# UNIVERSITY OF HULL | LOGISTICS INSTITUTE
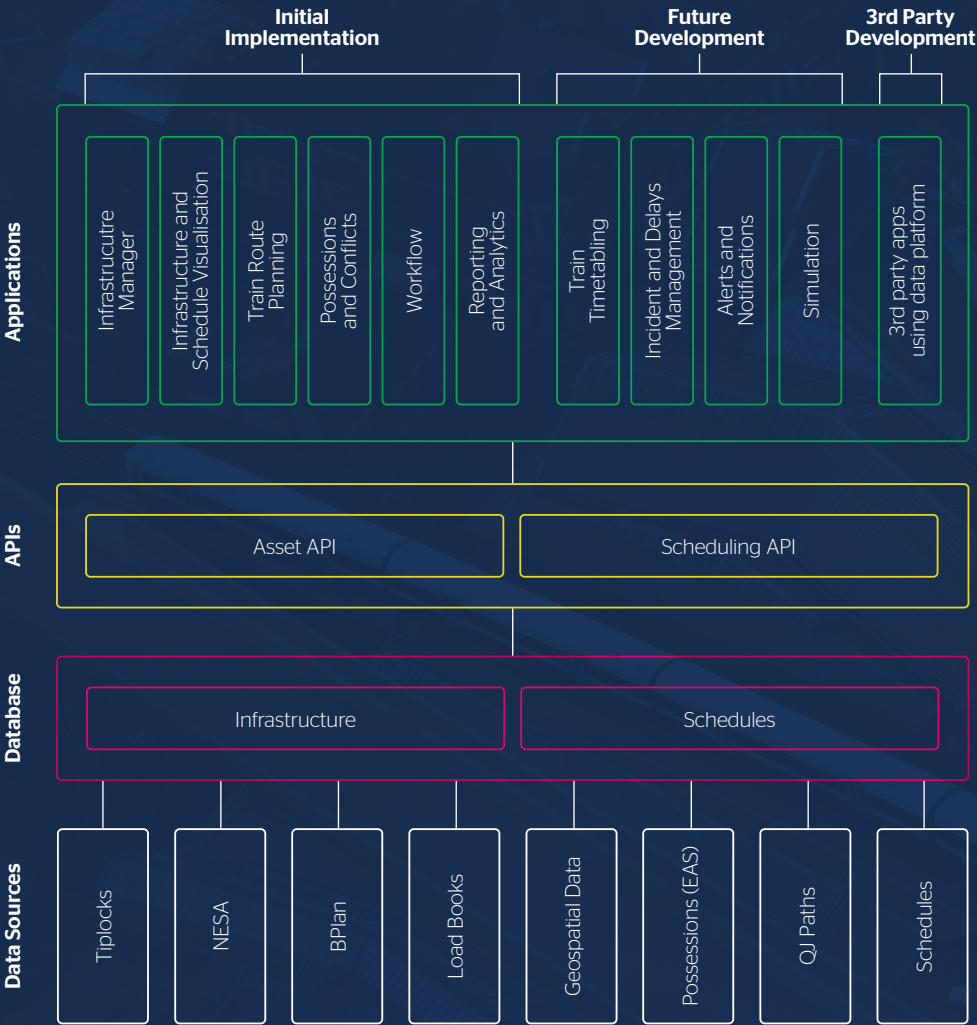
## **NR+** UK's First Digital Rail Infrastructure Platform for Optimised Freight Planning

Optimise the way you move freight and passenger trains across the rail network using NR+, the UK's first digital, integrated rail data platform, developed specifically for the UK rail industry by the University of Hull Logistics Institute.

**NR+** Suite brings together, for the first time, the multiple and diverse information sources required for planning and scheduling rail movements into a single, integrated database, with open APIs for any third party to tap into the data for their solution development.

The first version of NR+ includes all data required for freight route planning.
The applications allow you to analyse rail routes, based on key criteria such as loading gauge, weight, length, route availability (RA), electrification and potential engineering possession conflicts. Later versions of NR+ will include all relevant data and functionalities for passenger planning.



Initial Implementation — Future Development — 3rd Party Development

**Applications**
- Infrastrucutre Manager
- Infrastructure and Schedule Visualisation
- Train Route Planning
- Possessions and Conflicts
- Workflow
- Reporting and Analytics
- Train Timetabling
- Incident and Delays Management
- Alerts and Notifications
- Simulation
- 3rd party apps using data platform

**APIs**
- Asset API
- Scheduling API

**Database**
- Infrastructure
- Schedules

**Data Sources**
- Tiplocks
- NESA
- BPlan
- Load Books
- Geospatial Data
- Possessions (EAS)
- QJ Paths
- Schedules

Find feasible routes for your trains between any points on the network

Determine potential constraints and conditions associated with specific routes

Submit and track your schedule bids for routes through the verification and approval process

Use our database and maps to perform your own analysis and build your own applications

Present route information in a clear geospatial (map) format

Understand and analyse historic movement of trains across the network
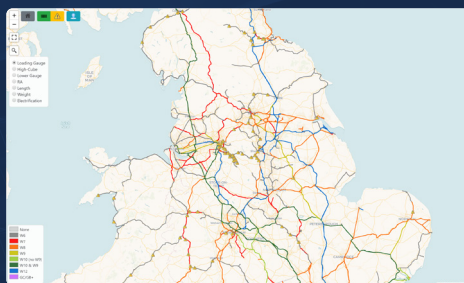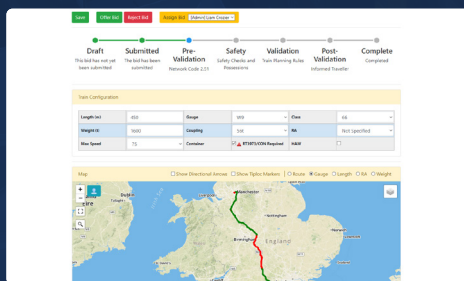






**NR+** can be used by Network Rail, rail operating companies or current and potential rail users to quickly and accurately understand and analyse routing options on the complex rail network. This can lead to major efficiency gains, not only in the resource time used to find the best routes, but also in faster decision making that provides an advantage in the highly competitive transport market.

## This project has the support of:

| Network Rail | DB Cargo UK | GB Railfreight | Colas Rail | Freightliner |
|---|---|---|---|---|
| Rail Operations Group | Direct Rail Services | Malcolm Logistics | Tarmac | |