

# EKE and Downer

## Smart connectivity to harness the power of data

**EKE and Downer, a trusted partnership, together striving to create smarter trains and class leading asset management performance by leveraging smart connectivity and harnessing the power of data.**

As an alternative to the high cost of train replacement, extend the life of your fleet by 15-20 years through a modern and complete solution provided by Downer-EKE. By replacing an aging Train Control Management System (TCMS) with a modern system coupled with the data processing power of TrainDNA which supports class leading asset management outcomes; we breathe new life into aging fleets and operations.

By engaging Downer-EKE you benefit from a 20-year partnership, providing a holistic yet iterative approach based on the expertise of seasoned rail technology and maintenance professionals. Bring trains and asset management into the modern era by deploying an EKE-Trainnet® TCMS to transform aging rolling stock into smart trains supported by a range of TrainDNA asset management modules. Whatever the train's location, real time monitoring provides data for both condition monitoring and predictive maintenance.

Detailed diagnosis of issues reduces maintenance work lead time and supports critical analysis of faults, to help determine and smooth out repair cycles, thereby improving a fleet's overall performance. This joint solution can be further complemented with the option to enhance maintainability through Downer's TrainDNA modules, supporting a totally adaptable solution to client needs and/or budget.

A complete one stop shop with long term capability for meeting all maintenance requirements, as well as providing the integration and engineering capabilities for train upgrades.

Through the provision of an on-going fleet-end-of-life service and the updating and upgrading of solutions throughout the asset's life cycle, ensures continuous improvement across train availability and durability. There are other suppliers, but the Downer-EKE partnership, provides the option of a complete package of rolling stock asset management solutions that will carry you through the next 15-20 years.

### TrainDNA Asset Management Modules

1

#### Maintenance Management

Asset Management of maintenance activities and the related workforce planning.



2

#### Operational Intelligence

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



3

#### Asset Intelligence and Analytics

The process of analyzing data and producing in-sights and findings.



4

#### Robotics and automation

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



5

#### Sustainability

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



## EKE-Electronics

# EKE

EKE-Electronics Ltd. is the leading provider of Train Control and Management System (TCMS) and Condition Based Monitoring (CBM) with turnkey project management and safety control systems.

EKE-Trainnet Train Control and Management System (TCMS) is a versatile platform that includes solutions for train automation, train communications, train diagnostics, train system integration, and improved safety. Developed as functional safety solutions (SIL) to meet customer requirements and to make train control and management systems safer and more reliable.

## Downer – RTS Digital



Powered by  
 TrainDNA

Downer Rail & Transit Systems, provides trusted support to critical passenger train assets across Australia and into new overseas markets.

We are Australia's largest national rollingstock maintainer with a unique breadth of digital capabilities across consulting and technology.

Across geographies, markets and economic conditions, the need to change and improve builds, maintenance practices and operations is increasing at pace. To support this transformational change, TrainDNA is a full suite of rail and transit system asset management services, designed to provide class leading performance and improve passenger outcomes.

## Case Study Snapshot

### Achieving 99.6 per cent availability for Australia's largest fleet of passenger trains – Waratah Fleet.

Built and maintained by Downer, the iconic Waratah fleet which was fitted with EKE-Trainnet® TCMS Train Control Management System, was a flagship project that has consistently achieved 99.6 per cent availability.

As part of EKE's partnership with Downer, their TCMS was installed on the 78 Waratah fleet set, that was Internet of Thing (IoT) enabled, across subsystems.

As a result:

- Waratah Trains, were the world's first fully Ethernet-based trains.
- EKE's TCMS on the Waratah's Electric Multiple Units (EMU); ensured improved security, safety, and accessibility.

Unique to the Waratah, was the fact that EKE were able to also integrate the European Train Control System (ETCS) Human Machine Interface (HMI) into existing driver display units.

This in turn, EKE telemetry and the use of TrainDNA's methodology, has allowed Downer to get all the relevant metrics and data points off the train via the EKE TCMS and then use this data to support maintenance management operational intelligence.



## Contact Us



### RTS Digital

Email [TrainDNA@downergroup.com](mailto:TrainDNA@downergroup.com)

T3, Triniti Business Campus  
39 Delhi Road  
North Ryde NSW 2113  
Australia

[www.downergroup.com/traindna](http://www.downergroup.com/traindna)



# EKE

### EKE-Electronics Ltd.

Email [sales@eke.com](mailto:sales@eke.com)

Phone +358 9 613 030

Piispanmäentie 5  
02240 Espoo  
Finland

[www.eke-electronics.com](http://www.eke-electronics.com)

