OPERATIONAL INTELLIGENCE

CLEVER INSIGHTS · REAL-TIME DATA · HOLISTIC VIEW

Downer
Relationships creating success

RTS Digital | Powered by TrainDNA

GAIN UNPARALLELED VISIBILITY OF YOUR ASSETS ON THE NETWORK

Imagine an operating platform that is the 'eyes and ears' of your fleet of rolling stock. Introducing the **Operational Intelligence Module** – an intelligent system that is utilised by both asset maintainers and operators. It gathers and analyses telemetry data in real-time from the rollingstock assets and turns this into useable information, pro-active alerts and actionable insights as events happen out on the network.

Developed over 15 years from Downer's deep industry experience and engineering expertise, Operational Intelligence optimises real-time operations of rollingstock. By transforming telemetry data into actionable insights and rapidly identifying and prioritising emerging issues of rollingstock on the network, operators and maintainers can make informed decisions in real-time to ultimately maximise trains and tram reliability and passenger experience.

Operational Intelligence integrates into your asset management system and timetable system, allowing timetable, run, maintenance and asset data to be viewed as alerts and actions are assessed. Corrective Maintenance work orders and changes to the maintenance plan can be actioned from within this module.

CAPABILITIES

- Visualisation of the trains on the network, showing real-time asset performance in a single view with alerts identifying where issues exist.
- Pro-active detection and notification of potential failure events.
- Correlation of real-time telemetry data to generate automated in-sights leading to shortened diagnosis periods.

- Prioritisation of events based on impacts such that rapid decisions can be made on what action is needed.
- Ability to emulate the driver cabin controls and dashboards to see what the driver is seeing from any location.
- Ability to allocate trains to the required runs/diagrams at any time.

Essential to the Operational Intelligence Module, Downer capabilities includes smart train enablement including Operational Technology (OT) and telematics on the train, system integration and ship to shore system implementation.

TrainDNA

WHAT IS TrainDNA?

A full suite of rail and transit system asset management services, designed to provide class leading performance and improve passenger outcomes.

ACCESSING DATA TO BOOST EFFICIENCIES

Upgrade to next generation asset management technology and provide the industry's most reliable, available and efficiently run trains.

" Love the software, efficient, clean, straight to where you want to be
**Eddie Patterson,
London North East Railway.** *"*

THE MODULES

Flexible, scalable and agile, TrainDNA is comprised of five standalone and inter-operable modules. Reap the benefits of one module, or add and combine multiple modules at any stage of operational maturity. The data, capability and knowledge of each module is proven to shape successful business decisions and improvements.

Maintenance Management
Asset management, maintenance activities and the related workforce planning.

Operational Intelligence
Real-time data, integrated from many sources (trains, maintenance facilities, operators).

Asset Intelligence and Analytics
The process of analysing data and producing insights and findings.

Robotics and Automation
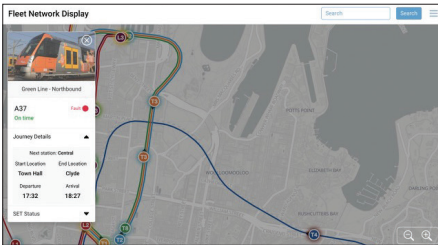Remove manual tasks that are prone to human error, difficult to perform and time consuming to complete.

Sustainability
Optimising real-time power consumption, work practices and track sustainability benefits.
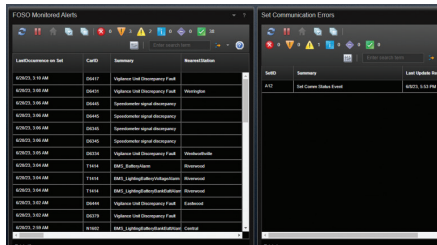
Downer

THE APPS

Downer has developed a rail specific set of applications to create the **Operational Intelligence Module.**

Fleet Network Display (FND)

A centralised and visually data-rich application, FND provides a bird's-eye-view of every fleet across the network. This comprehensive overview helps to track the movement of the fleet with real-time information on the asset performance, location and status. Through the visual map, we can drill down on any asset with integration back to the asset management system to see asset information, work order history, previous alerts, and any planned maintenance. Dashboards can be tailored to suit customer requirements and alerts and notifications for critical events can also be configured. Train allocations to runs/diagrams can also be managed in FND.

FND is all about providing the right, meaningful information to your operations center in a simple and useable way.

Alert Management System (AMS)

AMS is an advanced event correlation capability that processes 1,000's of data points coming off every train and tram every minute. It processes these messages, decides if there is an issue that requires attention, prioritises this and raises it as an alert. Downer, from our 15 years of experience, will implement the data models and business rules for this process.

From AMS, the operations center can then further investigate and decide what action is necessary including raising a corrective maintenance work order directly from AMS into the asset management system if necessary. Each alert and action is tracked to completeness.

Train Crew Display Emulator (TCDE)

Providing a replicate view of a real-time train environment, from a fleet-wide perspective to a single train, TCDE enables more visibility of the train cab than seen by the train crew.

TCDE allows the operations center and the engineering teams to understand exactly what is happening on the train out on the network by emulating the various train dashboards control systems and driver views. Uses include issue investigation, driver assistance and driver training.

Provided a 51% improvement in fleet reliability

Enhanced efficiency in maintenance delivery allowing for a 21% growth in fleet, with minimal increase in workforce requirements

Enabled a 2 fold extension in the routine periodic maintenance interval

---

Talk to one of our TrainDNA specialists and find out more about our modular approach.
✉ **TrainDNA@downergroup.com**

Downer