



Rail – **Asset** management solutions

Rail operators and infrastructure owners have the same primary objectives:

- Improve traffic safety and reduce risk of accidents
- Enhance network availability and usage of possession time
- Decrease maintenance costs and extend asset lifecycle

Balfour Beatty's DataMap™ Lite can help to achieve these objectives by providing a complete asset management solution.

DataMap™ Lite helps make the best use of data by making it simple to understand and providing the foundation for "predict and prevent" maintenance regimes. This enables the optimisation of track maintenance.

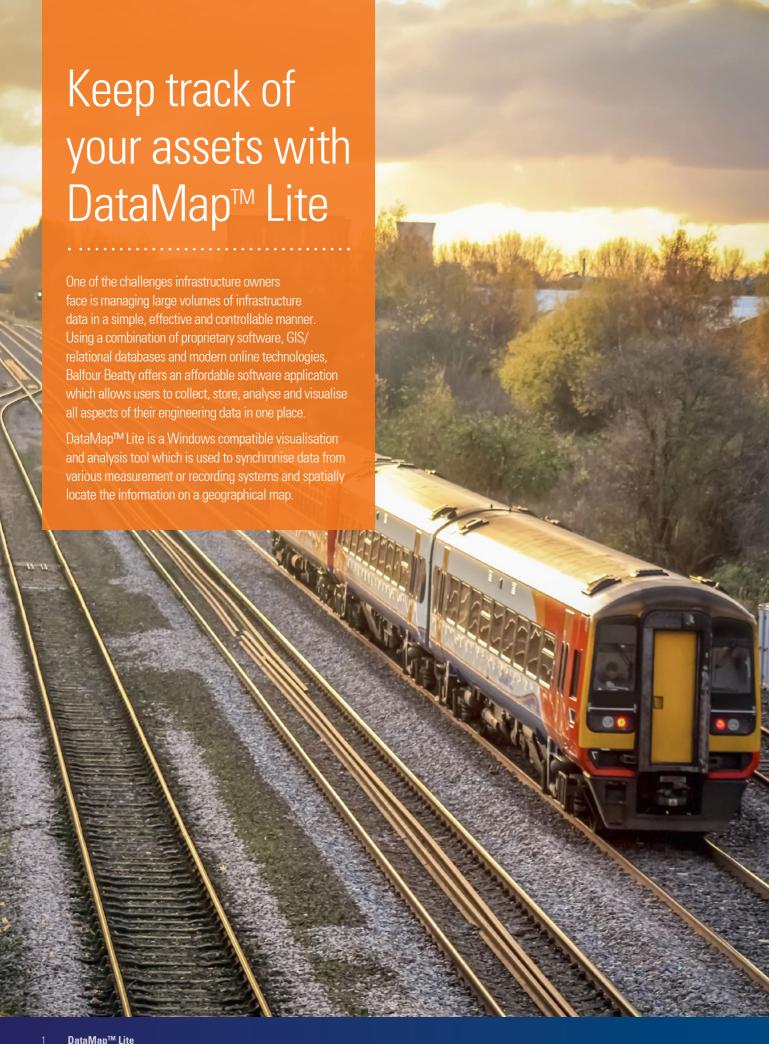
It can take data from any number of different sources. recorded on different vehicles and dates, and spatially align them together on a geographical map of the rail network.

For example, a combination of track geometry, structure gauging and video can be used to provide the user with detailed information relating to the track asset and the surrounding infrastructure at a specific location anywhere on the network.

DataMap[™] Lite allows the user to choose the appropriate level of data capture and provides high level analysis and visualisation on:

- » Ride
- » Track geometry
- » OHL parameters
- » Video
- » Ballast profiles
- » Rail profiles
- » Rail wear
- » Corrugation
- » Shoe gear accelerations
- » Statistics and exceedences
- » Structure survey and stress data

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DataMap™ Lite

A Rail



Proposed Study

Track asset management **Glasgow Subway**

Track engineers working on Glasgow's underground metro identified DataMap™ Lite as a potential software solution to assist them with the management of key assets on their network.

Data recording is undertaken by a variety of different methods. Using DataMap $^{\text{TM}}$ Lite, this data can be spatially synchronised to a linear map to allow it to be accurately analysed so that necessary maintenance works can be planned more effectively.

Parameters required by Glasgow Subway included:

- » Track geometry data
- » Video capture data
- » Structure profile measurement data

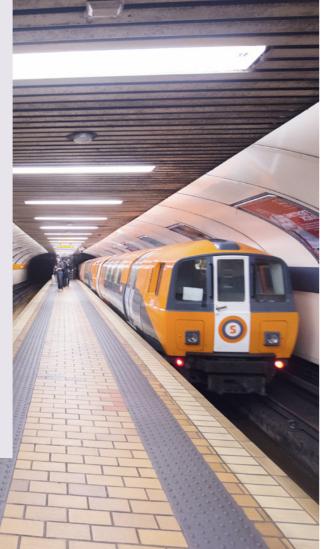
DataMap[™] Lite can be customised to suit customers' own specific requirements.

Typical linear map showing Glasgow Subway





Typical DataMap[™] Lite screenshot showing data analysis for rail assets



Road/Highways

Road asset maintenance



For road users the most visible aspect of asset management is road works. Road works are necessary to allow road operators and maintainers to carry out routine maintenance and vital repairs.

DataMap[™] Lite can be customised to play an integral part in supporting and improving programmed maintenance and help reduce costs and avoid unnecessary delays.

DataMapTM Lite can assist infrastructure organisations in identifying where current practices can be improved by critically reviewing the information that is captured about all major trunk roads and motorways. DataMapTM Lite can also assist in identifying new information that is collected and information that is no longer required.

Surveying

Surveying, asset management and geospatial data

DataMap[™] Lite can assist surveyors allocate and improve visibility and management of assets in the field by spatially aligning captured measurement data onto an interactive mapping system.

- Display and analysis tool for managing large amounts of measurement data
- Provides visualisation of trends in data
- Trend analysis



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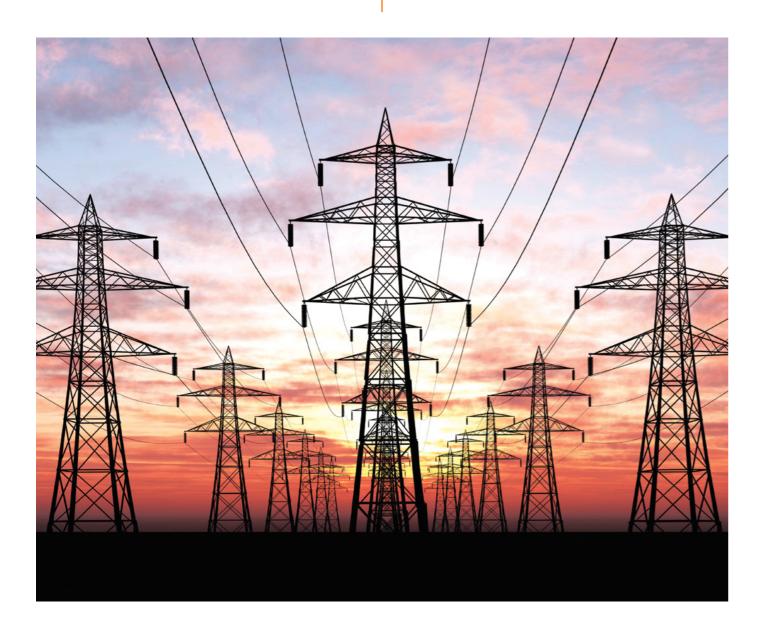
Utilities

Asset inspection monitoring and field analysis

Utility companies need access to the very best asset inspection and monitoring services, analysis and advice.

DataMap[™] Lite can host and support any form of asset inspection and management by accepting all forms of data collection and assist engineers with key inspection regimes.

- » On-site inspections
- » Asset analysis
- » Safety enhancements
- » Maintenance forecasting and scheduling
- » Works management



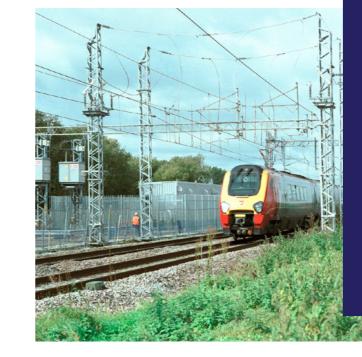
Features

- » Low and simple set up costs
- » Supports a wide range of data sources
- » Effectively integrates with third party systems
- » Supports trend analysis
- » Offers statistical and exceedence reporting
- » Spatially synchronises all data to a linear map



Benefits

- » Able to view any asset at any one time
- » Promotes predict and prevent maintenance
- » Improves safety case requirements
- » Extracts relevant information from large volumes of data
- » Scalable start small and grow the system as your needs increase
- » Developed and supported by an experienced player in the field of railway asset monitoring and maintenance



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