with various fleet configurations

FLO takes vehicle routing to the next generation with its tight integration to GPS satellite tracking and unique self-learning and auto-vehicle auditing features. If the vehicles have GPS units installed **FLO** provides many added benefits. The actual routes travelled by the drivers are automatically compared to the scheduled routes using the GPS units and any unauthorized vehicle use is immediately identified. This removes the manual checking of driver routes that is often required with tracking systems. **FLO** also uses the GPS data to learn and update travel times and visit times at customers.

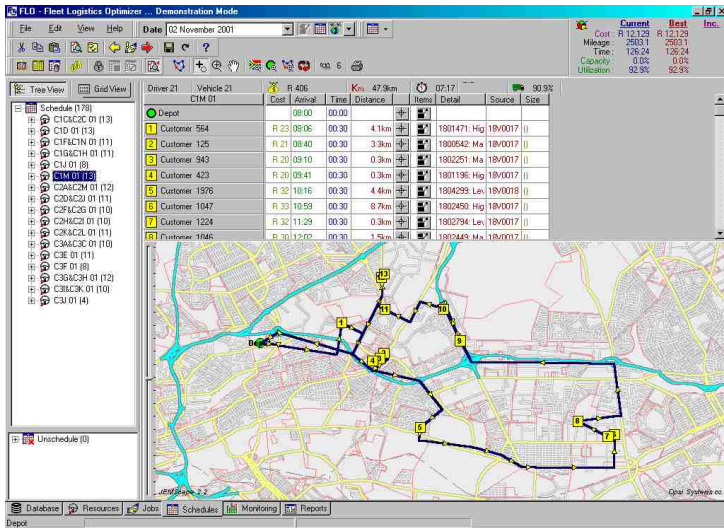
FLO displays the daily schedules and actual tracked routes on a full-colour vector road map. The time spent at each customer and the costs of each delivery are calculated.

How can FLO help you?

- Reduces your operating costs by improving your fleet utilization
- Enables you to identify and record the costs associated with your fleet
- Automatically assesses and records the performance of each driver
- Identifies delivery costs associated with each customer
- Pinpoints any unauthorized use of your vehicles.

FLO end-user markets:

Many installed sites: FMCG (Fast moving consumer goods) deliveries, Bulk (cement, oil, etc.), Fuel, Service (hygiene, uniforms, etc.), Building supplies, Hazardous substances, Motor spares, Clothing, Internet fulfilment, Beverages, etc.



Screen shot showing a planned route in FLOS's route editor

Business Rules

- Delivery windows. e.g. no deliveries to restaurants during lunch
- First on route, last on route, only one on route. e.g. a supermarket demands that vehicles leave their premises empty
- Job priorities. e.g. chicken farms before beef farms.
- Furthest drop first
- Vehicle size exclusion. e.g. no vehicles bigger than four tons allowed on garage forecourt
- Product class exclusions on vehicles. e.g. no products needing refrigeration on non-refrigerated vehicles
- Offload times by weight or volume
- Vehicle, driver and sleep-out costs included
- Multiple shifts or picking waves per day
- Specific shift time per vehicle or vehicle class.
- Vehicle compartment modeling
- Bulk deliveries
- Tracking/Monitoring
- Integrates with many popular tracking solutions
- Displays the daily schedules and actual tracked routes on a full-colour vector road map
- Automatically identifies routes taken and deliveries made
- The time spent at each customer and the cost of each delivery is calculated
- Download schedule to onboard computers and tracking equipment
- Calculate real-time expected arrival times
- Flag late deliveries and un-authorized vehicle use
- Learn travel and stop time from tracking equipment

De-brief

- Full debrief functionality for driver and for jobs
- Each job is debriefed at the detail lines level
- Drivers must explain all unscheduled stops and stops are marked as authorized or unauthorized
- Stop times at each customer are recorded either automatically through GPS tracking or manually
- Strategic planning
- Fleet configuration
- Service day assignment

- Evaluation of costs of various distribution centres
- Evaluation of primary and secondary distribution strategies
- Spreadsheet interface for what-if analyses

Driver and vehicle reports

FLO provides a complete set of reports including but not limited to:

- Driver routes - a trip schedule showing all customers and items to be delivered
- Driver trip reports - a report for each driver showing authorized and unauthorized stops as well as costs and distances
- Exception reports - a list of all unauthorized uses of the vehicles
- Customer service - for each delivery, the cost, and the time spent at each customer and tardiness

Databases

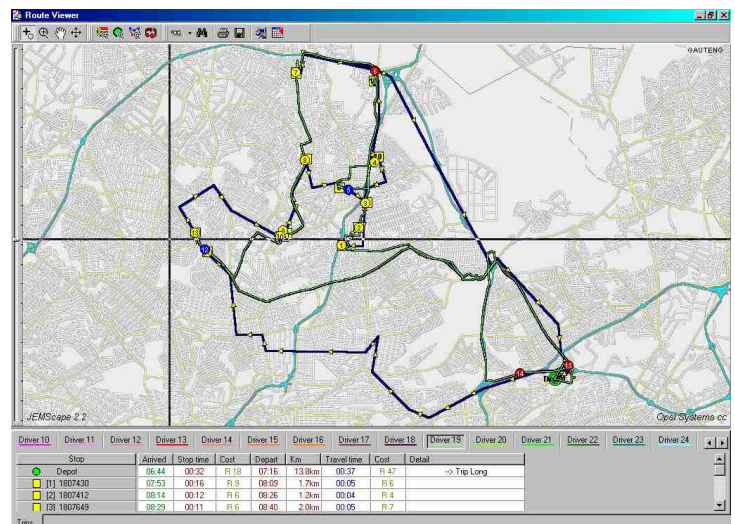
- FLO keeps up to date databases of customers, products and routes by using live links to your back-end databases
- The product database has a size or mass associated with each product so that FLO can automatically calculate the size of each invoice
- The database of vehicles has any number of vehicle types and the fixed and variable costs for each vehicle type

Jobs (deliveries)

- The jobs for the day can either come from the invoicing database or from a set of regular routes
- Regular routes can be downloaded or interactively defined
- Master routes can be maintained and each route can be individually optimized
- Ad hoc jobs can be entered manually

Route planning and what-if comparisons

- Advanced randomized algorithm to plan routes
- Manually plan routes or change the suggested routes
- Use drag-and-drop to move deliveries between vehicles
- Carry out what-if comparisons between different delivery schedules
- Calculate the marginal cost of each delivery



Screen shot showing planned and actual routes