

# Asset Management for Transportation & Mass Transit

State and local transit authorities face a unique set of requirements. There is the common need to manage a fleet, but frequently the municipality must also maintain facilities, equipment, and infrastructure that extend beyond the vehicles in service. Datastream 7i helps transportation and transit systems—such as RATP (Paris Metro) and Miami-Dade transit system—ensure public safety, increase asset availability, manage expenses, maintain customer satisfaction, meet regulatory guidelines and extend the life of assets. Datastream 7i helps public sector transit operations manage:

- > Fleets
- > Roads, railways, tunnels and bridges
- > Infrastructure and inventory
- > Call centers and crews on the road



## Fleets

The most visible component of the public transit system is the fleet, including buses, subway and rail cars, emergency vehicles, garbage trucks, construction vehicles and more. The Datastream 7i fleet

management software module helps manage real-world public sector transit operations. Datastream designed features specifically for helping customers manage their fleets.

> **Activity-Based Vehicle Maintenance Reporting Standards (VMRS)**—Datastream 7i uses automatically-populated VMRS standard codes to ensure accurate tracking of labor activities and parts needed to maintain fleets.

> **Fuel Management**—Handle onsite fuel inventory with ease, and integrate Datastream 7i with fuel card management systems to track vehicles, fuel, oil, and other fluids efficiently.

> **Motor Pool**—Book, track, report, and return vehicles in the motor pool online and in real-time. Project the availability of vehicles by type, location, and use in a specified date range with online availability reporting.

> **Preventive Maintenance**—Schedule regular maintenance—such as oil and filter changes, tire rotation, and fluid levels—based on meter or time.

> **Tire Management**—Capture data for each tire and other rotating assets, such as ID, description, accrued cost, and work order history for each vehicle, and track all casings through the re-treading process, crediting the unused portion of tire life to vehicle history.

> **Warranties**—Immediately flag warranty repairs for vehicle, component, or replacement parts or any asset of a major sub-system when opening a work order, and then automatically create a warranty claim to the supplier.

According to the National Transit Database, in 2004 the average Recovery Ratio (fare revenue per total operating expense) for public transit systems in the US was 22%. This means nearly 80% of operating expenses had to be covered by some other source, such as federal government subsidizing or local tax dollars. Keeping the fleet running maintains the revenue stream, not to mention keeps the customer and taxpayer happy.

## 2004 Average Revenue and Expenses for US Transit Agencies\*

	National Transit Data	Datastream 7i Potential Impact
Fare Revenue	\$7,673,393	✓
Total Operating Expenses	\$21,614,215	✓
Recovery Ratio	22.4%	✓
Labor Hours (maintenance & inspections)	148, 148	✓
Labor Cost † (\$19/hour wages)	\$2,814,812	✓

\*Data extrapolated from National Transit Database reports "Fare per Passenger and Recovery Ratio" and "Revenue Vehicle Maintenance Performance."  
 †Based on national median salary for Diesel Mechanic

Datastream 7i provides an at-a-glance view to critical items, such as scheduled maintenance and warranty expirations, that can help extend the miles between major system failures or eliminate the failures altogether. Fewer equipment failures result in more hours on the road and the opportunity to earn revenue increases.

**“We now recover in excess of \$1 million in warranties every year.”**

**∴ Wayne Bourdeaud'Huy**, Client Solutions Team Manager, Coast Mountain Bus Company ∴



### Roads, Railways, Bridges & Tunnels

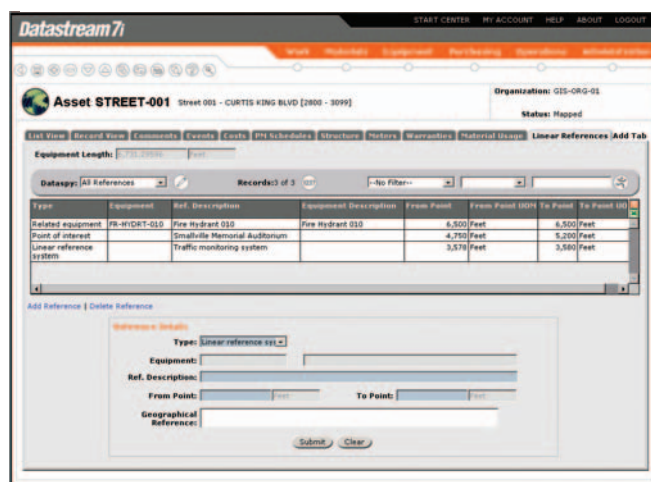
Beyond the public fleets, transit authorities and DOTs are also responsible for maintaining linear assets—including roads, rail tracks, bridges and tunnels—that help ensure public safety. The

**Linear Assets** module in Datastream 7i enables users to define an asset in terms of linear reference details like length, unit of measure, and geographic reference. This is helpful because users can write work orders against any portion or point on that asset by specifying To and From points. For example, when a portion of a road needs to be repaved, the cost and work involved in that repair is attributed to the specific portion being paved rather than the entire road. Accurate analysis of maintenance on linear assets helps DOTs and other agencies comply with GASB 34 and also provide the reporting necessary to obtain additional highway funds.

Datastream 7i also enables **dynamic segmentation** from within the linear asset feature, meaning that if a technician working on the road discovers that the repair is required in a larger or smaller area than anticipated, he can easily change the segment where work should be performed. The work order is adjusted and the costs and work are assigned to the correct segment.

Datastream 7i enables DOTs to monitor the condition of their linear assets through the use of mobile devices, inspection management, GIS and linear asset management. For example, small fissures are found in a bridge that do not pose a threat when first discovered. Through a combination of Datastream 7i features and modules—including inspections, preventive maintenance, mobile functionality, and linear assets—DOTs can use Datastream 7i to closely monitor problems to determine if the fissures are expanding and prevent a potential disaster. The life of the asset is extended, replacement costs are postponed, and public safety is not jeopardized. Plus the DOT experiences the added benefit of not having to dispatch emergency crews, which can result in overtime charges.

### Linear Assets



View and edit specific linear references, such as From Points and To Points on a highway segment.

**“[Datastream 7i] will enable us to deploy our resources more efficiently, boost equipment uptime and maximize the impact of taxpayer dollars.”**

**∴ Corinne Brody**, Assistant County Manager Miami-Dade County ∴



### Infrastructure & Inventory

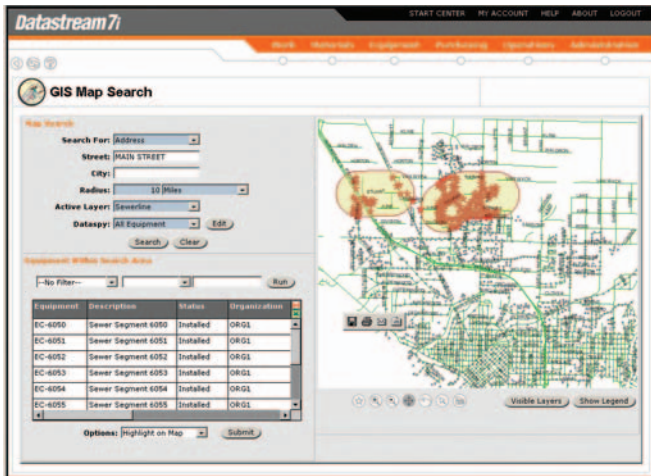
DOTs maintain more than just the roads and fleets. They are also responsible for the millions of street signs, traffic signals, manhole covers, parking meters and other critical assets. With the Datastream 7i **Asset module**, a

DOT can identify, track, locate, and analyze physical assets and facilitate usage measurement. By compiling asset data, such as location, cost history, warranties, meters, permits, and more, Datastream 7i maximizes productivity and enables DOTs to make educated “repair or replace” decisions about their equipment. The results are extended asset life and dramatic cost savings.

With Datastream 7i **GIS Integration**, transportation managers can easily identify an asset—such as a street sign, parking meter, or stoplight—on a map. The visual display of an asset helps the DOT quickly view the locations of the asset and work crews to facilitate work order assignment and routing.

For example, field technicians spend a large portion of their time traveling back and forth across the city performing maintenance at multiple locations. The integration capabilities of the GIS advanced module help optimize the workday by planning a more efficient route to designated locations, thereby reducing drive time and increasing the efficiency of the city's labor work force.

### GIS Map Search



Quickly view the locations of the asset and work crews to facilitate work order assignment and routing.



### Call Center and Crews on the Road

The Datastream 7i **Call Center** allows public sector organizations to centralize way to make inquiries, complaints, requests for assistance, maintenance history, and work orders all in one

centralized database. Call Center operators can find requested information quickly and efficiently and work orders are entered and assigned on the fly. And the Call Center can be connected to the Datastream 7i GIS interface so that the strength of ESRI GIS mapping and locating functionality is at the Call Center operator's fingertips.

Using **Datastream 7i Mobile**, on-the-road or service call technicians can report to work and head out to a job, completing assignments and downloading information to Datastream 7i from a handheld device. This capability allows municipal organizations to keep work crews in the field, increasing productivity and shortening response times. For example, if a traffic light is out at the corner of Main and 1st Streets, a citizen can call a designated number, such as 311, to report the outage. The operator has access to a GIS to locate the signal that is out and can create the work order directly from the GIS. Citizens experience quick customer service and the municipality increases their efficiency.



### Summary

Datastream 7i helps public sector transit operators keep fleets running at optimum efficiency, maintain linear assets such as roads, bridges and tunnels, manage infrastructure and inventory and ultimately meet the needs of their citizens. To find out how Datastream can help public sector organizations better manage transportation or transit operations, call Datastream at 1.800.955.6775 (USA and Canada) or visit [www.datastream.net](http://www.datastream.net).

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