

Transport Management Centre

...An Overview



The Transport Management Centre (TMC) provides the “missing link” in many transport management operations.

Frequently operations employ sophisticated scheduling tools to plan routes, but then rely on the A1 dry white board and the mobile phone to allocate resources and attempt to monitor the status of each route against plan.

The transport management centre seamlessly links together and facilitates the flexible management of available resource, the plan - both in terms of schedule and load / manifest information (whether created by Opus Fleet & Distribution or an external scheduling system, such as Paragon), and provides real-time visibility of the execution of the plan across the operations fleet. As such, the TMC is a central modular software component of the Opus Fleet & Distribution offering.

This real-time visibility is delivered by either the real-time data generated by the Automatic Vehicle Location ‘Black Box’ or from proof of delivery/collection data (or a combination of both in many implementations).

This powerful software system manages all allocated delivery assets in real-time, monitoring vehicle and driver performance both in terms of schedule and route adherence, driving style and delivery status (in the case of POD/POC). Based upon a set of customisable business rules, the TMC will then flag any issues or exceptions to plan - for example a vehicle running late or likely to miss important time windows, POD clauses, unscheduled stops, deviations from route etc.

These alerts can be generated in the traffic office or customer service centre, and TMC agents can also be used to inform customers of delays through the use of SMS, email and fax automation in real-time.

Drivers can be debriefed through the TMC against those events/exceptions that the operation have deemed to be worthy of further analysis / driver feedback. This might include, significant lateness, excessive idling, unauthorised stops, delivery clauses and shortages, etc.

Naturally, a huge amount of data is built up within the TMC database, relating to plan, actual and debrief feedback. The TMC is complimented by a varied set of KPI reports, which management can use to review overall operational performance

▲ SLA/KPI VISIBILITY

▲ CUSTOMER RELIABILITY

▲ ASSET LOAD VISIBILITY

▼ BACK OFFICE OVERHEAD

Benefits OF TMC Implementation

- **Increased SLA/KPI visibility** - real-time tactical and strategic reporting, schedule adherence, route adherence, driver debriefs
- **Improved customer visibility** - on-line visibility, automated PDF generation, process automation (e-mails, faxes, SMS etc)
- **Better asset load visibility** - real-time POD drill down
- **Reduced back office overheads** - coordination effort and administration - answering customer queries, etc.



Functional Summary

Transport Management Centre (TMC) is a real-time fleet management system that allows progress of delivery and collection assets (vehicles, trailers, drivers etc) on routes to be monitored against plan/schedule.

The TMC's core functions can be summarised as follows:

- Import from route scheduling package (route and manifest/onsignment) or interface into the Opus Scheduler components
- Import from warehouse management system (manifest/consignment - if not passed to route scheduler)
- These imports provide the TMC with a plan - the "where, when and what". The TMC can also manage the creation of fixed routes (milk runs and trunk routes)
- Asset calendars - drivers, tractors, trailers, etc. The asset calendars manage what assets are available and when, these can either be passed to the scheduling component in order to be built into the plan used by TMC directly, or can be manually or automatically allocated within the TMC itself if the route scheduler only allocates vehicles by class or type to the plan
- Journey white board - lists what assets are allocated to what planned route and their current status. Facilitates the manual allocation of assets or the displaying of the results of automatic asset allocation to schedule/plans. Allocations generated in the integrated Opus Scheduler module can be viewed and 'tweaked' within the central Electronic Traffic Sheet in the TMC
- Electronic Traffic Sheet - this is the central screen within the TMC. It is primarily a horizontal bar chart showing GPS Tracking and Collection/Delivery status against plan. It alerts the operator to exceptions and issues in real-time, allowing actions to be taken promptly
- As well as providing a snap shot of schedule adherence, including planned time of arrival, estimated time of arrival and actual time of arrival, proof of delivery information received back from mobile data terminals can be accessed - all this information significantly improves the customer service process
- Any proof of delivery/collection data and/or schedule adherence information can be routed through to the customer's third party systems (for example SAP or WMS)
- As with all Opus Fleet & Distribution software components, the data file formats are in XML and message queuing (either MSMQ or Biztalk), which provides a very powerful and reliable interface mechanism
- Business rule editors - these "drag and drop" controls create a series of XML documents (that can be created externally if required) that determine how the TMC should process and respond to events, warnings and alerts coming into the TMC
- Alert management - alerts can be triggered in real-time based upon business rules
- Automation agents - alerts can generate SMS, email and fax messages as required. (PDF documents based upon POD data can also be created automatically)
- Driver/journey debriefing. The debrief is based upon the information collected from vehicle tracking/POD system and the business rules defined. This might include significant lateness, excessive idling, unauthorised stops, delivery clauses and shortages, etc.
- The TMC includes a driver ranking system to support driver education and reward schemes
- Fleet accounting and KPI reports based upon the plan, actual and debrief data held in the TMC, can be generated. Similarly a comprehensive cost matrix (fuel costs, labour costs, overtime rates, penalty costs, etc) is also supported, allowing the customer to track operational costs against plan and actual performance

