

Catalogue of Railway Code Systems
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Catalogue of Railway Code Systems

Synopsis

This document identifies the systems that have been adopted into the catalogue under the Code of Practice for the Management and Development of Railway Code Systems

Network Rail Catalogue of Railway Code Systems

REVISION HISTORY

Issue	Date	Remarks	Prepared by
1.0	25/10/96	Issued to all Railway Group member organisations	Systems Code Project Team
2.0	27/03/03	Changes to the list of systems Company name change Removal of sections 6 to 10 on the Data Flow Index, Data Catalogue Development, Systems Release Proposals, Release Development Plans, Double Dot Releases and Service Specifications. Some of these are now included into other sections Issued to all Railway Group member organisations	Jim McKenzie Evelyn Godley Adrian Bruce
2.1	26/11/03	Updates of additions and withdrawals from the catalogue as per the Annual Review Document for 2003	Jim McKenzie Adrian Bruce Geoff O'Farrell
2.1.2	15/03/04	Updates of additions and withdrawals from the catalogue as per the Annual Review Document for 2004	Jim McKenzie Adrian Bruce Geoff O'Farrell
3.1	03/03/05	Updates of additions and withdrawals from the catalogue as per the Annual Review Document for 2005	Vanessa Ropiha Geoff O'Farrell
4.0	30/09/07	Updates of additions and withdrawals from the catalogue as per the Annual Review Document for 2007	Vanessa Ropiha Geoff O'Farrell David Hammond
5.0	05/06/10	Updates of additions to the catalogue as per the Annual Review Document 2010	David Hammond Jon Alcock Colin Dennis Rik Kapoor Iain King
6.0	08/12/10	Adoption of TD.net into the catalogue	David Hammond
7.0	20/02/13	Change of contact details for document owner	Simon Clayton
8.0	09/06/14	Change of contact details for document owner; Adoption of LINX and Integrale into the catalogue; ATOS company name change.	Peter Sanderson
9.0	30/10/15	Change of contact details for document owner; Adoption of R2 into the catalogue	Joanna Lines

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1. INTRODUCTION

1.1 OVERVIEW

The Catalogue of Railway Code Systems is the primary source of information about the systems that have been adopted under The Code of Practice for the Management and Development of Railway Code Systems, known as the Code.

The Code is a charter for ethical business practice and assures effective management of Network Rail and other industry organisations, owned and shared use systems. It defines the responsibilities of system owners and users of systems and helps to ensure that railway information systems continue to support the safe and effective operation of the railway network in Britain.

Under section 7 (Catalogue of Railway Code Systems) of the Code, Network Rail is obliged to distribute the catalogue to each user organisation. The scope and content of the catalogue is also specified in section 7 of the Code.

The catalogue will be subject to periodic updates and incremental sections.

1.2 THE PURPOSE OF THIS DOCUMENT

This document provides:

- an index of key characteristics of each of the Railway Code Systems
- a description of the relationship between this catalogue and Railway Code Systems

The catalogue will be distributed to the main contact representing the interests of each company having or entitled to have a contract with Network Rail for use of a Railway Code System. The catalogue will be updated periodically by Network Rail Group Business Services.

The catalogue is intended to assist users of Railway Code Systems to interpret the explicit and implied impact of proposed application changes. Additional information can be requested in the normal course of consultation on systems changes, undertaken under the Code.

1.3 PRECEDENCE

In the event that any statement or interpretation in or of this document differs in any way from the Code, then the latter shall take precedence.

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2. OUTLINE

2.1 CONTENT MANDATED BY THE CODE

Section 7 of the Code specifies the catalogue and defines its content. For each Railway Code System the following information is required:

Item	Information Field	Document Source
a)	its title	Network Rail Catalogue of Railway Code Systems
b)	the name of the Systems Owner	Network Rail Catalogue of Railway Code Systems
c)	whether it is a Necessary System or an Expedient System	Network Rail Catalogue of Railway Code Systems
d)	its main functions and features	Network Rail Catalogue of Railway Code Systems
e)	its relevance to the Railway Industry	Network Rail Catalogue of Railway Code Systems
f)	identity of Systems Management Group	Network Rail Catalogue of Railway Code Systems
g)	Whether it has material Safety Implications	Network Rail Catalogue of Railway Code Systems
h)	a summary of current System Release Proposals and Release Development Plans relating to them	System Release Plans, Release Development Plans and lists of Double Dot Releases published periodically under the Code of Practice
i)	an indication of relevant contract provisions	Network Rail Track Access Agreement Network Rail Software Licence Network Rail Contract for Computer Services
j)	categories of data to be exchanged using the Railway Code Systems	Network Rail Data Catalogue
k)	a list of Double Dot Releases (identified by system, number and date only)	System Release Plans, Release Development Plans and lists of Double Dot Releases published periodically under the Code of Practice

2.2 DEFINITIONS

Each Railway Code System is defined either as a Necessary System or as an Expedient System.

Necessary System - a computer application (not being an operating system, proprietary database, software package or other general-purpose substrate of an application) or Interface Specification whether owned by Network Rail or not, use of which is necessary for or in connection with the operation of trains on or access to Network Rail's Infrastructure.

Expedient System - a computer application (not being an operating system, proprietary database, software package or other general-purpose substrate of an application) or Interface Specification of which Network Rail (or any Affiliated or Related Undertaking) is owner and the use of which is expedient (but not necessary) for or in connection with the operation of trains on or access to Network Rail's Infrastructure.

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Other definitions for the purpose of this document are:

Integer Release - an enhanced or significantly modified version of a Railway Code System issued or implemented by Network Rail as the current fully supported operational release and which then replaces the version previously in use.

Dot Release - a release of software to:

- i. correct a failure of a Railway Code System to comply with specification, or
- ii. remedy an operational failure, or
- iii. implement a minor change or enhancement,

that in achieving its aims changes the look, feel, function or external interfaces of a system in a way that is or may become apparent to a User of that system but for which the User will not require training.

Double Dot Release - a modification to a Railway Code System which does not change the look, feel, and functioning or external interfaces of the system in a way that is apparent to a User.

2.3 STRUCTURE

The catalogue is compiled to meet the requirement specified in section 7 of the Code and repeated in 2.1 above. In this context it is a compendium of information extracted from other more detailed data sources maintained and stored by Network Rail.

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3. CATALOGUE SOURCE DOCUMENTATION

3.1 CONTRACTS AND SERVICE DESCRIPTIONS

The standard contractual terms under which railway companies obtain access to and use of Railway Systems are embodied in:

- Network Rail Track Access Agreement
- Network Rail Software Licence
- Contract for Computer Services

3.2 RELEASE PROPOSALS AND DEVELOPMENT PLANS AND DOUBLE DOT RELEASES

Release proposals reflect potential developments of Railway Code Systems. They will reflect the requirements of users, owners and other parties with a legitimate interest in Railway Code Systems. Release proposals and plans will be distributed as a basis for consultation and information under the Code. It is not intended that these detailed documents become a physical component of this catalogue. Volume alone would make this impractical. All proposals and plans may be accessed through the Customer Delivery Manager (external customers), Group Business Services, Network Rail, The Quadrant, Elder Gate, Milton Keynes MK9 1EN.

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4. PUBLISHING AND ACCESS POLICY

4.1 PUBLICATION

The catalogue was originally made available on a controlled distribution, but is now distributed electronically, on a regular basis. It will continue to be maintained through the Annual Review of Railway Code Systems. A single copy will be made available to a specified holder within each user organisation either electronically or hard copy.

A copy of this catalogue will be available for inspection through the Customer Delivery Manager (external customers), Group Business Services, Network Rail.

4.2 ACCESS TO SOURCE DOCUMENTATION

Source

Network Rail Track Access Agreement
Contract for Computer Services
Network Rail Software Licence
Network Rail Service Specifications

System Release Proposals
Release Development Plans

Access

User organisations should be in possession of their own versions of these documents.

These documents will be distributed under the normal operation of Network Rail Group Business Services in compliance with the Systems Code. Copies can be viewed at or obtained from Network Rail Group Business Services

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5. SYSTEM INDEX

5.1 TRAIN MANAGEMENT SYSTEMS

5.1.1 System:	CCF
Description:	Control Centre of the Future
Owner:	Network Rail
Classification:	CCF is an expedient system
Material Safety Implication:	CCF has no material safety use and the Safety Implication Statement has been issued

Overview: Control centre system that integrates all train running monitoring functions and provides a map-based display of current and historical train running facilities. Data is collected from Train Describers, compared against schedules, and displayed on a track-level map.

Note that "Control" in this context refers essentially to the strategic level of trying to ensure that trains run to time. Detailed control for safety purposes belongs in the signalling system, and CCF is NOT rated for this purpose.

The CCF application records the actual arrival / departure / passing times of trains at specific points in the journey. It assists delay attribution (through current views and a historic play-back facility), and assists route look ahead at a strategic level.

It also provides a real time train graphing facility.

5.1.2 System:	CCIL
Description:	Control Centre Incident Log
Owner:	Network Rail
Classification:	CCIL is an expedient system
Material Safety Implication:	CCIL has no material safety use. The Safety Implication Statement has been issued

Overview: This is a control centre logging tool for use by any company in the railway group. It is to be used in the Integrated, National and Network Rail Control Centres and in other company controls if they wish to use it. It is a common logging system that records each incident once but is added to by the stakeholders. It will produce the daily log for each control or company as required.

CCIL is in use in all NR controls and is also used by SWT in the Waterloo Integrated Control Centre to produce a common log with NR.

5.1.3 System:	EDTA
Description:	On-line data records system
Owner:	Network Rail
Classification:	EDTA is an expedient system
Material Safety Implication:	EDTA has a material safety use, and is grouped into the TOPS group of systems for the Safety Implication Statement and Systems Safety Case

Overview: EDTA DATABASE is a text storage and retrieval system, which runs as a utility under TOPSCICS.

EDTA provides the ability to create address datasets, and forward ordinary datasets to the addressees as a message broadcasting facility.

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5.1.4 System:

PALADIN

Description:	Historical Records of Train Running and Performance
Owner:	Network Rail
Classification:	PALADIN is a necessary system
Material Safety Implication:	PALADIN has no material safety use, and is grouped into the PALADIN group of systems for the Safety Implication Statement

Overview: PALADIN is a centralised storage of historic train movements (actual and planned), vehicle formation and loading, and delay details. The system is not used directly by users - instead, data is extracted by batch jobs submitted by systems such as PALADIN for Windows (PALWIN).

Data is derived from a variety of systems, principally TRUST, TRUST DA, TOPS and GEMINI and is extracted or passed from these systems on a daily basis. Once captured this data can be exported to analysis systems. The export may be requested directly by a user or an automatic interface process.

5.1.5 System:

PHIS

Description:	Performance Historic Information System
Owner:	Network Rail
Classification:	PHIS is a necessary system
Material Safety Implication:	PHIS has no material safety use, and is grouped into the PALADIN group of systems for the Safety Implication Statement

Overview: PHIS is a historic database designed to store completed train performance records, including both scheduled and ad-hoc services and summarised details of any train delays. PHIS is used by performance managers in Train and Freight Operating Companies, either directly or indirectly.

The system allows the retrospective comparison of actual versus planned train running details and is used to generate regular or ad hoc performance reports. These reports can be tailored on a top-down basis, allowing analysis in overview through to individual train detail.

Actual times are stored for eighteen months, and details of events within the last four weeks can be requested directly at any time (enquiries for dates beyond this must be made in writing).

Outputs can be viewed on screen, printed or downloaded to a local area network for use in other analysis systems.

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5.1.6 System:

Description:

Owner:

Classification:

Material Safety Implication:

POIS

Passenger Operations Information System

Network Rail

POIS is a necessary system

POIS has a material safety use, and is grouped into the TOPS group of systems for the Safety Implication Statement and Systems Safety Case

Overview: Records locomotive hauled train information for movement & maintenance monitoring.

POIS is a major sub-system of the TOPS system. It is a mainframe system designed to provide resource control and management facilities for locomotive-hauled passenger trains and the corresponding rolling stock.

It consists of two main elements: a database of coaching stock diagrams (representing the planned activity for individual sets of coaches) and real-time reporting of actual sets matched to those diagrams. This enables resource controllers and managers to meet the requirements of the train service and maintenance requirements of individual coaches and sets of coaches.

The allocation of coaching stock sets to diagrams also allows users to look forward beyond the current day for maintenance and operational planning purposes.

5.1.7 System:

Description:

Owner:

Classification:

Material Safety Implication:

TCCM

Train Coupling Compatibility Matrix

Network Rail

TCCM is a necessary system

TCCM has no material safety use. The Safety Implication Statement has been issued

Overview: TCCM is an in-house application used within Network Rail Control Centres that enables the user to determine the optimum rescue train for a particular failed train. TCCM is wholly owned and managed by Network Rail.

5.1.8 System:

Description:

Owner:

Classification:

Material Safety Implication:

TOPS

Total Operations Processing System

Network Rail

TOPS is a necessary system

TOPS has a material safety use, and is grouped into the TOPS group of systems for the Safety Implication Statement and Systems Safety Case, both of which have been issued

Overview: Management and control of freight vehicles and locomotives, providing real-time information about location, loading, consignee, condition, etc of freight vehicles.

TOPS is a mainframe system originally bought by British Rail from Southern Pacific in the early 1970s. It is a complex, command-driven system originally designed for the management and control of freight vehicles and trains, giving real-time information about the whereabouts, loading, consignee, condition etc. of freight vehicles. Since its introduction to BR, it has been expanded to handle locomotive activities, information about loco-hauled passenger operations, via a sub-system called POIS (see POIS) and automated consignment accounting for freight operations, via a sub-system called CTT.

Since the implementation of Systems Release Proposal 77 in 2010, TOPS no longer acts as the controlling source of all train schedules. TOPS role is limited to primarily to the management of freight trains in real time.

The TOPS system includes the following suite of applications:

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TOPS

TOPS ADHOC

TOPS FILESPLIT

TOPSCICS

TOPS also provides part of the functionality of the STEELSURE and HERMES applications.

5.1.9 System:

TRUST

Description:

Train Running Systems TOPS

Owner:

Network Rail

Classification:

TRUST is a necessary system

Material Safety Implication:

TRUST has a material safety use, and is grouped into the TOPS group of systems for the Safety Implication Statement and Systems Safety Case

Overview: Collects all train movements and compares to actual times to those planned in the working timetable. TRUST detects delays and requests explanations through TRUST DA. TRUST drives the information for the Train Performance Incentive Regimes.

TRUST is designed to present information about the movement of train services in an easy-to-understand format. The information is also used to drive the Schedule 8 (etc) contracts in operation between Network Rail and Train or Freight Operating Companies, and between Network Rail and its infrastructure contractors.

The system works by taking a copy of each train's schedule (the train's planned journey details) and creating a parallel record against which the actual departure, arrival and passing times at locations on the schedule are recorded.

The actual train movement events are generated by various means, both automatic and manual. Reports of train times can be made manually. The historic records of train journeys and delays can be amended for up to one week after the train ran.

By comparing the actual events against the plan, TRUST is able to detect when a train has lost time between two locations, and to automatically prompt for an explanation of the reason behind this loss of time.

5.1.10 System:

TSI

Description:

Train Service Information

Owner:

Network Rail

Classification:

TSI is a necessary system

Material Safety Implication:

TSI has a material safety use, and is grouped into the TOPS group of systems for the Safety Implication Statement and Systems Safety Case

Overview: The TSI database of train schedules formatted for use by the train operations systems is updated daily with information from TSDB provided via the CIF. TSI holds all the train schedules to be used by TRUST and related systems and passes them forward to TRUST. TSI is a batch processing system. The user interface to TSI is provided by TSIA.

TSI contains complex logic to reformat schedules from CIF codes and formats to TOPS codes and formats. Error and warning reports are dispatched through CPF.

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5.1.11 System:

TSIA

Description:	Train Service Information Access System
Owner:	Network Rail
Classification:	TSIA is a necessary system
Material Safety Implication:	TSIA has a material safety use, and is grouped into the TOPS group of systems for the Safety Implication Statement and Systems Safety Case

Overview: TSIA provides both on-line enquiries of train schedules and the ability to make very short term plan (VSTP) changes. Major facilities include journey enquiries, and location based enquiries. Enquiries can pick up data from TOPS or GEMINI.

Enables users to make journey enquiries, examine train schedules in detail or summary, examine train activity at a single location in detail or up to six separate locations concurrently, report actual train movement and produce performance information. Most enquiries can be generated using either public or working times. Journey and location enquiries can be made for any date future, current or past subject to the availability of data.

Schedules are sourced from TSI (LTP and STP). Since the implementation of Systems Release Proposal 77 in 2010, VSTP amendments to TSI are entered through TSIA.

Facilities also exist to provide information about train formation (from GEMINI or TOPS).

5.1.12 System:

ERIC

Description:	Enhanced Railfreight Intermodal Control
Owner:	Atos Worldline
Classification:	ERIC is a necessary system
Material Safety Implication:	ERIC has a material safety use. The Safety Implication Statement and the Systems Safety Case have been issued

Overview: ERIC supplies container weight and details about dangerous goods in containers to TOPS. It is the only system which does safety checks on container heights. ERIC is therefore relevant to the operation of the railway, and provides a single source of information to Network Rail & Freight Operators.

5.1.13 System:

CORPUS (Previously NALCO)

Description:	Codes for Operations, Retail & Planning – a Unified Solution
Owner:	Atos Worldline
Classification:	CORPUS is a necessary system
Material Safety Implication:	CORPUS has no material safety use and the Safety Implication Statement has been issued

Overview: CORPUS is a web based system that provides the means to link together the codes used in different UK rail industry systems to describe the same location and therefore maintain a National set of Location Codes. Changes to the codes are interfaced to the train planning, train management and retail systems used in the UK rail industry. It also provides updates to the European database (ENEE).

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5.1.14 System:

SWON (Previously WONView Publication)

Description:	Weekly Operating Notice, to specify bespoke WONs defined by Line of Route
Owner:	Network Rail
Classification:	SWON is a necessary system
Material Safety Implication:	SWON has no material safety use and the Safety Implications Statement has been issued

Overview: SWON is a system that collates the input to the Weekly Operating Notice. It provides facilities, usable by Network Rail and TOCs, to re-arrange the WON data into TOC specific routes, and driver or signaller-specific WONs. It also provides facilities for TOCs to filter out content redundant for their purposes. It enables users to access the WON via the internet

5.1.15 System:

NESA

Description:	National Electronic Sectional Appendix - Website
Owner:	Network Rail
Classification:	NESA is an expedient system
Material Safety Implication:	NESA has no material safety use and the Safety Implications Statement has been issued

Overview: The NESA Website enables industry users to access the NESA system to perform searches of all Sectional Appendices. Only the Website component of the NESA service has been included in the Code as it qualifies as a shared computer application. The main NESA system and database is used solely by Network Rail publications team

5.1.16 System:

RAVERS

Description:	Rail and Vehicle Records System
Owner:	Atos Worldline
Classification:	RAVERS is a necessary system
Material Safety Implication:	RAVERS has a material safety use. The Safety Implication Statement and the Systems Safety Case have been issued

Overview: Records maintenance information of locos and rolling stock. This system is managed by the Traction & Rolling Stock Group.

The RAVERS system is a complex but fully integrated suite of facilities provided for vehicle engineering management. Its primary purpose is to provide reporting and management tools in the area of vehicle and component maintenance.

The system covers many aspects of maintenance planning and management, including condition monitoring, defect monitoring and analysis, depot performance and productivity, maintenance planning, warranty claims, contract control and invoicing.

RAVERS has a direct interface with GEMINI.

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5.1.17 System:

RSL

Description:	Rolling Stock Library - vehicle licensing
Owner:	Atos Worldline
Classification:	RSL is a necessary system
System Management Group:	The Traction & Rolling Stock Group
Material Safety Implication:	RSL has a material safety use. The Safety Implication Statement and the Systems Safety Case have been issued

Overview: Vehicle licensing register of all rail vehicles including physical characteristics and design details. RSL is mostly accessed through down-stream systems such as TOPS and GEMINI. This system is managed by the Traction and Rolling Stock Group.

5.1.18 System:

GEMINI

Description:	Rolling Stock Control
Owner:	Gemini Applications Ltd
Classification:	GEMINI is a necessary system
System Management Group:	GEMINI User Group
Material Safety Implication:	GEMINI has a material safety use. The Safety Implication Statement and the Systems Safety Case have been issued

Overview: Although GAL complies with Part 1 of the Network Rail's systems code, GEMINI is also subject to Gemini Applications Limited's own Code of Practice for the Management and Development of its Systems

GEMINI has two components - GEMINI (Mainframe) and Web-GEMINI (internet based).

Web GEMINI as a whole contains details of multiple unit and locomotive-haul passenger rolling stock. Data is passed via an open interface (mainly from GENIUS) and allows engineers, rolling stock and performance managers to examine information about their vehicles without the need for access to the feeding systems. This has the advantage of allowing users in other businesses to track the whereabouts of particular vehicles (for maintenance purposes) or to establish the vehicles working a particular service.

GEMINI Mainframe provides the only means to communicate this information, and obtain information from, mainframe systems including RAVERS and Network Rail's passenger billing systems (PABS).

5.1.19 System:

INTEGRALE

Description:	Rolling Stock and Crew Control
Owner:	Atos Worldline
Classification:	INTEGRALE is an expedient system
System Management Group:	INTEGRALE System Management Group
Material Safety Implication:	INTEGRALE has a material safety use. The Safety Implication Statement and the Systems Safety Case have been issued

Overview: INTEGRALE combines data about the train service and its actual running with diagram and resource information and their associated rolling stock allocations and crew rosters. It is used as a real-time decision support tool within the controls to ensure the right resources are in the right place at the right time. Data is interfaced (from a wide range of industry and local systems) and can also be manually input. It enables users to have access to other businesses data (security permitting) to allow industry collaboration during times of disruption.

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5.1.20 System:

LINX

Description:	Layered INformation eXchange
Owner:	Network Rail
Classification:	LINX is an expedient system
System Management Group	INTEGRALE System Management Group
Material Safety Implication:	LINX has no material safety use. There is no Safety Implication Statement or Systems Safety Case.

Overview: LINX is the integration platform for the Rail Operating Centre (ROC) deployed Traffic Management Systems (TMS). The system exchanges information between the ROC TMS' and other Traffic Management Systems, Access Planning and Timetable Production Systems and other Industry Systems.

The system is built on an extensible IBM WebSphere Message Broker platform which supports message and file based data exchanges using a Service Oriented Architecture (SOA). Train planning and operation information exchanges form the basis of the information sent to, and received from, the ROC TMS using FTP and IBM MQ protocols.

Industry standards are used for file and message formats, where applicable, including CIF and the future GB TAF/TAP standards.

It should be noted that only the services that are shared across the rail industry (i.e. outside of Network Rail) fall under Systems Code governance. The integration platform and the services that are used solely by Network Rail are governed using standard procedures internal to Network Rail.

5.1.21 System:

R2

Description:	Rolling Stock Library, vehicle records and maintenance planning system
Owner:	Jointly between RSSB and Worldline
Classification:	R2 is a necessary system
System Management Group:	The Traction & Rolling Stock Systems Management Group
Material Safety Implication:	R2 has a material safety use. The Safety Implication Statement and the System Safety Case are being developed

Overview: There are 3 key functional areas within the R2 system:

- i. Rolling Stock Library (mandatory requirement under Railway Group Standard GM/RT2453) - Vehicle licensing register of all rail vehicles including physical characteristics and design details. It includes the fields required for the National Vehicle Register (NVR). The Rolling Stock Library within R2 is mostly accessed through down-stream systems such as TOPS and GEMINI.
- ii. Rail Vehicle Records (non-mandatory requirement) - Maintenance information of locomotives and rolling stock. It is an integrated suite of facilities provided for vehicle engineering management. Its primary purpose is to provide reporting and management tools in the area of vehicle and component maintenance, including condition monitoring, defect monitoring and analysis, depot performance and productivity and warranty claims.
- iii. Maintenance Planning (non-mandatory requirement) - The system covers maintenance planning of sets and vehicles.

R2 replaces the former RSL and RAVERS systems. It should be noted that elements of RAVERS will remain in place until the full roll of R2 has been completed in mid-2016.

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5.2 ACCESS PLANNING AND TIMETABLE PRODUCTION

5.2.1 System:

ITPS

Description:	Integrated Train Planning System – Publication System Interface for Timetable Information
Owner:	Network Rail
Classification:	ITPS is a necessary system
Material Safety Implication:	ITPS has no material safety use, and is grouped into the Timetabling group of systems for the Safety Implication Statement

Overview: ITPS is a planning and publication system producing timetable information of planned services (trains, bus, ships). It is the interface by which ITPS provides the timetable information to the appropriate downstream users that is adopted into the Systems Code and not ITPS itself. These interfaces are for CIF (Common Interface Format) and LATIN (Local Access to Timetable Information).

- iv. The provision of CIF files to different downstream systems that require timetable information. This includes Train Operation systems (TOPS/TRUST), Route Signalling systems, Customer Information Boards, Commercial/Retail systems and many others. This replaces TSDB/CIF.
- v. The ability to provide users, such as station staff, signalling staff and operators to query and extract timetable data that was previously available from LATIN. The query is possible as a hard copy or data extract.

Note: GBTT/GBPRT output file format previously generated the material for the timetables with connections and for the production of posters and pocket timetables. This information is now currently available to recipients as CIF files from ITPS.

5.2.2 System:

CIF

Description:	Common Interface File
Owner:	Network Rail
Classification:	CIF is a necessary system
Material Safety Implication:	CIF has no material safety use, and is grouped into the Timetabling group of systems for the Safety Implication Statement

Overview: CIF is an interface system for extracting train schedules from the Integrated Train Planning System (ITPS). CIF determines the specific data to be distributed to each system requiring train schedules.

The Common Interface File (CIF) distributes details of all the trains on the Train Service Database or Train Planning System for a limited period ahead or *time window*. This data, held in standard format, is updated nightly, and forwarded to receiving systems that require in an appropriate customised format to receiving systems, which require updated information.

5.2.3 System:

BPlan

Description:	Train Scheduling “Public Interface Format”
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Owner:	Network Rail
Classification:	Bplan is a necessary system
Material Safety Implication:	Bplan PIF has no material safety use, and is grouped into the Timetabling group of systems for the Safety Implication Statement

Overview: The BPlan system is a replacement to the legacy APlan system that was used by a small number of users in Operational Planning. BPlan is now the “master source” of operational geography (Network Links, SRTs) and reference data (e.g. Operator, Branding, Train Category codes) used by various Network Rail and external (TOCs/FOCs) planning systems. BPlan is a web-based “open” system which, in addition to providing the necessary interface files (PIFs) to the other planning systems, enables TOC/FOC train planning staff to have greater visibility of their areas of interest and to generate ad-hoc interface files as required.

BPlan is a tactical solution which will ultimately be replaced by the Integrated Train Planning System (ITPS) sometime in the future.

5.2.4 System:

STP EDI

Description:	Specification for EDI transfer file to Train Planning Systems for STP
Owner:	Network Rail
Classification:	STP EDI is a necessary system
Material Safety Implication:	STP EDI has no material safety use, and is grouped into the Timetabling group of systems for the Safety Implication Statement

Overview: The STP EDI (Short Term Planning – Electronic Data Interface) is a file format proposed for the transfer of Short Term train schedule details from TOC Train Planning systems to Network Rails Integrated Train Planning System.

The file format facilitates the transfer only train schedule details codes. Each owner of each system that wishes to utilise the STP EDI file format will have to develop their own import or export functionality.

5.2.5 System:

ELMTREE

Description:	Exceptional Load Management Tool and Routing Enquiry Engine
Owner:	Network Rail
Classification:	ELMTREE is a necessary system
Material Safety Implication:	ELMTREE has no material safety use and the Safety Implication Statement has been issue

Overview: ELMTREE was implemented to replace the manual process for the management of Freight Exceptional Load (RT3973). This is the process for the movement of exceptional loads by Freight Operation Companies (FOCs). ELMTREE provides:

- Web applications for managing requests, RT3973 forms, and entering network model data;
- A repository database of RT3973 forums;
- A workflow engine to orchestrate the whole process;
- Geospatial functionality to check route restrictions against the network model.

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5.3 OTHER INDUSTRY SYSTEMS

5.3.1 System:

SMIS

Description:	Safety Management Information Systems
Owner:	RSSB
Classification:	SMIS is a necessary system
Material Safety Implication:	SMIS does have a safety implication statement as it records the safety related events specific to GE/RT8047 for use in safety performance reporting and safety decision making

Overview: SMIS is an internet based software application which links Infrastructure Manager and Railway Undertaking organisations throughout the country to a central database. Safety related incident data entered, together with associated code tables, is stored on an Oracle database. This database stores all of the information on each safety event in a single record, which can be accessed rapidly by every organisation involved on the safety event.

SMIS is a relational database and is, therefore, able to record all the elements of a safety event relating to what happened and the assets or persons involved. The application includes rules in relation to the recording and reporting of data.

The recording rules are used to determine how fields are displayed. The reporting rules are used to determine whether a safety event is reportable or not under the requirements of RIDDOR 1995.

Business Objects reporting tools are used for data extraction and the presentation for safety performance dashboards.

This system is managed by the SMIS Programme Board and SMIS User Group.

5.3.2 System:

SPINNAKER

Description:	Rail Container Terminal Operating System
Owner:	Tideworks Technology Inc
Classification:	SPINNAKER is a necessary system
Material Safety Implication:	Spinnaker has a material safety use

Overview: Spinnaker is a rail container terminal operating system providing and enforcing loading criteria to wagons ensuring container weights, heights on route, widths and dangerous goods barrier distances and load compatibility are maintained as per GO RM 3053/1, RT3973, RT8073. The system provides an interface to TOPS for validation prior to train dispatch detailing all the wagon and container positions along with dangerous goods information.

As the system has a great deal of functionality which is not railway specific only changes to train loading rules or the TOPS interface will be considered as part of the System Code.

5.3.3 System:

TD.net

Description:	Train Data via Internet.
Owner:	Network Rail
Classification:	TD.NET is a necessary system
Material Safety Implication:	TD.net has no material safety use. There is no Safety Implication Statement or Systems Safety Case

Overview: TD.net is a "publish and subscribe" architecture designed to enable the publication of train-related data internally within Network Rail and externally with other industry parties. Subscribing clients include system integrators, innovation partners, and train operators.

Data (message classes) available via TD.net comprises:

1. Train Describer messages – train positioning data at signal berth level
2. TRUST movement messages – train positioning and movement event data

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3. VSTP schedules – schedule records created via the VSTP process (and thus not available via CIF)
4. TSR records – temporary speed restriction data
5. TRUST incident and delay messages

It is intended to extend the scope of the available data to include GPS positioning information when this becomes more widely available.

TD.net utilises IBM MQ messaging protocols and the data is published in xml format. Dependent on the message class, there may be different xml schema available (simple, or full). TD.net is the single interface from Network Rail to all rail industry train positioning systems.

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6. CONTACT DETAILS

6.1 NETWORK RAIL CONTACTS

Customer Delivery Manager (external customers), Group Business Services
Network Rail
The Quadrant:MK
Elder Gate
Milton Keynes
MK9 1EN

Telephone: 07515 625133

Chief Information Officer
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The Quadrant:MK
Elder Gate
Milton Keynes
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Contact through the Customer Delivery Manager (external customers), see above.