ORACLE REAL-TIME SCHEDULER FOR RETAIL DELIVERY AND LOGISTICS

KEY CAPABILITIES

- Real-time memory-resident application
- Advanced cost-based optimization approach
- Schedule in batch or real-time modes
- Supports "what if" scenario planning
- Supports multi-channel operations
- User-configurable Graphical User Interface (GUI)
- Two-way field data communications via handheld and telematics technology
- Automatic vehicle tracking via Global Positioning System (GPS) technology

**Oracle Real-Time Scheduler** - a core component of all Oracle Service Optimization solutions - creates cost-optimized plans and schedules for retail delivery and other logistics operations, allowing fleet operators to simultaneously improve their operating efficiencies, customer service levels and profits.

**Balancing Customer Service with Operational Costs**

The planning, scheduling and routing of delivery operations is a complex activity, a task made even more difficult by constantly changing customer requirements and a growing demand for improved service levels. However, a delivery fleet – drivers and vehicles – is an expensive resource, therefore, using them efficiently as well as effectively is critical to reducing overall costs and improving profitability.

Many companies have already invested heavily in their call centers and the back-end delivery process. Often they have neither the desire nor the resource to adopt a revolutionary approach to improving the quality or cost of delivery service. Oracle Real-Time Scheduler has been designed to accommodate the realities of an operational business by offering organizations a range of deployment options.

**Batch Scheduling**

A batch operation enables organizations to limit the impact of adopting optimization and routing technology. Demand capture, whether on-line or in-store, can continue uninterrupted, perhaps based on a nominal number of deliveries per hour or on daily delivery areas.
Post-capture, delivery requirements are passed to the Oracle Real-Time Scheduler which then optimizes that demand against the available resources. Oracle Real-Time Scheduler will automatically seek to optimize travel time and distance at the same time as minimizing the number of vehicles used.

The number of runs to be executed daily by each vehicle will be calculated with vehicle manifests and street level routings being generated simultaneously. As demand increases, users can be given early warning of where capacity limits are being approached; allowing them to make provisions for additional vehicles if possible.

At a pre-determined time, runs can be automatically closed and the information passed to the appropriate location for picking and loading.

**Integral Street-Level Routing**

Many scheduling technologies generate routes as a secondary process to call allocation. Oracle Real-Time Scheduler integrates industry-standard mapping data into the scheduling process so that drive time and distance are considered equally alongside vehicle capabilities, delivery times and other scheduling parameters. This approach ensures an optimal and accurate schedule with achievable ETAs. Furthermore, integral mapping means that any changes to the schedule are instantly reflected on the displayed routes and the software can also be used to display real-time location information for vehicles as they undertake each run.

**Real-Time Appointment Booking**

While Batch Mode scheduling has a relatively low impact on existing processes, one significant disadvantage is that vehicle capacity is commonly either over or under booked. Resolving overbooking after the event is time consuming and can result in disappointed customers. Under booking will introduce inefficiencies by underutilizing the available fleet. One way to eliminate these issues is to introduce real-time appointment booking.

Real-time appointment booking enables organizations to dynamically check the live schedule each time a customer delivery is to be booked. Once the scheduler is provided with details of the delivery and the delivery location, it will quickly respond with a list of available delivery slots from which the customer can choose. Delivery slots are fully configurable and can range from minutes to half-day and full-day slots. Different slot groups can be offered to different categories of customer allowing a wide range of customer service propositions to be offered.
Furthermore, the scheduler understands the relative efficiency of each available slot enabling the least efficient slots to be hidden or offered at a premium delivery charge.

This approach results in a highly efficient schedule and appointments offered secure in the knowledge that they can be honored.

**In-Day Event Management**

Logistics organizations have limited opportunity to respond to exceptional events that occur during the course of a day. Once a vehicle is loaded and enroute it may only be possible to minimize the impact of any delays rather than eliminate them.

In-day events such as sickness, bad weather and vehicle breakdowns, create significant challenges for dispatch staff. Oracle Real-Time Scheduler minimizes the impact of such events.

Oracle Real-Time Scheduler has the ability to integrate, in real-time, with in-cab technologies such as GPS. This ensures that any delays or re-routing are immediately visible and the impact on delivery times known. Alerts are automatically generated for any deliveries in jeopardy and users are given the option of re-sequencing runs to minimize the number of impacted deliveries.

**Organize the Fleet Information to Achieve Efficient Service**

Optimizing vehicle schedules reduces operating costs and improves customer service levels. However, many organizations do not accurately maintain the information necessary to ensure that their vehicle/driver schedules consistently comply with all company calendaring requirements, government regulations and labor union rules, such as average target weekly work hours, paid leave, rest breaks, night work, shift patterns etc.
Typically, the information that is available relates only to payroll or human resource operations and therefore cannot support the scheduling process. Oracle Real-Time Scheduler helps managers maintain all the necessary information by complementing an existing fleet management solution or functioning as the primary fleet management solution, if none exists.

Oracle Real-Time Scheduler fleet management capabilities include:

- Centralized data management for all vehicles, equipment and other assets
- Vehicle-specific information – location, attributes, geographical constraints and relative speeds
- Shift pattern – management of multiple shift templates
- Shift details – working period (day, week, month), number of days per working period, specific working calendar days
- Hours worked – to assist with regulatory compliance and for calculating recommended future shifts and reporting

Oracle Real-Time Scheduler enables your operations staff to easily maintain all the vehicle data required to create optimized plans and schedules.

**Oracle Real-Time Scheduler Delivers a Broad Range of Functionality…**

- Manage delivery points and routes which are not fixed – i.e. changing from day-to-day
- Support delivery and collection
- Decide dynamically which fulfillment centre or store customers would be serviced from where they are in the delivery area for more than one fulfillment center
- Process all changes in real time -- visible in the system immediately
- Configure operational parameters (e.g. drive speeds and doorstep time) by type of residence, region, and zone
- Return slots to customer based on profitability of fulfilling the order within that time period
- Support multiple slot lengths and overlapping slots in terms of time periods
- Rapid response times even under full load
- Provide dynamic route optimization in background
- Handle multiple cut-off times for delivery
- Provide an accurate, comprehensive vehicle database

**… and an Equally Broad Range of Benefits**

- Increased fleet productivity
- Reduced travel time and lower mileage resulting in lower servicing costs and prolonged fleet life
- Later cut-off times provide more on-line shopping time to retailers
**KEY CAPABILITIES**

- A single, comprehensive repository for all vehicle and driver related information
- Helps to reduce costs and improve service by providing accurate information required for real-time scheduling
- Helps companies comply with work-related rules and regulations
- Helps identify resource related performance issues.

- Improved customer service resulting from less late deliveries and tailored offerings
- Improved operating margins
- Accommodate environmental demands by highlighting low incremental mileage delivery options
- Improved in-day visibility with option to provide delivery ETA information to customers

**Easy Integration with Core Business Systems for Maximum ROI**

Oracle Real-Time Scheduler is a core module that is required for all Oracle Service Optimization solutions. Oracle Real-Time Scheduler is designed for easy integration with Oracle or third party ERP, CRM and “on board” telematics systems. As a result, companies can protect their existing investments and maximize ROI.

**Contact Us**

For more information about Oracle Real-Time Scheduler for Retail Delivery and Logistics, please visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.