

# ***Rail Delivery Group***

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**National Rail**



**BRITAIN  
RUNS  
ON RAIL**

## **RDG TIS Accreditation Guide**

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Organisation	Role	Name
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RDG	Document Owner	RDG Accreditation Business Manager, Tracey.Dagley@raildelivergroup.com

## Distribution

Organisation	Role	Name
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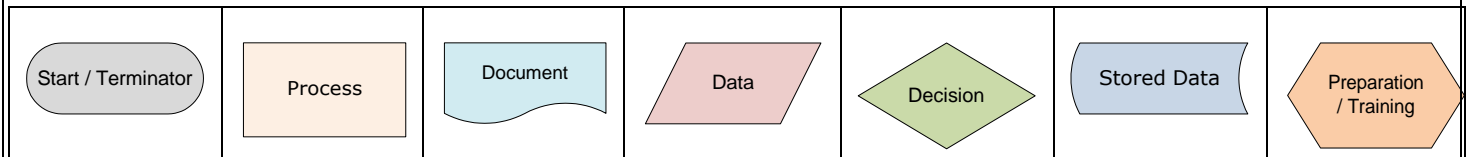
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## Flowchart Key



## Glossary

Term	Meaning
ALTS	Automated Lennon Test Service
APACS	Association for Payment Clearing Services
API	Application Program Interface
ASSIST	Accreditation Standards Site Integrating System Toolset - RDG's Accreditation and Compliance Standards Website
CTR	Customer Transaction Record
DTD	Data Transformation Distribution
FRG	Fares and Retail Group
HOPS	Host Operator or Processing System
INTERAVAILABLE	Products which are capable of being used on more than one TOC service
INTEROPERABLE	A description of the successful communications between different RDG systems and Ticket Issuing Systems for the purpose of sale, issue and settlement in national ticket on departure
ISL	International Sales Licence
ITSO	International Transport Smartcard Organisation, the company responsible for the ITSO Specification, and for providing services needed for the operation of ITSO equipment
ITX	Inclusive Tours travel agent - a type of Licensed Travel Agent
JIRA	Issue Management System used by RDG
KNOWLEDGEBASE	Retailing guides issued by National Rail Enquiries
Lennon	RDG's apportionment and settlement information service, Latest Earnings Networked Nationally OverNight.
NLC	National Location Code
NRS	National Reservations Service
POST	Point of Service Terminal – this is a device which reads and / or writes data on a Smartcard. This can include rail TIS and TVM, but also includes gates, validators and hand held checkers
RJIS	Rail Journey Information Service
RSF	Retail Systems Forum
RSP	Rail Settlement Plan
SDCI+	Standard data capture interface plus. Standard for the format of settlement data sent from TIS to Lennon..
TIS	Ticket Issuing System
TISA	Ticket Issuing System Accreditation
TOC	Train Operating Company
TOC Business Group	Group of TOCs which all have the same parent company.
ToD	Ticket on Departure
TOM	Ticket Office Machine
TSA	Ticketing & Settlement Agreement
TSSC	Ticketing and Settlement Scheme Council
TTIS	Timetable Information Service
TVM	Ticket Vending Machine

Term	Meaning
UAT	User Acceptance Testing
WebTIS	On-line TIS



## **1. Introduction**

### **1.1 Purpose of this guide**

1.1.1 Rail Delivery Group (RDG) is responsible for the accreditation of Ticket Issuing Systems (TIS). This guide is an introduction to TIS accreditation and describes the process as well as the scope of TIS accreditation. Further, it directs the reader to more detailed documents that cover TIS processes and their accreditation requirements.

1.1.2 This document describes the processes that must be followed to achieve accreditation.

### **1.2 Intended audience**

1.2.1 This document is primarily aimed at TIS Suppliers, both existing and new, who will need to understand the accreditation process in order to:

- a) Design aspects of TIS that are subject to accreditation; and
- b) Gain accreditation.

This document includes where to find the details about TIS processes, accreditation requirements and other relevant material.

1.2.2 Retailers (including Train Operating Companies (TOCs)) seeking to procure a TIS will also need to understand accreditation and their role in the process in order to engage with a TIS Supplier. Information about how to become a retailer, licence conditions, obligations and so on should refer to RDG Customer Experience via the contacts listed on the RDG website.

1.2.3 This document is also for use by retailers (including TOCs) that already operate TIS, who must keep abreast of updated accreditation processes and requirements, or who wish to extend the scope of their TIS functionality.

1.2.4 Generally, this document is aimed at readers with existing knowledge of transport retailing, but who may not be familiar with the details of the UK rail industry.

### **1.3 Need for accreditation**

1.3.1 Rail retailing must be carried out with equipment and processes that have been accredited by RDG. This is to ensure:

- Accurate generation of transaction data;
- The correct settlement of revenue between TOCs;
- That the risk of fraud is managed to an acceptable level;
- That correct inter-available tickets are produced; and
- That RDG systems are protected.

1.3.2 The retailer has an obligation to implement a TIS which has been accredited by RDG and conforms to the standards laid down by the Ticketing and Settlement Scheme Council (TSSC) as published in this document, RSPS1XXX Policy documents and other related documents which can be found in section 8, 'Further reading'. The precise objectives of accreditation are listed in section 2, 'Objectives of TIS Accreditation'.

1.3.3 The TIS Supplier is expected to implement software management and development processes and develop its TIS in accordance with the standards laid down by the TSSC as published in this document, RSPS1XXX Policy documents and other related documents which can be found in section 8 'Further reading'.

## **1.4 Context with RDG Commercial retail documentation**

- 1.4.1 A key source for many of the business rules for ticket sale and issuing which form the basis for TIS accreditation is Knowledgebase. Access can be arranged with RDG Customer Experience.
- 1.4.2 RDG Customer Experience currently carry out retail accreditations in order to award the National Rail Accredited Mark of Approval The process for retail accreditation with award of the National Rail Accredited Mark of Approval is separate from the RDG TIS accreditation process.

## **1.5 Definition of a TIS**

- 1.5.1 A TIS comprises the physical Ticket Issuing Machine and consumables, plus any non-ticket issuing equipment, software and communications implemented as part of the system. A non-exhaustive list of examples includes printers, barcode scanners etc.
- 1.5.2 A distinction is made between Selling and Issuing (fulfilling) TIS. Some TIS may be designed to sell and not issue, some only to issue and others to do both. Additionally, TIS designed to support National Ticket on Departure (ToD) can issue tickets that they have not sold.
- 1.5.3 Implicitly a TIS that sells and does not issue in all cases will interact with a Fulfilment Service in an Indirect Fulfilment process.
- 1.5.4 With the increasing adoption of smart, mobile and self-print ticketing methods, a TIS may include or interface with third party fulfilment and ticket checking devices which are also subject to RDG accreditation and which may also have to comply with an external standard in order for the TIS to gain accreditation; an example is an ITSO Smartcard Point of Service Terminal (POST).
- 1.5.5 In summary, a TIS provides the facility for an authority to travel to be purchased and / or issued to a customer. The entire system processes are accredited in order to satisfy the 'Need for accreditation' as referenced in section 1.3.

## **1.6 What is accreditation?**

- 1.6.1 Accreditation is the process by which RDG ensures that a TIS is able to:
- Produce tickets that conform to industry standard specifications (RDG Standards), so that they can be accepted by all TOCs and thus support interoperability across all TOCs in line with the TSA;
  - Generate the associated transaction data ensuring it conforms to the relevant RDG Standard and is therefore acceptable to the centralized RDG settlement systems, in order to ensure accuracy and probity of settlement;
  - Generate data which interfaces appropriately with other RDG systems and allows for interoperable functionality between TIS for reservations, Ticket on Departure (ToD) and other systems;
  - Maintain RDG standards of security and integrity in relation to RDG systems; and
  - Support disaster recovery and business continuity and can recover from system fault conditions, with robust error handling and a full audit trail.
- 1.6.2 Through accreditation RDG can:

- Assure TOCs that their TIS comply with the terms of the TSA, and assure third party retailers that their TIS comply with the terms of their retailing licence; and
- Ensure that the TIS uses RDG standard data feeds in their retailing processes to meet consistency and impartial retailing requirements.

1.6.3 The remit of the TIS Accreditation team is to review and ensure compliance to RDG standards for new TIS designs and modifications to already accredited TIS by:

- Defining and documenting changes to functional specifications and processes;
- Analyzing TIS specifications (compliance reviews) and specifying changes to TIS Supplier testing in order to prove the integrity and conformance of the TIS to RDG standards, ensuring consistency with other system changes and minimizing risks to RDG systems;
- Supporting testing, test planning and change management including reviewing of test material in order to provide assurance of suitable coverage of business processes and supporting all phases of testing (supplier testing, and pilots);
- Generating and maintaining records of testing and issues arising, through the use of the internal systems (ASSIST, JIRA issue management system, fares systems etc.);
- Defining changes to processes and procedures ensuring TOCs, third party retailers and TIS Suppliers are aware of the changes that impact them, reviewing documentation from suppliers for Lennon and TIS changes to ensure implemented changes meet RDG's requirements in relation to probity of settlement and that changes between systems are consistent; and
- Monitoring TIS Supplier progress against development plans, accreditation plans and implementation plans.

1.6.4 After completing accreditation and following a period of pilot operation in the live environment, which is designed to ensure that any minor issues are resolved in a controlled manner prior to general deployment, the TIS will be issued with a formal Conditions of Approval (CoA) document and certificate by RDG. These details the specific RDG standards against which the TIS has been accredited, as well as, how and in what environments it can be used.

1.6.5 Interim accreditation (also referred to as a 'minor release') refers to updates of previously accredited TIS, as a result of functional or technical upgrades by the TIS Supplier, or in order to become compliant with new versions of RDG standards.

1.6.6 Where certain RDG core standards, such as those related to CCST and SDCI+ are updated by RDG following internal and external reviews, TIS Suppliers are obliged to adopt updated versions at their own cost to remain accredited.

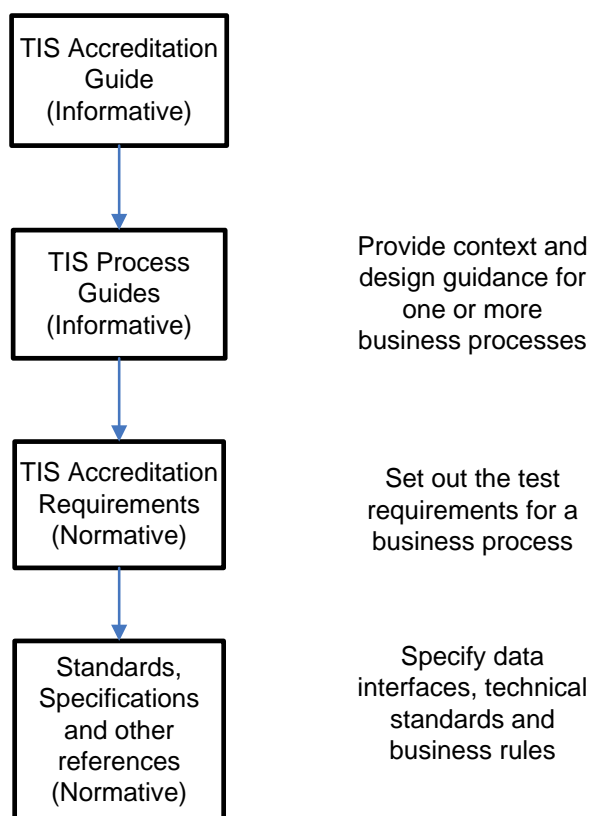
1.6.7 In order to allow sufficient time for TIS Suppliers to react to updated RDG standards, TIS Suppliers are generally given 6-12 months (depending on the complexity of the change) to complete the change and go through the accreditation process against the new version of the RDG standard. In some cases, it is necessary for all TIS Suppliers to implement a change at the same time, and in such circumstances, TIS Suppliers will be given sufficient notice of such changes by RDG, who may also play a co-ordinating role. Failure to comply may result in accreditation being withdrawn.

- 1.6.8 It is the responsibility of each TIS Supplier to ensure that they have sufficient financial and human resources in order to maintain their accreditation status in line with new RDG standards and specifications, which may be issued from time to time.
- 1.6.9 ASSIST enables TIS Suppliers and RDG to manage changes to TIS' and Compliance Standards over time with the aim of providing an efficient and clear accreditation process.
- 1.6.10 ASSIST also provides common analysis and testing tools to help with the development and testing processes.

## 1.7 Accreditation Documents

1.7.1 RDG publishes through ASSIST a number of different types of document that are relevant to accreditation, as shown in Figure 1 below. These comprise:

- Informative documents, which give background, context and guidance on TIS design, accreditation and operation but are not themselves prescriptive; and
- Normative documents, which set out (a) requirements that must be met in order to gain accreditation and (b) obligations on the retailers of rail products;
- Other relevant documents which may be of either or mixed content.



*Figure 1 - Accreditation Documentation*

1.7.2 The TIS Process Guides are available and accessible from ASSIST.

## **2. Objectives of TIS Accreditation**

### **2.1 Ticketing Issuing Systems (TIS) Approval Objectives**

To provide a mechanism that allows RDG to confirm that systems are working in accordance with the RDG published Standards.

2.1.1 That the TIS produce an audit trail to enable all transactions to be unequivocally recorded and to be clearly traced through all business systems and processes to RDG.

2.1.2 That the TIS supplies RDG with data that is complete and which conforms to the RDG's Data Transfer Standards; enabling RDG to fulfil its obligations.

2.1.3 To ensure that fares supplied to the TIS are stored in a secure, unalterable manner.

2.1.4 To ensure that where timetable or reservation information is provided by a TIS, that information is provided in accordance with the RDG Timetable System Standards and RDG Reservation System Standards as appropriate.

2.1.5 To ensure that where appropriate, customer details are captured and held in a secure manner to allow refunds, remote ticketing or invoicing to occur in a timely and accurate manner.

2.1.6 To ensure that effective security arrangements exist to prevent unauthorised access to all systems.

2.1.7 To minimise the opportunities to produce tickets fraudulently, or alter tickets.

2.1.8 To protect the systems and processes provided by RDG ensuring that TIS do not adversely impact RDG's systems.

### **2.2 Fulfilment Process Approval Objectives**

To provide a mechanism that allows RDG to confirm that fulfilment is taking place in accordance with the RDG published Standards.

2.2.1 To produce a clear and unambiguous authority to travel via a variety of approved fulfilment methods that meet RDG TIS Standards.

2.2.2 To define accurately the products purchased so as to be understandable by passengers and recognisable by staff.

2.2.3 To provide a secure process that enables correct and auditable accounting and capture of data for RDG settlement purposes.

2.2.4 To ensure the integrity of RDG supplied data and its use by TIS, through effective delivery and presentation controls.

2.2.5 To enforce procedures to ensure that the correct version of fares and timetable data is used at all times.

2.2.6 To ensure that the appropriate procedures (which represent best practice and latest RDG guidance), are followed by the TIS in respect of ToD sale and issue.

2.2.7 To ensure that appropriate procedures (which represent best practice and latest RDG guidance), are followed by the TIS in respect of the making of reservations via National Reservations Services (NRS).

2.2.8 To minimise the opportunities to produce fraudulent or altered tickets.

### 3. Scope of TIS Accreditation

#### 3.1 What is subject to accreditation?

3.1.1 Generally, the following are subject to accreditation:

- TIS of all types that sell or issue RDG settled products that are fulfilled on a variety of media, e.g. Smartcard, Barcode, Self Print and any journey planning functions present therein;
- Ancillary equipment and POSTs (when part of a TIS);
- Refund calculation engines;
- APIs & Microsites;
- Output from printers used to produce authority to travel; and
- Systems otherwise falling outside the scope of accreditation that connect to NRS (in order to manage NRS usage).

3.1.2 Any TIS that uses RDG data is subject to accreditation.

#### 3.2 Ticket Issuing Business Process

3.2.1 For accreditation purposes RDG define a set of TIS processes as summarised in the following diagram:

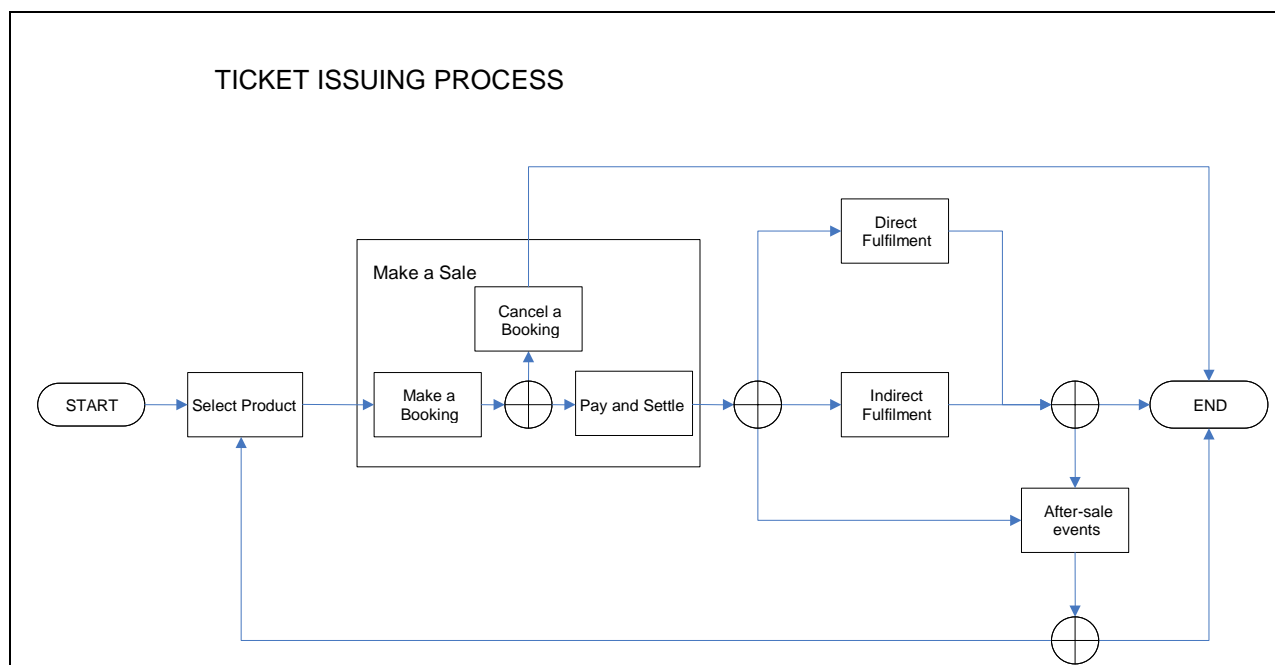


Figure 2 - Ticket Issuing Process

3.2.2 'Select a Product' covers the process of journey planning or direct fare enquiry resulting in one or more products being selected for onward processing in the TIS. At this stage no transactions are created in the TIS. Where a product is quota managed an NRS availability check will be performed and the TIS will only allow the product to be selected if NRS shows that it is available.

### 3.2.3 'Make a Sale' covers the following:

- Make a Booking, which is the initial creation of product data in the TIS and includes the placing of NRS reservations if required. Subject to business rules a Booking may be Held for a period of time, otherwise the process continues to the Pay and Settle step;
- Cancel a Booking, which provides for a previously Held Booking to be cancelled; and
- Pay and Settle, which deals with the processing of the customer payment and creation of the RDG settlement data.

3.2.4 Direct and Indirect Fulfilment processes cover fulfilment of the product to different media.

3.2.5 After-Sale event processes cover Refund, Excess, Changeover, Ticket Replacement, etc.

## 3.3 Accreditation Requirements

3.3.1 RDG defines accreditation requirements that are based on the use of RDG data and interaction with RDG systems or other obligations arising from the TSA.

3.3.2 Each of the TIS Business Processes is based on one or more Product Record state transitions. Each transition has a set of compliance or test requirements that must be met in order to be accredited for that process. Many of the processes have been broken down further as they represent self-contained functions in their own right e.g. 'Make a Booking' and 'Pay and Settle' are the functions used in the 'Make a Sale' process. The requirements are published in the documents listed in section 8.3, 'TIS Accreditation Requirements', below.

3.3.3 The TIS transaction lifecycle is based on a Product Record which will be in a number of predefined states according to where it is in the end to end process. The Product Record is a logical entity and it is up to the TIS Supplier to decide how to hold it in the TIS along with a supporting audit trail which is required in order to meet the accreditation requirements. Conditions determine when a Product Record can move to a new state via a transition. A state model defines which processes can move a Product Record from one state to another.

3.3.4 In this context, a product is a combination of origin, destination, ticket type, discount, class, etc, issued for one person for one journey (including carnets and seasons as a journey). A TIS sales transaction and its SDCI+ settlement records can include several products, subsequently a TIS may change or refund products independently of others in the original sales transaction.

3.3.5 The Product Record is needed for a number of purposes, including the management of fulfilment and after sale events. It has to be accessible to all the TIS that can carry out these processes. Arrangements must be put in place by the retailer to ensure there is a definitive Product Record, even when more than one TIS Supplier needs to make use of it. Accreditation testing must ensure that all parties use the Product Record correctly, even when this involves more than one TIS Supplier.

3.3.6 Transitions are defined for success and failure scenarios and are accompanied by accreditation requirements.

3.3.7 Requirements can be met in two ways:

- Objectively, where compliance can be assessed in simple yes or no terms e.g. sight of an ITSO certification for smartcard transaction processing; or



- Subjectively, where the method of apparent compliance needs to be assessed through testing or by applying knowledge e.g. robustness of a control.

3.3.8 The requirements are set out in tables, which contain the following columns:

- Scenarios applicable to the process, covering success and failure outcomes;
- Requirements that must be evidenced or tested;
- The type of tests that should be performed; and
- The expected result for the scenario.

3.3.9 The first test scenario is:

- All the input conditions were true before the transition took place;
- All the output conditions are true now the transition has taken place; and
- All the transient conditions applied during the transition.

3.3.10 This first scenario has to be tested with a wide range of different products, individually and in combination as specified by RDG, matching the expected use of the TIS.

3.3.11 The other scenarios include tests for appropriate handling of the different ways in which a state transition can fail.

### **3.4 Assessment and Testing**

3.4.1 As far as possible RDG aims to promote self-assessment with the minimum of verification. This is more practical for objective criteria and thus RDG may apply an amount of due diligence on the more subjective criteria which varies according to the scope and complexity of the TIS.

3.4.2 Where testing is stipulated as the means of assessing compliance, the tests will be agreed early in the accreditation process immediately following the compliance review. The TIS Supplier has the task of proposing tests for each transition that meet each of the accreditation requirement scenarios.

3.4.3 TIS Suppliers may also propose tests that execute processes that are composed of more than one transition. This is acceptable, as long as the transitions are executed in the correct order, and all of the input and output conditions can be demonstrated to be true as the process passes through the transitions. For example, the first step in a ticket refund is to void the ticket, which must take place before the refund SDCI+ can be written and the refund payment generated. Similarly, tests of selling a ticket can include both the Make a Sale and Successful Direct Fulfilment transitions.

3.4.4 Testing can be a combination of:

- Accreditation conducted by a recognised authority, for example ITSO: evidence of certification will be required;
- RDG agreed and verified TIS Supplier testing;
- RDG prescribed testing performed by the TIS Supplier, which may be witnessed by members of the RDG Accreditation Team;
- Checking test output from the TIS Supplier;
- Statements from the TIS Supplier;

- Inter-operability testing - An ongoing requirement to take part in testing between systems to ensure conformity, e.g. ToD inter-operability testing; and
- TIS Supplier self certification as authorised by RDG on a case by case basis.

### **3.5 Operational Context**

3.5.1 Once a TIS has been accredited it must be operated in accordance with the terms of:

- The retail licence or franchise agreement;
- Conditions of use of RDG data feeds and any third party interfaces utilised (as published on the RDG website);
- Industry and RDG codes of practice relevant to its functionality and retail use; and
- Accreditation conditions of approval.

3.5.2 Non-compliance with any of the above could result in accredited status being withdrawn

### **3.6 Who can seek accreditation?**

3.6.1 An applicant will usually be one of the following:

- A retailer who is also a TIS Supplier;
- A TIS supplier who is not a retailer and wishes to develop a TIS and market it to retailers; or
- A TOC. Example: Where the TOC is an integrator of a Smartcard solution.
- An owning group developing its own retail solution

3.6.2 Regardless of who the applicant is, accreditation is given to a named version of the TIS in compliance with the versions of RDG standards that are in force at the time.

3.6.3 A TIS Supplier wishing to develop a product without the initial sponsorship of a retailer can submit an application for accreditation, but will need to find a licensed retailer to pilot it before it can become accredited.

3.6.4 Subject to the above, there are no RDG restrictions on who can develop and market TIS, although there is an implicit assumption that the retailer will perform due diligence in their own procurement process. User Acceptance Testing should be completed before accreditation review of testing takes place.

### **3.7 Accreditation dependencies**

3.7.1 A number of activities need to have been completed before certain stages of the accreditation process can commence, and in some cases before an application can be made. These include:

- An RDG Retail Licence in order to use RDG Data to retail rail products;
- An RDG Data Licence (for regular data updates and for any purpose other than testing); and
- Any third party certifications that are requirements for aspects of TIS Accreditation e.g. ITSO certification for Smartcard processing.

3.7.2 Further details of the dependencies are given in section 3.11 below.

### 3.8 Accreditation Timescales

3.8.1 The timescales of each accreditation need to be individually planned, as the complexity and duration depends on the range of products to be offered and the fulfilment mode(s) supported. It is therefore advisable to engage with RDG early in the TIS design stage and certainly before committing to a date for the TIS to be put into production.

3.8.2 Prospective TIS Suppliers should expect that completion of the accreditation process will take a number of months.

### 3.9 How are applications assessed?

3.9.1 Applications are assessed based on the proposed retail use of, and the facilities provided by, the TIS. The scenarios, test requirements and expected results set out in the Standards and Accreditation Requirements documents define the requirements that must be met in order for a TIS to achieve accreditation.

3.9.2 The scope of testing that the supplier is expected to perform is determined with reference to the following:

- Type of retailer the TIS is designed for;
- The retail environment in which the TIS will operate;
- The RDG licence held by the retailer;
- Products that will be sold/issued; and
- Allowable fulfilment methods for the various categories of product.

3.9.3 RDG will agree with or enhance the TIS suppliers proposed products to be tested during each accreditation.

### 3.10 The TIS accreditation process

3.10.1 Accreditation is one part of the process of getting a new TIS into live use, or an amendment to an existing TIS into live, as the following diagram shows:

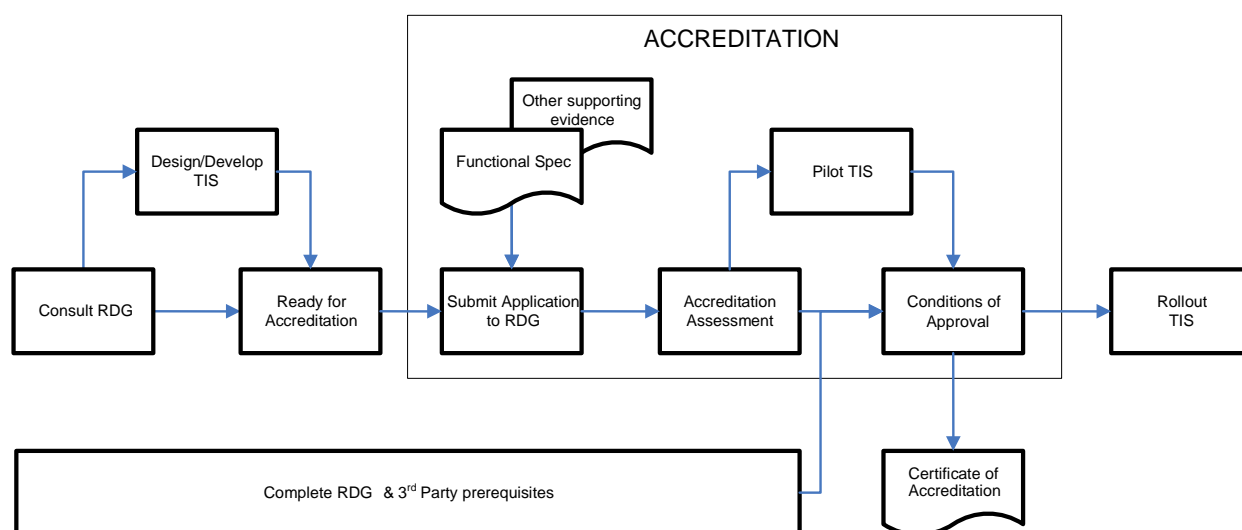


Figure 3 - Accreditation Process

3.10.2 Having met these entry criteria, applications progress through a 7 stage accreditation process which is detailed in section 4, “The TIS Accreditation Process”, below.

3.10.3 Accreditation will be delayed if any of the dependent activities outlined in section 4.1, “Overview”, below have not been completed.

### **3.11 Dependencies in the accreditation process**

3.11.1 IT Network and RDG data/service access need to be in place in order to perform testing. See section 7, “TIS Interaction with RDG and other rail systems”, below for further details.

3.11.2 As RDG lead times can vary according to current workload, prospective applicants should contact the TIS Accreditation Team at the earliest opportunity.

3.11.3 Where a new retail licence is required to operate a TIS, this needs to be obtained from RDG Customer Experience prior to commencement of pilot. A new Third Party Retailer will also be required to put up a bond.

3.11.4 The retailer must have all their operating procedures, infrastructure and other resources in place prior to pilot.

## 4. The TIS Accreditation Process

### 4.1 Overview

#### TIS ACCREDITATION SEVEN STAGE PROCESS

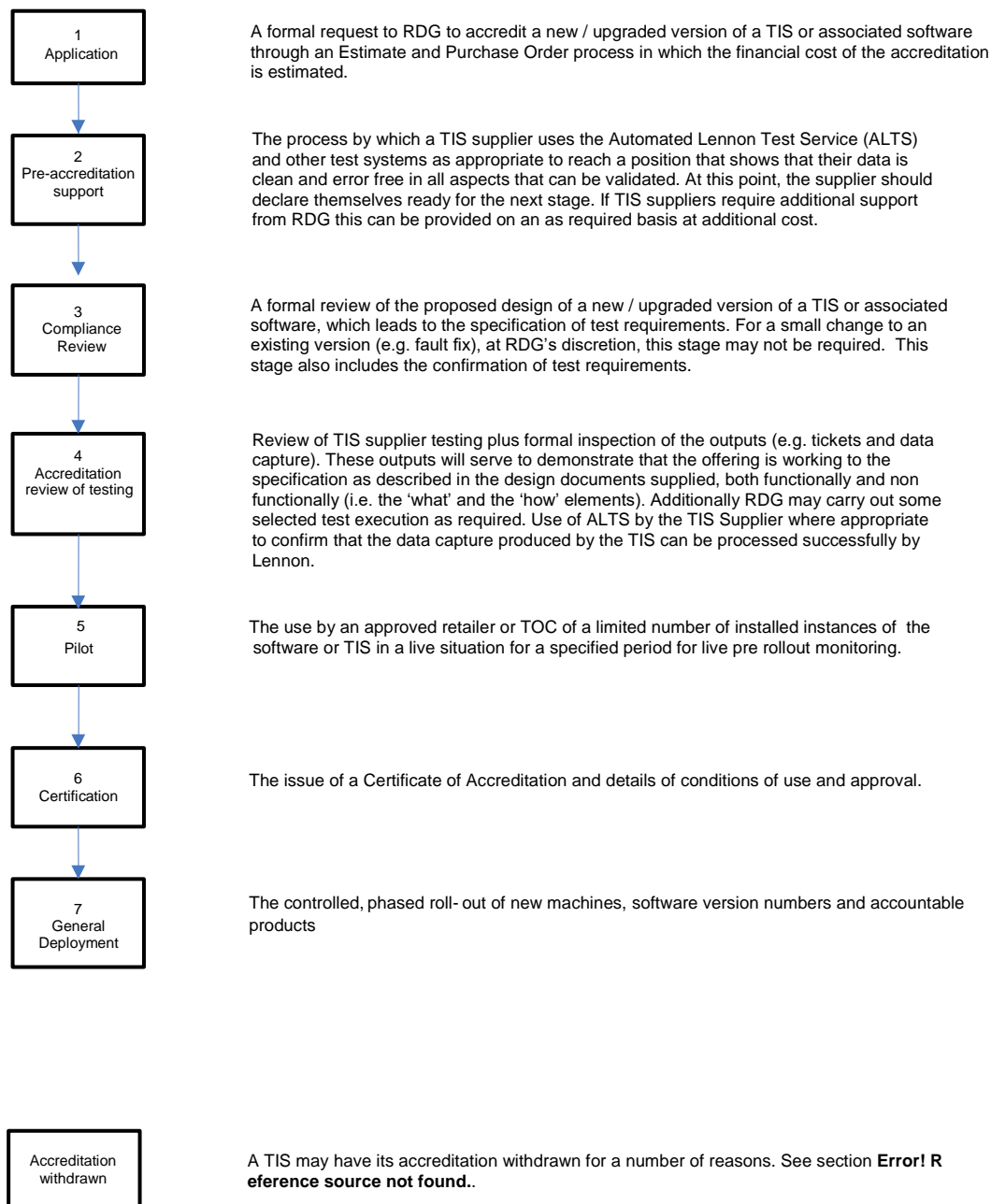


Figure 4 - Seven Stage Process

## 4.2 Stage 1 – Application

### 4.2.1 Process Map

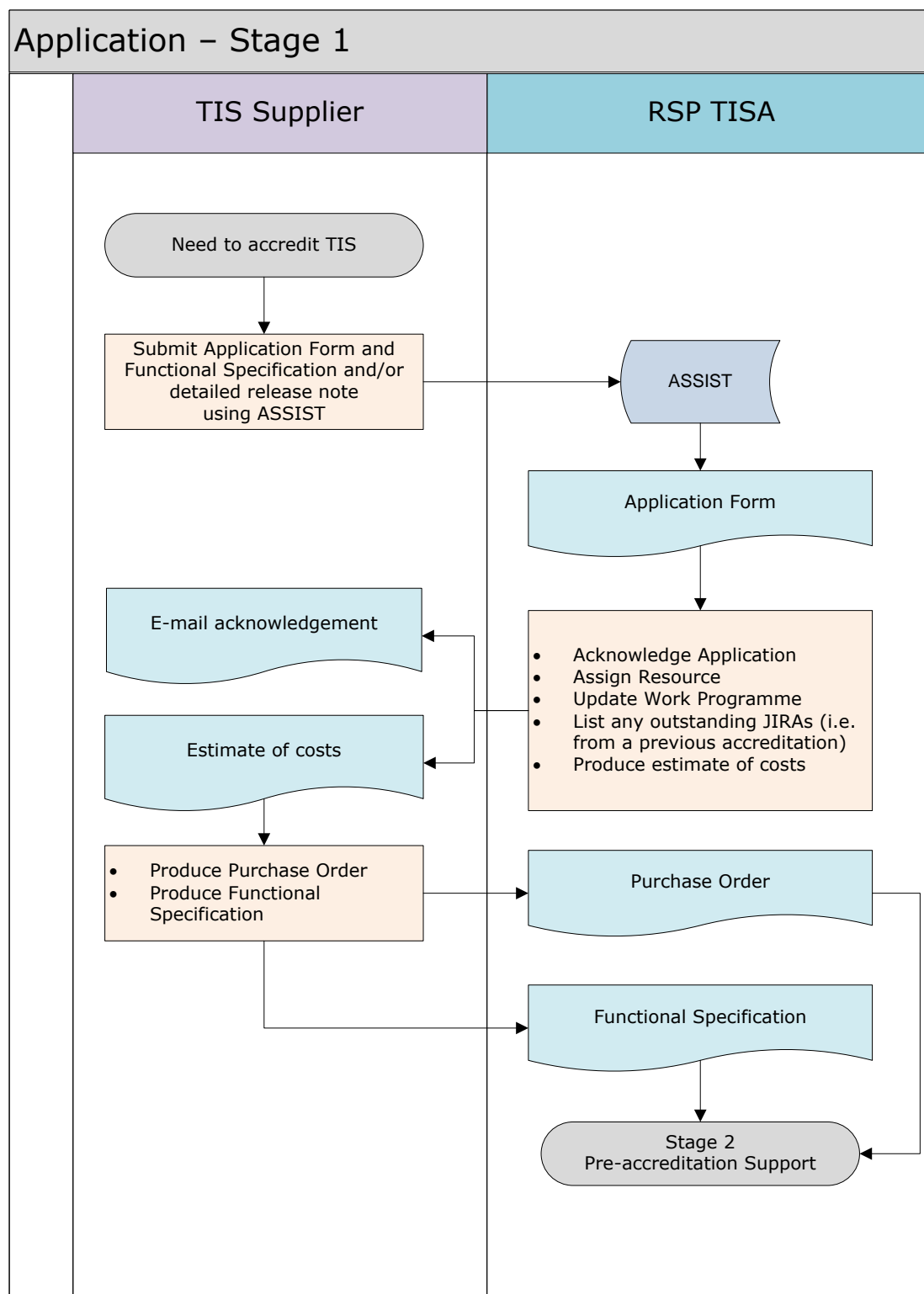


Figure 5 - Accreditation Application

4.2.2 An Application is required for a new TIS or an enhancement to a previously accredited TIS.

- 4.2.3 Any enhancement or defect fix to a previously accredited TIS within the areas and functionality outlined in Section 3 Scope of TIS Accreditation will be subject to TIS accreditation.
- 4.2.4 Before a TIS supplier can make an application for the first version of a new TIS, the supplier and the TIS must be defined in ASSIST by RDG. The supplier should contact RDG by email at [TISAccreditationTeam@atoc.org](mailto:TISAccreditationTeam@atoc.org). For existing TIS the relevant application can be made via ASSIST. This must be completed by the TIS supplier and submitted to RDG.
- 4.2.5 RDG will formally acknowledge receipt of the application form. Contained within the acknowledgement e-mail will be:
- The RDG Version information for use in the SDCI+ 2C record type. All SDCI+ shifts generated must contain this version data; and
  - A list of any outstanding JIRA issues (i.e. from a previous accreditation). These are expected to be resolved in this release of TIS software and will be discussed in detail during the Compliance Review process between the RDG TIS Accreditation team and the TIS Supplier.
- 4.2.6 RDG require a functional specification or detailed release note describing the new release. The functionality specified contributes to the Compliance Review creation.
- 4.2.7 Where there is contention for resources for accreditation RDG sets priorities of work based on the business priorities of the rail industry. This includes new functionality and resolution of operational issues, etc. RDG will endeavour to work within supplier's timescales as indicated within the application. RDG will produce an estimate of the time required to complete accreditation and also an estimate of the cost. The Supplier must provide RDG with a Purchase Order to cover this cost prior to commencement of the Accreditation. Failure to provide commercial order cover will result in delay and / or postponement of the accreditation. Part or all of the costs may be covered by an ongoing accreditation service contract.
- 4.2.8 Once commercial arrangements are in place then an RDG TIS Analyst will be assigned. One of the first actions performed by the analyst will be to review the list of outstanding JIRA issues and their relevance to the functionality of the release. The analyst will then discuss with the TIS Supplier which JIRAs will be resolved in the new release. RDG expect all JIRA issues to be resolved except those that are dependent on actions or circumstances outside of the TIS supplier's control.

## 4.3 Supplier Documentation

4.3.1 The following information should be provided to RDG during the accreditation process:

- Definition of the scope of the TIS in terms of the types of services and functionality offered (including which railcards are accepted, which tickets are sold, how reservations occur, whether ToD is offered, etc.);
- The journey planning, sales and fulfilment transactions to be accredited;
- User processes and instructions;
- Identification and definition of interfaces external to the TIS: in particular identifying network requirements to achieve this;
- Identification of the key physical components and the key functions they perform (including a comprehensive statement of the hardware and software build for version control purposes);
- The form in which TIS services are offered to other systems, e.g., service APIs, widgets or messaging standards;
- Design of resilience and recovery features, especially how data integrity and therefore revenue protection is maintained throughout the system in failure and recovery scenarios and how external interfaces are managed in such scenarios;
- Physical and logical architecture diagrams of the TIS. These diagrams should explain how RDG data is transferred through the TIS;
- Details of the physical location of TIS components and the networks connecting them;
- The roles/individuals that are allowed access to the system; and
- Details of system security access controls and encryption technologies that are employed to regulate and/or record access to protected information and system components. RDG require evidence of an audit trail to verify that these safeguards are in place.



## 4.4 Stage 2 - Pre-Accreditation Support

### 4.4.1 Process map

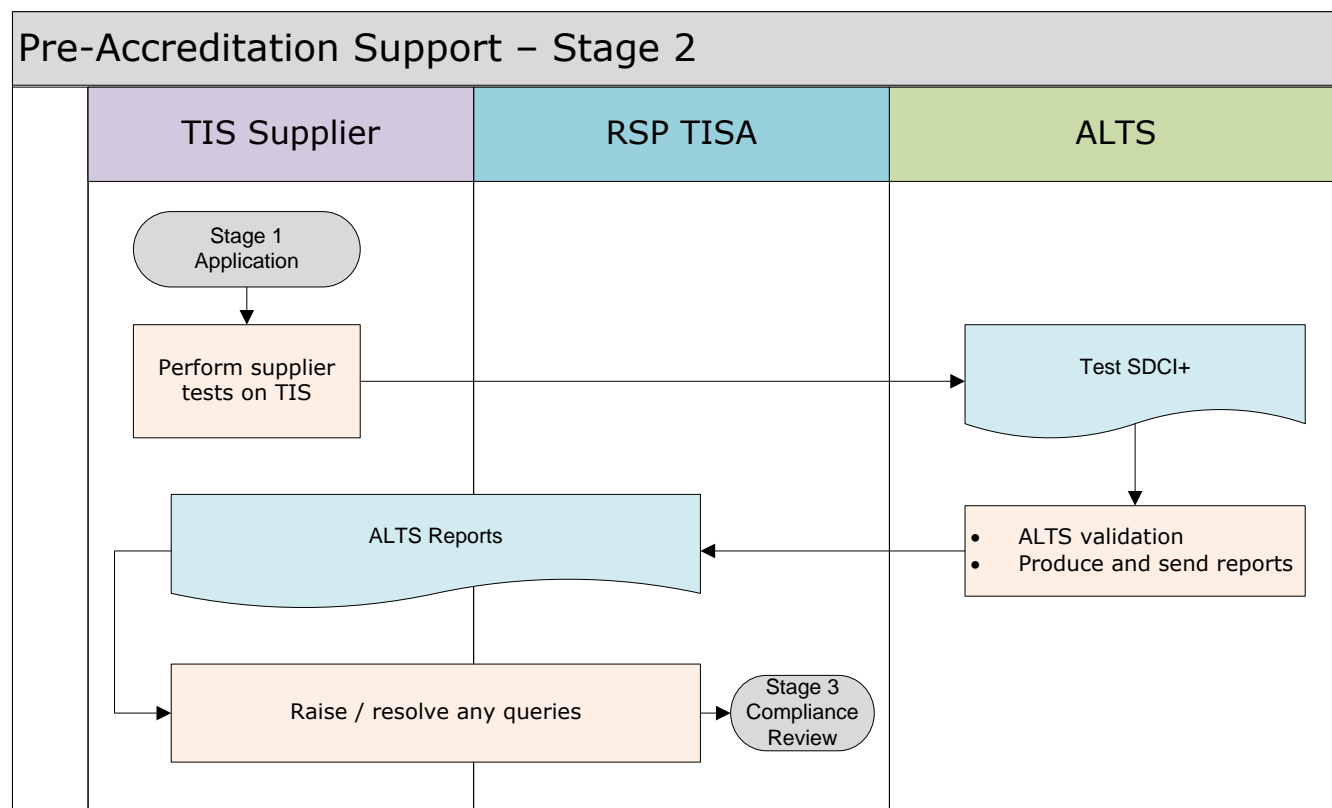


Figure 6 - Pre-Accreditation Support

- 4.4.2 The purpose of this stage is to evaluate the “readiness” of the Supplier’s solution for commencement of more formal TIS accreditation testing and evidence checking. Prior to the accreditation Review of Testing (section 4.6), Suppliers need to conduct and supply evidence of their own testing to ensure that the release submitted for accreditation is, to the best of the Supplier’s knowledge, meeting the appropriate RDG standards. RDG provides Test Lennon (ALTS), Test LSM (ToD) and Test NRS services for this purpose. Suppliers are also encouraged to work with their customers through User Acceptance Testing (UAT) at this stage providing RDG with executed test scripts to ensure their requirements are met. The test documentation and data sets created will assist progress through to later stages of accreditation. See section 7 – “TIS Interaction with RDG and other rail systems” for more details about RDG provided services.
- 4.4.3 Tests are carried out by the TIS supplier according to RDG requirements using the Automated Lennon Test Service (ALTS). The TIS supplier will use ALTS to pass the data capture files through the Lennon validation test bed. Automated feedback will be provided by ALTS directly to the TIS supplier, so this process can be carried out largely independently of RDG. This feedback is also uploaded to ASSIST automatically and stored in the TIS version recorded in the SDCI+ filename. Where TIS suppliers require interpretation of error reports and guidance, RDG can provide this as required. For further details regarding ALTS access and usage, please refer to the RDG compliance standards document “RSPS9012 – User Guide for Automated Lennon Test Service”. This document is accessible from ASSIST.
- 4.4.4 TIS Suppliers and Retailers are expected to perform their own functional/ UAT tests; these will be broader in scope than the RDG-specified tests which concentrate on specific outputs and compliance with standards. TIS Suppliers and Retailers should not limit their scope of testing to only that specified by RDG.

## 4.4.5

Limited pre-accreditation support and guidance can be provided by the RDG TIS Accreditation Team at additional cost. The RDG accreditation team does not provide guidance on design of TIS or use and/or interpretation of RDG data feeds.

## 4.5 Stage 3 - Compliance Review

### 4.5.1 Process Map

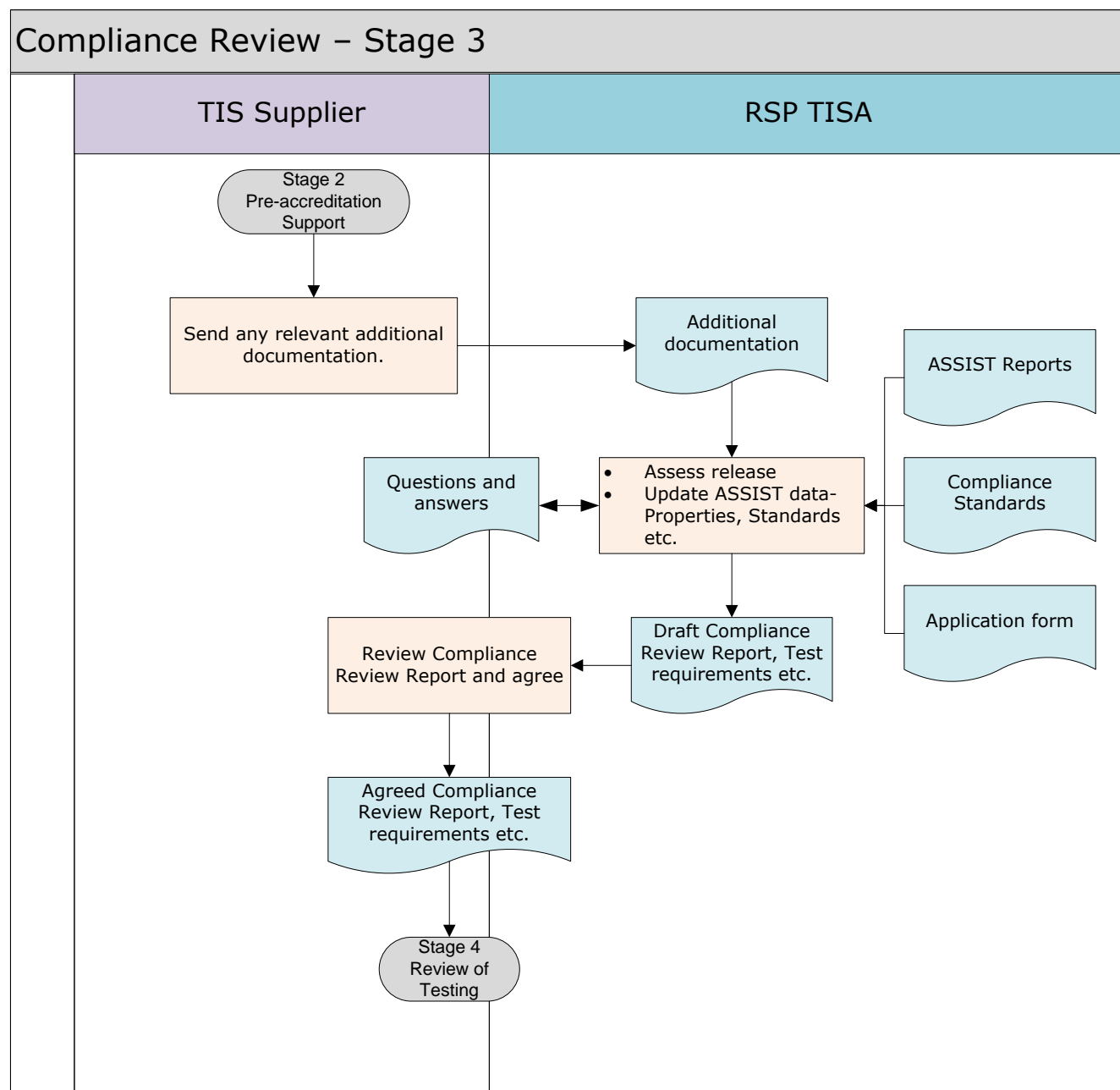


Figure 7 - Compliance Review

4.5.2 The Compliance Review will be carried out by RDG by a nominated analyst. Using ASSIST the Accreditation Application Form and the TIS Supplier Functional Specification and the detailed release note the analyst will compare the release submitted for accreditation against the current standards to which it should comply.

4.5.3 The Compliance Review will assess the release against the criteria contained in the TIS Accreditation Requirements (the documents referenced in section 8.3, "TIS Accreditation Requirements" below) relevant to the scope of the TIS, by consideration of the functional specification (or if agreed with RDG, a detailed release note), and RDG standards. The compliance review looks at the data integrity, journey planning, fulfilment, security, data recovery and settlement data capture capabilities of TIS / applications and identifies the

scope of testing in order to achieve accreditation. Further documentation may be requested from the TIS supplier to address queries and provide clarification arising from the compliance review. Feedback will be given to the supplier during the compliance review.

4.5.4 Each RDG standard is identified in the compliance review as being one of the following:

- Required for accreditation – with tests for checking in stage 4 - Accreditation Review of TIS Supplier Testing;
- Required for accreditation but contains no specific tests; and
- Not Applicable (N/A) – the standard is not relevant for this accreditation.

4.5.5 RDG will produce a Compliance Review Report detailing the findings of the review. The process may be iterative with a number of revisions of the Compliance Review report depending on the level of detail provided in the Functional Specification. The Compliance Review may outline requirements on the TIS supplier to perform particular tests to demonstrate compliance. Some tests are best achieved through witness testing.

4.5.6 When the Compliance Review Report is complete it is issued to the supplier along with the testing requirements.

4.5.7 RDG will then agree the detailed scope of the accreditation testing with the TIS Supplier, using ASSIST to identify those tests from the relevant Compliance Standards and ASSIST Test Library which are applicable to the scope of the TIS and the extent of the Accreditation. Once this has been agreed, the accreditation review of TIS supplier testing is conducted. (This is described in section 4.6 of this document).

4.5.8 For a full accreditation, RDG will review the TIS for compliance with all applicable standards.

4.5.9 For interim accreditations, the review will focus on new or changed functionality of the TIS and on those RDG standards that have changed since the previous accreditation.

## 4.6 Stage 4 - Accreditation Review of TIS Supplier Testing

### 4.6.1 Process map

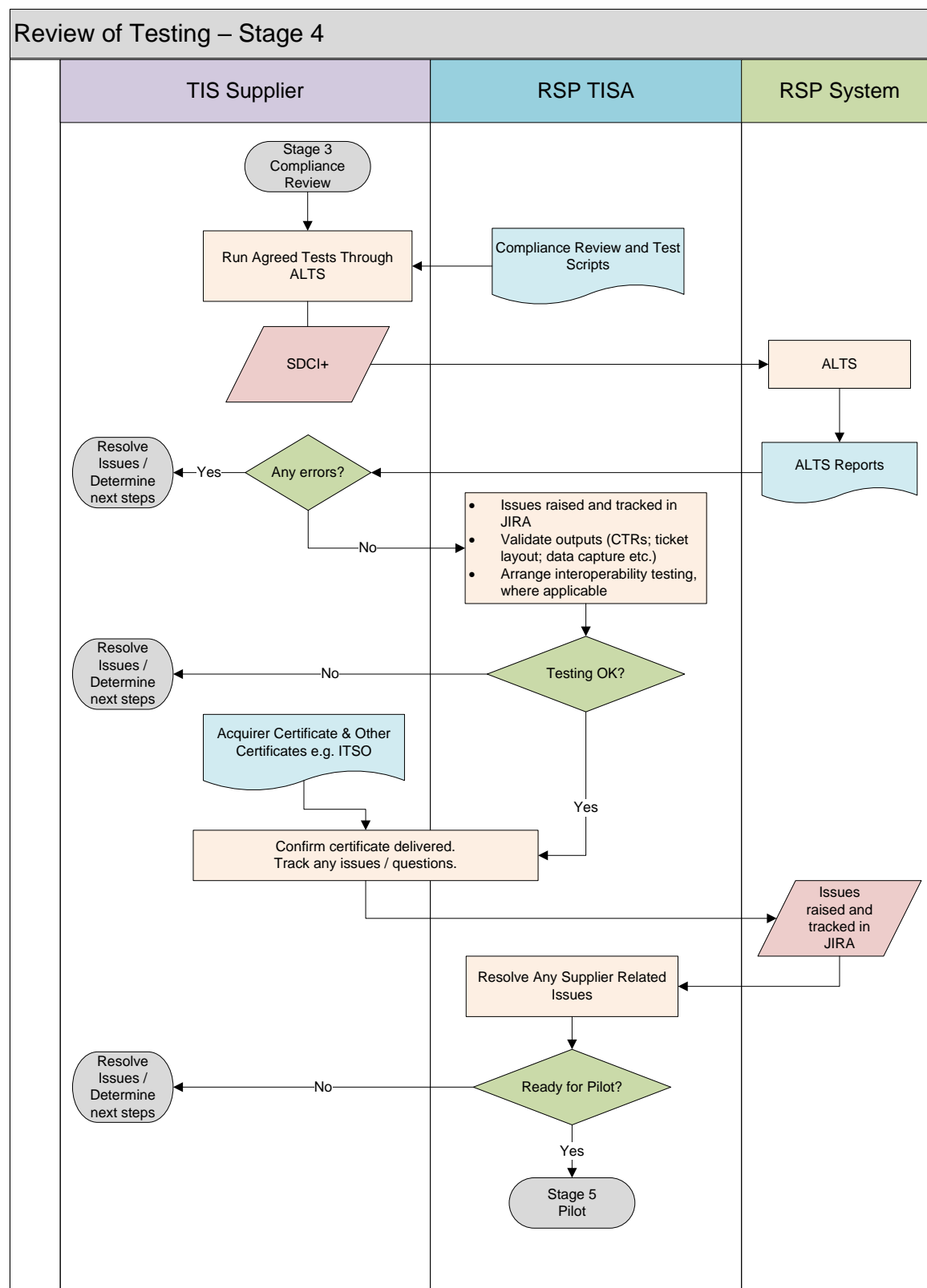


Figure 8 - Review of Testing

- 4.6.2 RDG recommends that UAT is concluded before entry into this stage.
- 4.6.3 The TIS Supplier will use ALTS (see compliance standards “RSPS9012 - User Guide for Lennon Automated Test Service (ALTS)”), to process data capture files through the Lennon test bed to confirm that the data passes Lennon validation. This is indicated by the absence of errors reported by ALTS. The TIS Supplier must notify RDG of the filenames submitted to ALTS.
- ALTS can only accept test SDCI+ data from a TIS at a known machine type, machine number, NLC and window number.
- 4.6.4 RDG validate that for the previously-agreed set of tests, the TIS produces the necessary outputs (e.g. correct CTRs, tickets with the correct layout and content and correct data capture). This includes interoperability testing for ToD transactions. In some cases, determined during the Compliance Review, witness testing will be required by RDG.
- 4.6.5 In order to exit this stage the TIS Supplier must work with RDG to ensure that all Category 1 issues in JIRA are checked by RDG Accreditation and resolved prior to progression to pilot.

## 4.7 Stage 5 – Pilot

### 4.7.1 Process map

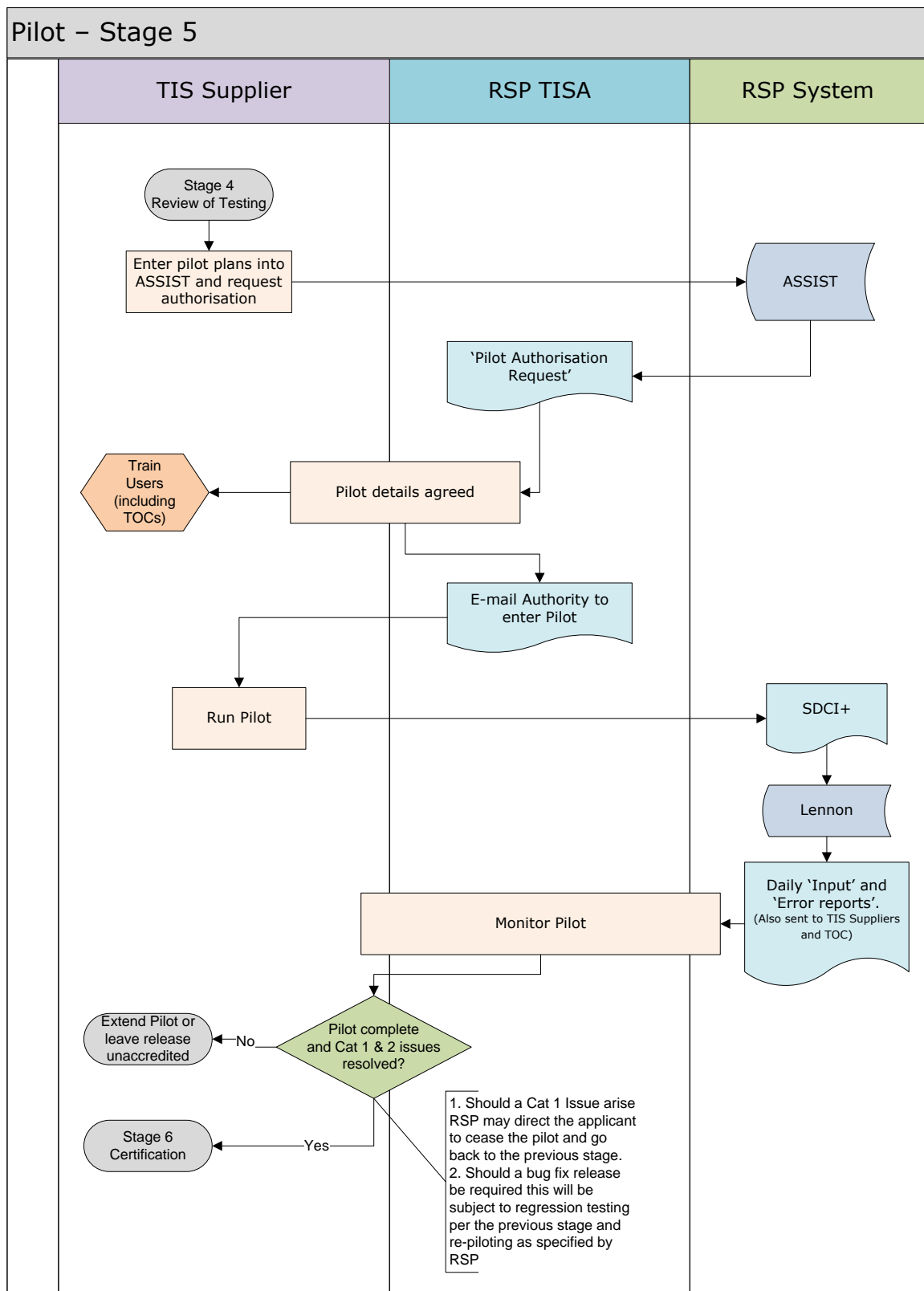


Figure 9 - Pilot

- 4.7.2 The Pilot is the implementation of an agreed number of specified release instances of the application operating in the live environment for a defined period of time, usually a minimum of 4 weeks. The purpose of the pilot is to monitor the performance of all aspects of the application under controlled, small scale, live operating conditions and to demonstrate a clean install and upgrade process with no adverse impact on settlement data.
- 4.7.3 The entry criteria for pilot are as follows:
- Exit criteria from the previous stage satisfied;
  - Where a third party accreditation has been carried out, certificates have been received by RDG confirming this accreditation was successful;
  - Pilot sites are identified and agreed with Retailers / Sponsors and RDG;
  - Appropriate training is provided to users of the application; and
  - The provision of an appropriate implementation plan and processes for installing the application in to the pilot environment.
- 4.7.4 The supplier must identify a suitable number of installations for their pilot at either TOC sites or other approved locations. Typically for TVMs, TOMs and mobile TIS, the maximum number of machines permitted for a pilot is 10. For WebTIs and API/UI based TIS agreement must be reached with RDG on the number of machines permitted. These installations and sites must be agreed with both RDG and the other parties. If the pilot of a new TIS is to take place on a new machine (rather than an upgrade of an existing machines) the process outlined in 4.9.1 must be followed.
- 4.7.5 RDG will issue instructions which will specify the pilot operating conditions
- 4.7.6 The supplier is required to record the planned pilot installation details within ASSIST. Once the details are recorded, the TIS Supplier requests pilot authorisation from within ASSIST. ASSIST sends a "Pilot Authorisation Request" e-mail to RDG and the Atos Lennon Data Centre team for consideration. Once the pilot details are agreed (with any amendments entered into ASSIST), RDG will send an email to the TIS Supplier from ASSIST confirming pilot authorisation.
- 4.7.7 Once pilot starts RDG and its agents carry out pilot monitoring of the data and systems to identify any issues which may arise and agree on their resolution. There may be specific checks required to be done on pilot TIS data and Lennon reports as basic validation will not cover some conditions. This monitoring is defined according to the systems with which the application interfaces e.g. in Lennon it takes the form of daily input and error reports. The feedback is reported to all impacted parties. The TIS Supplier is expected to respond on a daily basis to any issues arising from the daily reports.
- 4.7.8 Exit from pilot is subject to an agreed approach to the resolution of identified problems and the provision of acceptable plans for full roll-out. There should be no Category 2 (or Category 1) issues remaining open to exit this stage. It must be emphasised that pilot should also have demonstrated the ability to deliver a clean installation and upgrade process with no adverse impact on settlement data, or other areas.
- 4.7.9 In the event that any Category 1 issues arise in pilot RDG reserves the right to request that the applicant cease pilot operation and goes back to stage 4 (Accreditation Review of TIS Supplier Testing), fixing the issues and re entering pilot at a later date to be agreed with RDG.
- 4.7.10 The piloting TOC(s) will be consulted during and before exit from pilot and the TOC will need to confirm probity of settlement.



- 4.7.11 Pilots will generally include a period end reporting cycle in Lennon<sup>1</sup> (though at RDG's discretion, they may not if the changes do not warrant this), to ensure that no settlement errors arise from this pilot operation. Each machine in the pilot must submit transaction data to Lennon every day, and a pilot must exercise all of the functionality of the TIS across a full range of transactions and produce reasonable volumes of data prior to and across a Period End: where insufficient data volumes are recorded or data or operating issues arise, RDG reserves the right to ask the supplier to remain in pilot until these are resolved. Such issues will be recorded in the JIRA Issue Management System (see section 4.10 below) and categorised accordingly. The length of pilot may only be reduced by exception at RDG's discretion.
- 4.7.12 The release will exit pilot if no Category 1 or 2 issues remain open and the conditions of 4.7.9 have been met.
- 4.7.13 Where a bug fix release is applied to address any issues arising during pilot this will be subject to a reduced cycle of regression testing as per stage 4 (Accreditation Review of TIS Supplier Testing) and re-piloting for a further period of time specified by RDG.

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<sup>1</sup> The period end reporting date is the Monday of week 2 following period end, so a minimum pilot period would run for some time before period end until the period end reporting date

## 4.8 Stage 6 - Certification

### 4.8.1 Process map

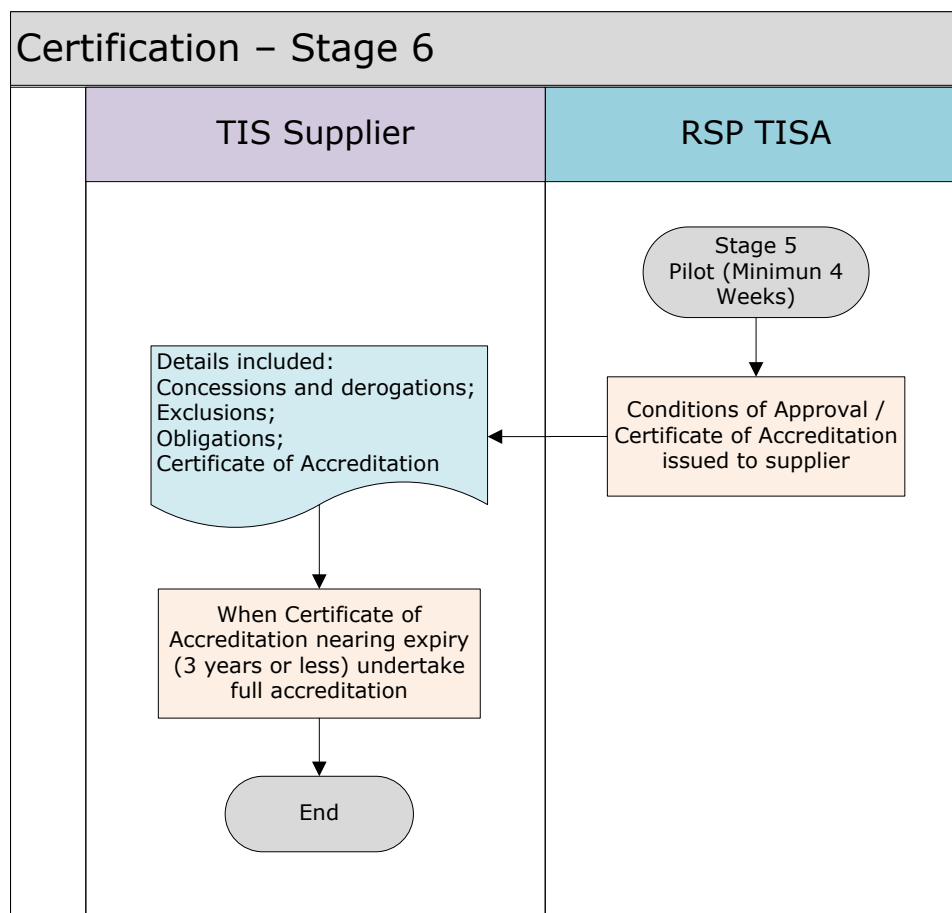


Figure 10- Certification

4.8.2 After successful completion of Pilot RDG will issue a document (Conditions of Approval) to the supplier as proof of accreditation. The document will contain details of the conditions under which approval is granted and a certificate of accreditation. It will document the scope of testing carried out by RDG, including the caveat that testing only pertains to probity of settlement and ticketing, including the protection of RDG systems. Operational usage of the TIS is outside the scope of accreditation where this has no impact on RDG systems.

4.8.3 Schedules to the document will contain the details of:

- Concessions and derogations, with the details of the required future amendments and timescales to address any outstanding (Category 3) issues in the TIS or its use, to ensure continued accreditation;
- Exclusions which apply in respect of the TIS's operation; and
- Obligations for the supplier and the user / retailer using the TIS.

4.8.4 The document will contain a signed Certificate of Accreditation.

4.8.5 A Certificate of Accreditation is issued for a maximum of 3 years. It will be issued for less than 3 years if the compliance review or other directive in the Conditions of Approval dictate

this. Any subsequent interim accreditations e.g. for minor releases will not change the expiry date of the Certificate of Accreditation. Note: Suppliers may at any time choose to apply for a full accreditation and therefore gain certification for a new 3 year period.

Before expiry of the Certificate of Accreditation the TIS supplier must submit their latest software version for full accreditation. TIS suppliers must allow sufficient time to achieve accreditation before the current Certificate runs out. The TIS will be accredited against the latest versions of the applicable standards. On completion of the full accreditation, it will be awarded a new 3 year certificate.

- 4.8.6 In exceptional circumstances a Certificate of Accreditation will be issued for a more limited time; for example where a new product is not yet available and a transitional, short term product offering is acceptable.

TIS Suppliers are expected to present their Certificate of Accreditation and associated Conditions of Approval to their retail customers as part of the planning for the installation of a new TIS, or upgrade of an existing TIS. RDG will encourage its members, the Train Operating Companies to request such documentation and remind them that this may place obligations on them concerning the operation of the TIS.

- 4.8.7 In exceptional circumstances a Certificate of Accreditation will be issued for a more limited time; for example where a new product is not yet available and a transitional, short-term product offering is acceptable.

## **4.9 Stage 7 - Full Roll-out**

4.9.1 Once RDG has granted accreditation and confirmed exit from pilot, the upgrade of existing TIS machines is to be arranged between the TIS supplier and the customers. If the new TIS version is to be installed on any new machines, then the Lennon Data Centre and TIS Accreditation should be notified of new installations using the form contained within the file called "New TIS Installation.xlsx" which can be downloaded from the Compliance Standards area in ASSIST.

4.9.2 For TIS withdrawal please contact the Lennon Data Centre directly.

## **4.10 Issue Management**

4.10.1 All defects, errors or issues encountered during accreditation and subsequent live operation will be recorded and tracked using the JIRA Issue Management System. Each issue is assessed for severity and impact in accordance with the table in 4.10.7 below.

4.10.2 It is possible that issues could result in a Change Request between the TIS Supplier and their sponsoring TOC.

4.10.3 Accreditation issues can be identified at any stage of the process.

4.10.4 Operational issues can arise either during an accreditation when the version of the TIS under accreditation has been made partially or fully operational, or can arise after the system becomes operational after accreditation.

4.10.5 Issues will be progressed or escalated in line with the table in 4.10.7 below.

4.10.6 TIS Suppliers must ensure that they respond to new issues raised and update all outstanding issues in line with the requirements of the table in 4.10.7 below, including details of the investigations into the issue, the fix proposed and the timescales for implementation.

#### 4.10.7 Accreditation and Operations Issues can be categorised as one of three levels of severity<sup>2</sup>:

Definition	Compliance Review & Accreditation	Pilot Operation	Live Operation
<b>Category 1</b>	The issue has a business critical impact on RDG Systems, RDG Services or the chosen fulfilment process, causing any one of them to stop working, or has an impact on the accuracy of settlement. There is evidence that RDG Systems, RDG Services or the chosen fulfilment process have stopped working, or that settlement is inaccurate.		
<b>Action</b>	Agree with supplier how and when the issue will be fixed during the accreditation and record in JIRA. This will include any accreditation work. TIS cannot proceed into Pilot Operation until the issue has been closed by RDG.	The issue must be fixed within the business day. Pilot Operation to cease and TIS regressed to previous accredited version pending re-accreditation. RDG to escalate the issue to TIS Customer if deadline to fix is missed.	The issue must be fixed within the business day and an emergency patch implemented. If unable to patch then supplier must regress to previous accredited version within the business day. RDG to escalate the issue to TIS Customer if deadline to fix is missed.
<b>Category 2</b>	The issue has a non business critical impact and whilst RDG Systems, RDG Services or the chosen fulfilment process are still able to operate, the quality or timeliness of RDG Systems, RDG Services or the chosen fulfilment process is being impacted. There is evidence that RDG Systems, RDG Services or the chosen fulfilment process are being adversely impacted. There is no impact on the accuracy of settlement.		
<b>Action</b>	Agree with supplier how and when the issue will be fixed during the accreditation and record in JIRA. This will include any re-accreditation work. TIS can still enter Pilot Operation with the issue open.	Agree with supplier how and when the issue will be fixed during the Pilot Operation and record in JIRA. This will include any re-accreditation work. TIS cannot exit Pilot Operation until the issue has been fixed. RDG to escalate the issue to TIS Customer if deadline to fix is missed.	Agree with supplier how and when the issue will be fixed and record in JIRA. This will include any re-accreditation work. RDG to escalate the issue to TIS Customer if deadline to fix is missed.
<b>Category 3</b>	The issue does not impact on RDG Systems, RDG Services or the chosen fulfilment process. There is no evidence that RDG Systems, RDG Services or the chosen fulfilment process are being adversely impacted. There is no impact on the accuracy of settlement.		
<b>Action</b>	Agree with supplier how and when the issue will be fixed and record in JIRA. TIS can still enter Pilot Operation with the issue open.	Agree with supplier how and when the issue will be fixed and record in JIRA. TIS can still exit Pilot Operation with the issue open.	Agree with supplier how and when the issue will be fixed and record in JIRA. RDG to escalate the issue to TIS Customer if date is missed.

<sup>2</sup> This table is available within ASSIST on the home page.

## **4.11 Withdrawal of Accreditation**

4.11.1 A TIS may have accreditation withdrawn for four reasons:

- i) The RDG Back Office systems and / or the RDG data feeds no longer provide for all the TIS functionality;
- ii) The TIS has been replaced with an upgrade which has received accreditation; and
- iii) The TIS has been decommissioned by the supplier
- iv) Failure to address critical compliance issues

4.11.2 In the first and second cases, RDG will provide the TIS supplier(s) reasonable time to upgrade their software to correct the errors or issues, or to remove the dependency on obsolete functions.

4.11.3 In the third case RDG will consult with the industry in respect of initiatives to decommission previously accredited TIS. This consultation will be driven by future business requirements and agreed strategy in respect of such accredited products. Following this consultation RDG will review the asset base of the product and identify a date by which all installations should have been decommissioned. From this date the product will be declared de-accredited.

4.11.4 In the event that a supplier fails to address critical compliance issues in respect of its application in the previously declared timescales RDG will de-accredit the product. This de-accreditation will be accompanied with a notice to the known customer base.

4.11.5 Following de-accreditation the list of accredited products held on ASSIST will be amended.

## **4.12 Post Accreditation Review**

4.12.1 At the discretion of RDG, a meeting with the TIS Supplier might be requested to undertake a "lessons learnt" review of a recently completed accreditation.

4.12.2 Following such a meeting, RDG will produce and issue a draft Post Accreditation Review report which contains recommendations applicable to either party, and should help to inform future accreditations. The TIS Supplier will be asked to comment and these comments will be included, before a final version of the report is published.

## **4.13 Accreditation Communication Channels**

4.13.1 RDG holds regular meetings with TIS suppliers. The purpose of this activity is for suppliers to inform RDG of their plans in order for RDG to plan its future work.

4.13.2 ASSIST includes TIS Accreditation information. RDG updates ASSIST with new information on the process and compliance standards. The TIS suppliers are asked to review and update the list of contacts for each of their TIS and those persons who have access to ASSIST. In addition a list of all accredited versions of software is listed for TOC and other Retail agents to access.

4.13.3 TIS suppliers requiring access to ASSIST should go to [www.rspaccreditation.org](http://www.rspaccreditation.org) and click on the link "Click here to request an ASSIST account"

4.13.4 From time to time Technical Bulletins may be issued to suppliers to advise of a new compliance standard, changes to an existing compliance standard or as an urgent communication requiring immediate attention. These are published on ASSIST (found under Compliance Standards).

## **4.14 Enforcement of Compliance Standards**

4.14.1 TIS are accredited against the relevant Compliance Standards and therefore achieve compliance as part of that process. However, as Compliance Standards can be updated

and amended at any time through the recognised internal and external review process, RDG use Bulletins to communicate mandated changes to Compliance Standards that require TIS Suppliers to comply within mandated timescales.

- 4.14.2 RDG will monitor ongoing compliance with mandated changes using JIRA to prompt TIS Suppliers who have yet to make the required changes, to make them before the deadline to comply expires.
- 4.14.3 If RDG consider that a TIS Supplier could possibly miss a mandated deadline, then RDG will advise the relevant customer(s) of that TIS Supplier. The customer(s) will be reminded of their obligations under the relevant retailing licence or TSA depending on whether they are a third party retailer or a TOC.
- 4.14.4 If the third party or TOC does not take action to remedy the situation, then RDG will take a formal paper to TSSC so that an appropriate sanction can be approved.

## **5. Costs associated with accreditation**

### **5.1 RDG Accreditation Charges and related costs**

5.1.1 RDG charges for time expended on accreditations on a time and expenses basis. Please contact RDG for details of current rates.

5.1.2 The estimate for the accreditation work will be based on past experience of running the accreditation process on a range of different types of TIS. The factors affecting the effort required for accreditation include:

- Complexity of the TIS design and functionality (e.g. number of products available from TIS, whether ToD is implemented, whether the TIS provides journey planning functionality);
- Proposed scale of implementation and the likely risks to settlement;
- Information provided to RDG via the TIS Accreditation Application Form and any supporting documents;
- Co-operation received from the TIS Supplier during the accreditation process;
- Quality and execution of the testing carried out by the supplier prior to accreditation; and
- Quality of test evidence submitted to RDG.

5.1.3 RDG undertakes all TIS accreditation work based on an evaluation of the TIS suppliers application for accreditation and reference documents provided such as Functional Specifications and technical architecture documents. An estimate of likely cost of the accreditation will be provided prior to commencement of works, however any reference in this estimate to dates or timescales for the completion of an activity by RDG shall be an estimate only.

- c) Fees may be subject to increase if the amount of work and/or time needed by RDG to carry out the accreditation is greater than originally estimated in the event of any re-work due to scope changes or issues arising. Any such increase in the amount of effort required shall be subject to discussion and prior written agreement of the TIS supplier. In the absence of agreement RDG will not be obliged to carry out any additional work. Any Test evidence provided to RDG as part of the accreditation process must have been passed cleanly through the Test Systems and checked by the TIS Supplier prior to submission to RDG.

5.1.4 Test use of RDG data can be requested ahead of obtaining a live feed.



## **5.2 RDG costs relating to TIS operation**

- 5.2.1 Further accreditation charges will be incurred if concessions are made when a certificate of accreditation is issued for time spent in connection with their resolution.
- 5.2.2 An RDG data licence is required for operational use of RDG data feeds. RDG data downloads or real-time feeds are charged according to type and usage.
- 5.2.3 The costs of NRS are currently borne by the TOCs and third party retailers.
- 5.2.4 TIS Suppliers may incur connection charges to the NRS managed data network. For details of this and the associated costs, contact the RDG NRS Service Manager.
- 5.2.5 If a TIS supports National Ticket on Departure (ToD) the costs are included in the RDG service charge levied on retailers on a per Sale basis. An issuing fee also applies where a ToD Sale is issued by another retailer, this is levied on the selling retailer.
- 5.2.6 Where the TIS provides ToD functionality, the TIS Supplier will need to be granted access permissions for the use of LSM. For details of this and any associated costs, please contact the RDG Service Manager for LSM.

## **6. Retailers and Products their TIS can sell**

### **6.1 Introduction**

6.1.1 This section provides an overview of the different types of retail licence, retail environment and the types of product that must or may be sold under each. Together these determine the scope of accreditation testing.

6.1.2 Accreditation considers what types of product are to be sold and issued by the TIS and therefore what after-sale processes it must support. It also covers the environment in which the TIS is to be used and other variables such as the configuration and fulfilment method. These will influence the products the TIS will retail.

6.1.3 Further information on which fares and products can be sold will be found in the relevant retail licence, which is the TSA for TOCs and the relevant RDG licence for 3<sup>rd</sup> party retailers.

### **6.2 Retail licences**

6.2.1 Below are a list of the current retail licences which the TIS Supplier should refer to when either developing or enhancing a TIS:

- TOC – refers to a franchised operator or open access operator;
- Interim Retail Licence (third party retailer), (See Appendix A in this document) – licence which allows proof of concept work to be undertaken and leads onto potential granting of an Investor Licence (See Appendix B in this document);
- Investor Licence (third party retailer) (See Appendix B in this document) – refers to retailers appointed under TSA Schedule 27;
- RDG Travel Agent (TA) (See Appendix C in this document) – refers to retailers appointed under TSA Schedule 27;
- ITX Travel Agent (inclusive tour operator) (See Appendix D in this document) – refers to retailers appointed under TSA Schedule 27;
- TOC Retail Agents – TSA Schedule 26 provides for TOCs to appoint agents to operate retail outlets on their behalf; and
- International Sales Licence (See Appendix E in this document) – Licence which allows third parties to retail UK domestic fares in all countries other than the UK.
- More information on the licence types is available at:

<http://www.atotravelagents.org/third-party-retailing/third-party-licences>

<http://www.atotravelagents.org>

### **6.3 Retail environments**

6.3.1 The criteria applied to accreditation will differ according to the environment in which the TIS is going to operate and will be categorised as one of the following:

- Attended Environment where a trained member of staff operates the TIS (e.g.: TOM);
- Unattended Environment where the customer operates the TIS (e.g.: TVM); and

- Online Environment where the customer accesses the TIS via an interface, either directly or via a member of staff (e.g.: WebTIS).

6.3.2 For the avoidance of doubt, Smartcards are seen as a method of fulfilment, rather than an environment in themselves. Therefore Smartcard schemes are made up of elements from the above list of environments.

6.3.3 Some retail environments are further described according to whether they are impartial or dedicated. The former offer products from all operators on a route, the latter offer only their own.

## **7. TIS Interaction with RDG and other rail systems**

### **7.1 Introduction**

7.1.1 Fundamental to TIS Accreditation is the obtaining and submission of data from and to a number of systems run by or on behalf of RDG or other rail industry organisations that support ticketing and settlement. This must be carried out in accordance with the standards and documentation published by RDG. This data is obtained and submitted through the following processes:

- Querying of fare and timetable data via an RDG data feed for the purpose of journey planning or direct fare lookup;
- Querying and updating NRS for determining the availability of and booking quota managed products such as advance products, seat, cycle or berth reservations;
- Creation of Lennon settlement data via the SDCI+ interface;
- Creation and update of CTR data via the LSM interface to record sales and issues where the indirect fulfilment method is ToD; and
- Interaction of ticket media that forms part of an integrated Smartcard environment that includes gates, validators and HOPS.

7.1.2 Further details can be obtained on ASSIST.

### **7.2 NRS Managed Data Network**

7.2.1 Access to the National Reservations Service (NRS) is via an IP Virtual Private Network.

7.2.2 Access requests are submitted to the RDG Services Manager for NRS who will obtain a formal quote from Global Crossing and handle the ordering process.

7.2.3 There is an order to provisioning lead time of up to 60 days, so it is important to include this lead time in TIS accreditation and roll-out plans.

7.2.4 NRS administers quota managed aspects of train travel, including advance products, seat, berth and cycle reservations.

### **7.3 Fares, Timetable and Routeing data**

7.3.1 This is provided through a service known as DTD (Data Transformation Distribution) and there are two options here:

- Download various files containing the data and develop the business logic in the TIS for how to interpret it; or
- Obtain the data via an approved journey planning system.

## **7.4 Lennon/SDCI+**

- 7.4.1 Lennon is the RDG settlement system which apportions revenue among carriers and third parties. SDCI+ is the format in which TIS (or their intermediate concentrators) communicate with Lennon. Access to Lennon for testing and also live file submission is provided by the Lennon Service Manager. Please also refer to RDG standards documents – RSPS9012: 'User Guide for ALTS', 'RPSP4000: SDCI+ Interface Specification – Lennon Settlement' and RSPS4002: 'SDCI+ TIS Push Process Protocols'.

## **7.5 Customer Transaction Record (CTR)**

- 7.5.1 The CTR service provides a database that supports the National Ticket on Departure (ToD) service.

## **7.6 Test Systems**

- 7.6.1 RDG offers a number of test services to support TIS development and accreditation:

- DTD (Data Transformation Distribution);
- ALTS (Automated Lennon Test Service);
- CTR Test Database; and
- NRS Test Service.

- 7.6.2 Access to test services should be requested from the relevant RDG Service Managers.

## **7.7 Putting a TIS into Operation**

- 7.7.1 Beyond accreditation and general prerequisites there are some specific tasks that must be completed in order to install and operate a new TIS.
- 7.7.2 If the TIS is being installed in a new location, a new Selling NLC code will need to be obtained.
- 7.7.3 The TIS must be configured with a Machine Type, allocated by the Lennon Data Centre Team; Machine Number set by the TIS supplier, which must be unique within machine type; Selling NLC code and Window Number, unique within the Selling NLC. RDG TIS Accreditation can assist with the selection of suitable values.

## **8. Further reading**

### **8.1 RDG Document References**

- 8.1.1 Each document is given a unique 8 character reference. Informative document references are prefixed "RSPA". Normative document references are prefixed 'RSPS'. RDG's document management process is further explained in RSPS9000: 'Compliance Standards Development Process'.
- 8.1.2 The complete set of Accreditation Process Guides and Accreditation Requirements documents have been published, please refer to ASSIST for details of the latest versions of documents currently available from RDG.

### **8.2 TIS Process Guides**

- 8.2.1 TIS Process Guides are informative and aim to provide design guidance and general background at a more detailed business process level.
- 8.2.2 The guides contain the following information:
- A general introduction;
  - Diagrams and related narrative for the high level business process;
  - What is in scope of accreditation for the process;
  - Principles / business rules that apply;
  - Cross references to other RDG and third party documents;
  - RDG data feeds and interfaces;
  - Third party interfaces; and
  - Design guidelines for each topic within the theme.

- 8.2.3 The guides lead into the detailed accreditation criteria which are found in the Accreditation Requirements. For convenience these are also listed in section 8.3 below.

### **8.3 TIS Accreditation Requirements**

- 8.3.1 These documents set out normative standards and accreditation requirements for each theme.
- 8.3.2 Input and output states and conditions which drive the accreditation requirements are defined for each process, along with message and record requirements.
- 8.3.3 Accreditation requirements are set out in tables which include related test requirements and expected results. This allows those wishing to seek accreditation to understand precisely what is required and how compliance is assessed.

### **8.4 Specifications and Other Standards**

- 8.4.1 Other standards in addition to the above and not specifically related to one business process are also published by RDG and are referenced in the accreditation documents. The standards also refer to RDG specifications, such as those for data exchange, ticketing or settlement.

### **8.5 Third Party Standards**

- 8.5.1 Some aspects of accreditation refer to third party standards, such as EMV and ITSO.

- 8.5.2 Where this is the case, RDG generally only requires evidence that a third party standard is complied with, rather than duplicating their requirements.

## Appendix A. Interim Retail Licence - (Extract).

### ANNEX B PART 2 - RAIL PRODUCTS AUTHORISED FOR SALE

The Rail Products which the **Agent** is authorised to sell under this Agreement shall consist of those meeting the criteria in Paragraph B2 (a) to (e) of Part 2 of this Annex B and, at the **Agent's** discretion, those meeting the criteria in Paragraph B3 (a) to (d) of Part 2 of this Annex B.

#### B2 RAIL PRODUCTS AGENT IS OBLIGED TO SELL

- (a) All Rail Products with a Price of £10.00 or more for which the relevant data has been supplied by RDG pursuant to Clause 5.1 of this Agreement, unless the Rail Products are specified in Paragraphs B3 and B4 of Part 2 of this Annex B;
- (b) All other Rail Products for which the Price is specified in the Fares and Retail Publications Portal (FRPP) which is in force and has been supplied to the **Agent** by RDG;
- (c) Reservations relating to Rail Products in accordance with B5;
- (d) Rail Products using Discount Cards, specifically; 16-25 Railcard, Friends & Family Railcard, Senior Railcard, HM Forces Railcard, Disabled Persons Railcard and Network Railcard;
- (e) Changes to a Rail Product sold or issued under this Agreement, in accordance with the rules of such Rail Product, but not including excess fares or upgrades; and
- (f) Such other Rail Products which may be settled through the services of RDG, as may be notified to **the Agent** from time to time.

#### B3 RAIL PRODUCTS WHICH AGENT IS NOT OBLIGED TO SELL

- (a) Excess fares;
- (b) Upgrades;
- (c) Rail Products (including mandatory Reservations) for travel on sleeper services;
- (d) Discount Cards (excluding the Disabled Persons and HM Forces Railcard); and
- (e) Integrated Rail Products, where they contain elements which are not zero rated for VAT.

#### B4 RAIL PRODUCTS WHICH AGENT IS NOT AUTHORISED TO SELL

**The Agent** has no authority under this Agreement to sell any of the following:-

- (a) Rail Products purchased with the benefit of a railways staff privilege card;
- (b) The Disabled Persons and HM Forces Discount Cards;
- (c) Season ticket Rail Products; and
- (d) Inclusive tour Rail Products.



**B5 RESERVATIONS**

- (a) **The Agent** shall comply with any condition of sale of a Rail Product which requires a Reservation;
- (b) Reservations for other types of Rail Product may be made by the **Agent** if requested by the customer and subject to availability; and
- (c) For any journeys involving sleeper services, customers or prospective customers shall be advised by the **Agent** that Reservations are compulsory on such services.

## **Appendix B. Investor Licence (TPIL) – (Extract).**

### **SCHEDULE 5 - LIST OF RAIL PRODUCTS AUTHORISED FOR SALE BY THE AGENT**

#### **1 - RAIL PRODUCTS THE AGENT IS OBLIGED TO SELL**

Subject to the restrictions on the Agent's authority under this Agreement the Rail Products that the Agent is authorised to sell or Issue shall consist of those meeting the criteria in (a) to (f) below, with the exception of those specifically identified in the list of products that the Agent is not authorised to sell or Issue in 2 below:-

- (a) Rail Products to be issued with the aid of an Approved TIS for which the Fare has been provided and in accordance with the rules for the application of such Fares as shall from time to time be supplied by RDG in advance in writing;
- (b) All other Rail Products for which the Fare is specified in the Fares and Retail Publications Portal (FRPP) which is in force and has been supplied to the Agent by RDG;
- (c) Reservations relating to Rail Products;
- (d) Rail Products purchased using Discount Cards, specifically: 16-25 Railcard, Friends & Family Railcard, Senior Railcard, HM Forces Railcard, Disabled Person's Railcard, Network Railcard;
- (e) Changes to a Rail Product issued under this Agreement in accordance with the rules of such Rail Product but not including Excess Fares and Upgrades; and
- (f) Such other products which may be settled through the services of RDG as may be notified to the Agent from time to time.

#### **2 - RAIL PRODUCTS SPECIFICALLY NOT AUTHORISED FOR SALE BY THE AGENT**

The Agent has no authority under this Agreement to sell any of the following:-

- (a) Rail Products purchased with the benefit of a railways staff privilege card;
- (b) Discount Cards which are intended for use by specific groups, i.e. Disabled Person's Railcard and HM Forces Railcard;
- (c) Season Tickets;
- (d) ITX Fares or other net fares; and
- (e) Eurostar Interlining Fares.

#### **3 - RAIL PRODUCTS WHICH THE AGENT IS NOT OBLIGED TO SELL**

The Agent may add other Rail Products to this list with the written consent of RDG:-

- (a) Excess Fares;
- (b) Upgrades;
- (c) Discount Cards, specifically: 16-25 Railcard, Friends & Family Railcard, Senior Railcard, Network Railcard;
- (d) Rail Products sold or Issued in exchange for Warrants or Exchange Orders;
- (e) Motorail services;
- (f) Integrated Rail Products, where they contain elements that are not zero rated for VAT; and
- (g) Sleeper services.

## **Appendix C. Travel Agent Licence – (Extract).**

### **SCHEDULE 6 - RAIL PRODUCTS**

Subject to the restrictions on the Agent's authority under this Agreement (including for the avoidance of doubt those contained in Schedule 8 of this Agreement) the Rail Products shall consist of the following:-

- (a) Tickets to be issued with the aid of an Approved TIS for which the fare has been provided and in accordance with the rules for the application of such fares as shall from time to time be supplied by RDG;
- (b) All other Tickets for which the fare is specified in a Fares Manual which is in force and has been supplied to the Agent by RDG;
- (c) Reservations relating to Tickets;
- (d) Discount Cards; and
- (e) Such other products which may be settled through the services of RDG as may be notified to the Agent from time to time.

### **SCHEDULE 8 - RESTRICTIONS ON THE AGENT'S AUTHORITY**

The Agent has no authority under this Agreement to sell any of the following:-

- (a) Season Tickets;
- (b) One-Day Travelcards which do not comply with Transport for London's specifications;
- (c) Tickets sold in exchange for Warrants;
- (d) Tickets purchased with the benefit of a railways staff privilege card; or
- (e) Discount Cards which are specifically intended for use by disabled persons.

## **Appendix D. ITX Travel Agent – (Extract).**

### **2 SALE OF ITX PRODUCTS**

#### **2.1 Authority to Sell ITX Products**

Subject to Clause 2.2 below, the ITX Agent is authorised to incorporate the ITX Products specified in the ITX Fares Database into its Leisure Packages and to market and sell such ITX Products in accordance with this Agreement, as an agent for the RDG Members, at its Authorised Offices.

#### **2.2 Restrictions on ITX Agent's Authority**

- (a) The ITX Agent may only sell ITX Products which form part of Leisure Packages sold by it or on its behalf.
- (b) The ITX Agent may not sell any ITX Product the first use of which may properly occur after the expiry of this Agreement.

#### **2.3 Not relevant and left intentionally blank here.**

#### **2.4 Sale of Other Rail Products**

The ITX Agent shall not issue, or hold itself out as having authority to issue any ITX Ticket, Reservation, Railcard or other rail product other than an ITX Product unless it is expressly authorised to do so in writing by the RDG Representative.

#### **2.5 Incorporation of ITX Products into Leisure Packages**

- (a) The ITX Agent may incorporate ITX Products into a Leisure Package either as an essential part of that Leisure Package and quote a single price (including the relevant ITX Product) or as an optional part of that Leisure Package and quote a separate price (including any applicable VAT) for the relevant ITX Product if that ITX Product is included in the Leisure Package at its customer's option.
- (b) The ITX Agent shall in all cases:-
  - (i) account to RDG for each ITX Product in accordance with Clause 4; and
  - (ii) issue supporting documentation to each of its customers who are issued with an ITX Ticket and advise each of them that they must produce such documentation together with the relevant ITX Ticket if so requested by an agent or employee of an Operator. Such supporting documentation must evidence the incorporation of that ITX Product into the ITX Agent's Leisure Package.

## **Appendix E. International Sales Licence (ISL) – (Extract).**

### **SCHEDULE 6 - RAIL PRODUCTS THE LICENSEE IS AUTHORISED TO SELL**

Subject to the restrictions on the Licensee's authority under this Agreement (including for the avoidance of doubt those contained in Schedule 8 of this Agreement) the Rail Products shall consist of the following:

- (a) Tickets to be issued with the aid of an Approved TIS for which the fare has been provided and in accordance with the rules for the application of such fares as shall from time to time be supplied by RDG. The Licensee is not obliged to undertake a transaction the value of which is less than £10;
- (b) Reservations relating to Tickets;
- (c) Such other products which may be settled through the services of RDG as RDG may notify to the Licensee from time to time.

### **SCHEDULE 8 - RESTRICTIONS ON THE LICENSEE'S AUTHORITY**

The Licensee has no authority under this Agreement to sell any of the following:-

- (a) Season Tickets;
- (b) One-Day Travelcards which do not comply with Transport for London's specifications;
- (c) Tickets sold in exchange for Warrants;
- (d) Tickets purchased with the benefit of any railway staff privilege card;
- (e) Discount Cards which are specifically intended for use by disabled persons;
- (f) Inclusive Tour fares or other net fares;
- (g) Integrated tickets which contain elements that are not VAT zero-rated;
- (h) Interline Fares (through fares);
- (i) BritRail Fares;
- (j) UIC TCV Fares; or
- (k) SailRail Fares in the direction from Ireland to the UK.

End.