Amended and Restated Master Services Agreement

~~SITA INFORMATION NETWORKING COMPUTING IRELAND~~

ENTERPRISE REGISTRY SOLUTIONS LIMITED

~~("SITA")~~

Regulis S.A.

("Registrar")

Level 2, Number 4, Customs House Plaza, Harbourmaster Place, Dublin, Ireland

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<u>Amended and Restated </u>Master Services Agreement

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Date of agreement		[——————] <mark>insert date</mark>
Parties		
~~SITA~~ ERS	Name	~~SITA Information Networking Computing Ireland~~Enterprise Registry Solutions Limited
	Address	~~Building 1, Letterkenny Office Park, Windyhall, Letterkenny, Co. Donegal, Ireland~~Level 2, Number 4, Customs House Plaza, Harbourmaster Place, Dublin, Ireland
	Address for notices	~~General Counsel~~ ~~26 Chemin de Joinville, 1216 Cointrin, Geneva, Switzerland~~
	~~Fax~~Email:	~~+41 22 7476166~~ Head, Level 2, Number 4, Customs House Plaza, Harbourmaster Place, Dublin, Ireland <mark>To be advised</mark>
Registrar	Name	Regulis S.A.
	Reg. Address	L-1330 Luxembourg, 48, boulevard Grande-Duchesse Charlotte, Grand-Duché de Luxembourg
	Address for notices	Managing Director, L-1330 Luxembourg, 48, boulevard Grande-Duchesse Charlotte, Grand-Duché de Luxembourg
	~~Fax~~	<mark>To be advised</mark>
	Email:	
Recitals	A	~~SITA~~ERS provides software and services throughout the world.
	B	Registrar has been awarded the contract to operate a rail registry by the Preparatory Commission, under the authority of the Convention and the Protocol
	C	Registrar has requested, and ~~SITA~~ERS has agreed to provide software development services, support, maintenance, hosting and other services to the Registrar.

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Services	The services as set out in the ~~Statement of Work (SOW~~Design, Implementation and Operational Requirements (Schedule 1)

Schedules	

SITA

Amended and Restated Master Services Agreement

1. Scope of the agreement

    1.1   The Registrar entered into a Master Services Agreement with SITA Information Networking Computing Ireland Limited ("SITA") dated December 12, 2014 (the "Original MSA").

    1.2   On [insert date], SITA assigned its interest in the Original MSA to Enterprise Registry Solutions Limited ("ERS").

    1.3   Following the assignment, Registrar and ERS entered into this Amended and Restated Master Services Agreement (the "MSA").

    1.11.4 ERS agrees to develop the Software and supply the Technology Services to Registrar.

2. Term

    2.1   This Agreement commences on the Effective Date and will continue until the end of the Initial Term, unless terminated in accordance with clause 19 below.

    2.2   Where necessary, the terms of this Agreement may be extended by the Registrar for a period of twelve (12) months on its giving three (3) months' notice expiring on or prior to the expiry of the Initial Term.

3. Technology Services

    3.1   SITAERS will provide to Registrar the Technology Services described in Schedule 1 (Statement of Work) and Schedule 2 (System Design Document, Implementation and Operational Requirements) in accordance with the Project implementationImplementation Plan (Schedule 6) and to the standards set out in Schedule 4 (Service Level Agreement). The parties agree that SITAERS will not be obligated to commence activities under this Agreement until the Target Date is certified by the Supervisory Authority.

    3.2   In the event SITAERS requires the services of any sub-contractors other than those set out in Schedule 2 (System Design Document), SITA6 (the Project Implementation Plan), ERS shall obtain the prior written approval and clearance of Registrar for such additional sub-contractors. The approval by Registrar of a sub-contractor shall not relieve SITAERS of any obligations under this Agreement.

    3.3   The remedies set out in Schedule 4 (Service Level Agreement) for Technology Services shall be Registrar's sole remedy applying to SITA'sERS's obligations in respect of the agreed Service Levels.

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3.4   In providing ~~Hosting Services, SITA~~hosting services, ERS shall not be responsible for any hardware, software and/or network facility owned, maintained or managed by Registrar or its third party supplier or agent or customer.

3.5   ~~SITA~~ERS is responsible for the Technology Services up to the demarcation point with the Internet service provider.

3.6   Apart from software and hardware required to run the Software, the provision, management and maintenance of all applications, content and public services hosted on the web server(s) on behalf of Registrar are the responsibility of Registrar unless otherwise agreed in this Agreement.

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3.7   At the Go-Live Date the Technology Services shall be provided in the English language, provided that the FAQ help information is also provided in Arabic, Chinese, French, Russian, Portuguese and Spanish at no additional charge. The Registrar may request SITAERS to provide an additional Latin-alphabet language in accordance with Change Control.

4.   Ancillary Services

4.1   Registrar appoints SITAERS with the exclusive rights to sell, operate and commercialise the Ancillary Services for the fees in clause 4.2 below for the period from three (3) months prior to the Go-Live Date until the end of the Term.

4.2   SITAERS shall credit to the Registrar the following amounts:

(a)   in the period between the Effective Date and the date that the accumulated fee revenues for all Ancillary Services have not yet equalled the Fee Threshold, an amount that is equal to 40% of gross revenues from fees for all Ancillary Services;

(b)   once such accumulated fee revenues have exceeded the Fee Threshold, an amount equal to 8% of gross revenues from fees for all Ancillary Services, subject to a maximum of 25% of the aggregate charges payable by the Registrar under this Agreement; and

(c)   such Service Credits determined in accordance with Schedule 4 (Service Level Agreement).

4.3   SITAERS will provide Registrar with details of the required information requested by the Supervisory Authority for written approval for the provision of an Ancillary Service. The Registrar will submit all Ancillary Service provision requests it receives from SITAERS to the Supervisory Authority once it has received adequate information from SITAERS as noted below:

4.3.1.4.3.1   A detailed description of the Ancillary Service that is intended to be provided;

4.3.2.4.3.2   A detailed description of the resources that will or may be used in order to provide the Ancillary Service;

4.3.3.4.3.3   Details of the fees proposed to be charged for the Ancillary Service and auditing provisions for such fees;

4.3.4.4.3.4   Details of the extent to which the Ancillary Service will be provided using the resources of SITAERS, and of any proposed contracts with SITAERS; and

4.3.5.4.3.5   Details of the potential risks in relation to the provision of the Ancillary Service and how the Registrar, the Supervisory Authority and the Indemnified Parties will be indemnified and protected against such risks.

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4.4 Following receipt of the first item of information under clause 4.3, the Registrar shall maintain a dialogue with ~~SITA~~ERS to advise whether further information is required. Once all relevant information which is identified by the Supervisory Authority is provided by ~~SITA~~ERS, the Registrar shall provide a response within sixty (60) days of receipt of the last item of such information. The Registrar shall keep ~~SITA~~ERS briefed on status.

4.5 Subject to approval of the Supervisory Authority (and any conditions of such approval), ~~SITA~~ERS will be licensed to:

~~4.5.1.~~4.5.1 use the International Registry brand;

~~4.5.2.~~4.5.2 market advertising space on the International Registry website;

~~4.5.3.~~4.5.3 use the Data;

~~4.5.4.~~4.5.4 access and operate ~~Data Feed Services; and~~data feed services;

~~4.5.5.~~4.5.5 operate the official training services for users of the International Registry; and

~~4.5.6.~~4.5.6 other items as deemed appropriate.

4.6 ~~SITA~~ERS agrees that it will not provide any Ancillary Service that it is entitled to provide under this MSA after the termination of this MSA unless otherwise agreed between the parties.

4.7 ~~SITA~~ERS grants the Registrar the right to share all information it deems necessary with the Supervisory Authority for the purposes of this clause.

4.8 ~~SITA~~ERS shall, for the duration of the period during which it is permitted to utilise the licence herein (Ancillary Services) and provide the Ancillary Service, procure and maintain insurance, with insurers of recognised reputation and having at least an AM Best rating of "A" or better, covering potential liability of ~~SITA~~ERS to the Registrar and the end users, arising out of the provision of an Ancillary Service in accordance with industry standard terms and conditions for such services.

4.9 As part of the approval process of an Ancillary Service as set out in clause 4.3 and 4.4 above, the Registrar may require the indemnification of the Indemnified Parties and itself in the manner it so determines.

5. Technology Refresh

5.1 ~~SITA~~ERS shall, at its own cost, submit a report to Registrar within thirty (30) calendar days after the end of the 6th Year, which shall identify the emergence of new and evolving relevant technologies and processes which could improve the Technology Services and a technology refresh of the hardware and operating software used to operate the International Registry with substantially the same or better functional and operational performance as the then current Technology Services. Such report shall be provided in sufficient detail to enable Registrar to evaluate properly the benefits of the new technology or process.

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5.2 If the Registrar wishes to incorporate any improvement identified by ~~SITA~~ERS pursuant to clause 5.1, Registrar shall send ~~SITA~~ERS a written consent to proceed and ~~SITA~~ERS will implement the technology refresh and associated new technologies and procedures in accordance with the Change Control as agreed between the parties.

6. Encumbrances/Liens

6.1 ~~SITA~~ERS shall not cause or permit any hypothec, lien, attachment or other encumbrance to be created over the Data or Archives ~~or any asset necessary to operate the International Registry by any person~~.

6.2 ~~SITA shall not grant a hypothec or security over its assets necessary to operate the International Registry nor any undertaking to creditors, and~~ERS shall make it clear in its dealings with creditors that the Data and Archives of the International Registry are the property of the Supervisory Authority, and that these and all other assets necessary to operate the International Registry are inviolable and immune from seizure or other legal or administrative process.

7. Acceptance

7.1 Software and Technology Services provided under this Agreement shall be subject exclusively to the Test Strategy as agreed between the parties prior to the commencement of Provisional Acceptance Test (PAT). All tests may be observed by any relevant regulatory authority of the Registrar or its nominee.

7.2 The Acceptance Tests (AT) will be conducted in two phases - PAT and Final Acceptance Test (FAT). The period of time which is estimated as one (1) month between the PAT and FAT will be used as rectification of equipment or system deficiencies evidenced at PAT for removal of adverse comments made during PAT, and as equipment continuity verification (burn-in). In case of absence of deficiencies or adverse comments during the PAT, PAT and FAT may be merged and a Final Acceptance Certificate may be signed and issued.

7.3 ~~SITA~~ERS shall submit to Registrar at least forty-five (45) days before the PAT, the proposed PAT and Acceptance Criteria procedures which shall be subject to mutual agreement between the parties and after being agreed shall then form part of the Agreement.

7.4 The PAT and FAT testing, Acceptance Criteria and test procedures shall consist of verification of all equipment under this Agreement as an operational system and entity. Upon the FAT, ~~SITA~~ERS is responsible for removing any adverse comments or remarks considered as gating items which were documented during the PAT.

7.5 If the system or sub-system fails to pass one or more of the Acceptance Tests, i.e. the Acceptance Criteria are not met, then ~~SITA~~ERS shall correct the cause of the failure(s). Registrar shall reserve the right to have all the Acceptance Tests or any single Acceptance Test performed again. All additional costs for Registrar's participation in re-testing the system shall be borne by ~~SITA~~ERS.

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7.6 The Final Acceptance Certificate will be signed one month after the issuing of the Provisional Acceptance Certificate if all deficiencies and observations encountered at PAT which are documented as gating items have been rectified and if no operational fault or discrepancy occurs on an individual equipment or system level.

7.7 The Final Acceptance of all Software and Technology Services under this Agreement shall take place upon satisfactory completion of the following conditions:

(a) all observations and comments of PAT which are documented gating items are successfully rectified;

(b) FAT is successful in accordance with the Acceptance Criteria;

(c) all installation details are completed;

(d) all technical documentation, drawings, plans, etc. are available and found acceptable;

(e) the training of the operational and help desk personnel is completed; and

(f) the staff assigned for the system operation is sufficient and adequately qualified.

7.8 Prior to the Go-Live Date, ERS shall engage a third party to conduct a penetration test and audit of the infrastructure of the International Registry System.

7.87.9 Any Software and/or Technology Services put to any use by the Registrar other than for testing purposes prior to Acceptance whether in whole or in part, shall be deemed accepted.

7.97.10 The Registrar shall be liable for any unrecoverable direct costs incurred by SITAERS in the event that SITAERS is delayed from achieving Acceptance due to a substantial fault of Registrar in complying with its obligations under Schedule 1 (always provided these costs have been mitigated by SITAERS) provided that *the* maximum amount payable by the Registrar shall be limited to sixty thousand Euro (€60,000).

7.10 On or within thirty (30) days after Go-Live Date SITA shall deposit the then current version of the Software and Documentation (the "**Escrow Materials**") with the National Computer Centre in Manchester, UK (the "**NCC**") under the NCC's standard escrow terms. SITA shall deposit (i) the Escrow Materials at least once a quarter and (ii) all updates as soon as such updates are operational, subject to SITA's reasonable costs and NCC charges being paid by the Registrar.

7.11 For these purposes a "**gating item**" means an item or issue which areis considered serious enough to prevent progression to the next stage in a production.

8. Registrar's obligations

8.1 Registrar agrees to carry out its responsibilities as described in Schedule 1 (Statement of WorkDesign, Implementation and Operational Requirements), in accordance with the time periods described in the Project Plan.

8.2 Without limiting the obligations described in clause 8.1, Registrar agrees that it will:

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(a) cooperate with ~~SITA~~ERS during the implementation of the Software and the requisite training;

(b) perform its obligations during implementation;

(c) if applicable, provide ~~SITA~~ERS with all technical data, including protocol specifications and functional specifications, as may be reasonably required by ~~SITA~~ERS to install the Software and provide the Technology Services;

(d) if applicable, facilitate connection of the Technology Services to Registrar's own computer systems;

(e) if applicable, evaluate and provide ~~SITA~~ERS with all technical information as may be necessary, and if so requested by ~~SITA~~ERS, designate a technical and/or commercial representative;

(f) if applicable, maintain Registrar's equipment to the relevant up to date version as recommended by ~~SITA~~ERS from time to time; and

(g) if applicable, incorporate the latest version of the Software with any updates or releases as provided by ~~SITA~~ERS from time to time.

8.3 Registrar will not give, sell or, in any manner make the Software provided in accordance with this Agreement available to any third party without ~~SITA's~~ERS's prior written consent.

8.4 If applicable, Registrar agrees to give ~~SITA~~ERS access to Registrar's premises as described in the Project Plan in accordance with the time periods set out in that plan but subject to the Registrar's standard security procedures as notified to ~~SITA~~ERS from time to time.

9. Suitability assessment

9.1 Registrar acknowledges it has independently determined that the Technology Services described under this Agreement meet its requirements.

10. Service Continuity

10.1 The rights and obligations of the Registrar under this Agreement will be assigned to the Supervisory Authority's nominated New Service Provider, in accordance with the Deed of Business Continuity and subject to clause 10.2 below.

10.2 In addition to any other right to terminate this Agreement hereunder, the New Service Provider shall be entitled to terminate this Agreement at any time after one (1) year from the Transfer Date for any reason on giving three (3) months' prior written notice to ~~SITA.~~ERS.

11. Use of data and data protection

11.1 ~~SITA~~ERS and Registrar will each comply with all applicable legislation, rules and regulations (including relating to the protection of Personal Data) in relation to the use and delivery of the Software and the Technology Services.

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11.2 If for any reason ~~SITA~~ERS is permitted access to Personal Data or is supplied with or otherwise provided with Personal Data by Registrar during the delivery of the Software and the Technology Services, then ~~SITA~~ERS shall:

(a) use and/or hold such Personal Data for the purposes and in the manner directed by Registrar and shall not otherwise modify, amend or alter the contents of the Personal Data or disclose or permit the disclosure of the Personal Data to any third party unless specifically authorised in writing by Registrar and shall take all such steps as may be necessary to safeguard the Personal Data;

(b) comply in all respects with the relevant data protection legislation in the relevant jurisdictions from where ~~SITA~~ERS and Registrar provides the Technology Services;

(c) implement appropriate technical and organisational measures to protect the Personal Data against accidental or unlawful destruction or accidental loss, alterations, and unauthorised disclosure or access; and

(d) return the Personal Data to Registrar on request or termination or expiry of this Agreement (whichever is sooner).

11.3 During the Term Registrar shall comply with all applicable data protection rules and regulations relating to the protection of Personal Data. Registrar shall, with respect to each and all Personal Data loaded onto the ~~SITA~~ERS System by Registrar or by ~~SITA~~ERS on behalf of Registrar, be responsible for the management of the Personal Data and shall ensure that any Personal Data shall have been lawfully obtained and limit such Personal Data as is specifically required for the purposes of the Technology Services. Registrar shall ensure that at all times its personnel and agents shall not load or store any sensitive Personal Data onto the ~~SITA~~ERS System.

11.4 Where, through no fault of its own, ~~SITA~~ERS would not be able to perform an obligation under this Agreement without being in breach of the relevant data protection legislation (including where this happens as a result of any actual or stated non-compliance by Registrar with such legislation in relation to Personal Data of ~~SITA~~ERS or its sub-contractors), it shall notify Registrar promptly and shall not be obliged to perform the obligation until such obligation would cease to involve it being in breach of such legislation.

11.5 ~~SITA~~ERS will not be responsible for the accuracy of the Data and Archives, except as stated in clauses 21.4 and 21.6.

12. Charges

12.1 Registrar agrees to pay to ~~SITA~~ERS all charges identified in Schedule 3 ~~("~~(Pricing and Payment~~"))~~ in the manner set out in that schedule.

12.2 Unless otherwise set out in Schedule 3, ~~SITA~~ERS will invoice Registrar with the Charges monthly in arrears.

12.3 ~~SITA~~ERS may only vary the Charges in the manner described in Schedule 3.

SITA

12.4 Registrar agrees to pay the Charges to ~~SITA~~ERS within thirty (30) days of the date of invoice. If the invoice is not paid in full by the due date (and Registrar has not raised with ~~SITA~~ERS a reasonable query or queries to the charges in the invoice, either in whole or in part), then interest will automatically and without further notice accrue, on a daily basis, as from the end of such thirty (30) day period until the date on which payment is received by ~~SITA~~ERS . The rate of such late payment interest shall be equal to the percentage rate per annum being the LIBOR three months' rate for Euro (as quoted by Barclays Bank plc from time to time and published by the Reuters Services), multiplied by:

(a) 1.05 for amounts due for over 30 days;

(b) 1.10 for amounts due for over 60 days; and

(c) 1.15 for amounts due for over 90 days

calculated on a day to day basis using a 360 day year, provided that interest shall be simple and not compounded. Accordingly, as an illustrative example, if the Registrar paid a month's invoice amount for 100,000 Euro on the 40th day after the due date for payment and if LIBOR was 1%, then the Registrar would owe 29.16 Euro in interest.

The maximum amount of interest on a late payment to ~~SITA~~ERS for any given month's charges shall not exceed 2 per cent of that month's invoiced amount.

12.5 All invoices will be Euro, and payment must be made in Euro.

12.6 The Charges do not include taxes, and Registrar shall pay all taxes relating to the provision of the Registrar Services and subject to any credits given under clause 4.2. In respect of withholding tax, Registrar agrees to pay such additional amounts as may be necessary, such that ~~SITA~~ERS receives the amount it would have received had no withholding tax been imposed.

13. Change control

13.1 If Registrar wishes ~~SITA~~ERS to provide any additional software or services or change the Software and Technology Services, then the parties will follow the change control procedures set out in Schedule 5.

13.2 No waiver or modification of this Agreement or of any of its provisions shall be valid unless in writing and executed by duly authorised representatives of both parties.

14. Contract Management

The parties shall set up and operate Service Review Meetings and Contract Review Meetings, in accordance with Schedule 7 (Contract Management Procedures), the function of which shall include monitoring and controlling ~~SITA's~~ERS's performance of this Agreement.

15. Liquidated damages for delay

15.1 ~~SITA~~ERS shall perform its obligations under this Agreement to meet the Go-Live Operation Date in accordance with the Project Implementation Plan subject to clause 20.7 (*Force Majeure*) or the Registrar's failure to meet its obligations under the Project Implementation Plan as such failure is notified to it by ~~SITA~~ERS .

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15.2   In the event that the Go-Live Operation Date is not met in accordance with clause 15.1 above due to a fault attributable to ~~SITA~~ERS then liquidated damages shall be payable by ~~SITA~~ERS to the Registrar amounting to five thousand Euro (€5,000) per week for each week where the Go-Live Operation Date is delayed beyond the twelfth (12th) month following the Notification to Begin Date.

15.3   The maximum amount of liquidated damages payable by ~~SITA~~ERS in accordance with clause 15.2 above shall be limited to sixty thousand Euro (€60,000~~.~~) and are the Registrar's sole remedy in the event that the Go-Live Operation Date is not met in accordance with clause 15.1.

15.4   Any dispute as to the quantum of liquidated damages payable shall be referred to the procedure set out in clause 25 (Dispute Resolution).

16.   Confidentiality

16.1   The Recipient may be given access to Confidential Information from the Discloser in order to perform its obligations under this Agreement. The Recipient shall hold the Confidential Information in confidence and, unless required by law, not make the Confidential Information available to any third party, or use the Confidential Information for any purpose other than the implementation of this Agreement. The Recipient shall take all reasonable steps to ensure that the Confidential Information to which it has access is not disclosed or distributed by its employees or agents or Subcontractors in violation of the terms of this Agreement. ~~The~~ The obligations in this clause 16 shall not apply to Confidential Information that:

(a)   is or becomes publicly known other than through any act or omission of the receiving party;

(b)   was in the other party's lawful possession before the disclosure;

(c)   is lawfully disclosed to the Recipient by a third party without restriction on disclosure;

(d)   is independently developed by the Recipient, which independent development can be shown by written evidence;

(e)   is required to be disclosed by law, by any court of competent jurisdiction or by any regulatory or administrative body; or

(f)   is disclosed to an adviser under a professional duty of confidentiality or a subcontractor or other third party who enters into a non-disclosure agreement substantially in the terms approved by the Registrar in writing.

16.2   ~~SITA~~ERS shall not communicate at any time to any other person or authority external to the Registrar, any information known to it by reason of its association with the Registrar which has not been made public except with the written authorization of the Registrar; nor shall the ~~SITA~~ERS at any time use such information for private advantage.

16.3   Unless authorized in writing by the Registrar, ~~SITA~~ERS shall not disclose the particulars of the Agreement, advertise or make otherwise public the fact that it is performing, or has performed, services for the Registrar, or use the name, emblem,

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or official seal of the Registrar, or any abbreviation of the name of the Registrar for advertising or for any other purpose.

16.4   Notwithstanding the foregoing, nothing shall preclude the Registrar or ~~SITA~~ERS from disclosing Confidential Information to the Supervisory Authority.

17.   Intellectual Property Rights and other propriety rights

17.1   ~~SITA~~ERS recognises that it is not entitled to the Intellectual Property Rights with regard to the Data and Archives~~.~~, the name of the International Registry and its domain and website as well as any social media sites in the name of the Registrar or International Registry. At the Registrar's request, ~~SITA~~ERS shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights in relation to the Data and Archives for the benefit of the Registrar in compliance with the requirements of the applicable law. At the Registrar's request, ~~SITA~~ERS shall take all necessary steps, execute all necessary documents and generally assist in carrying out ~~SITA's~~ERS's obligations in relation to the portability of software pursuant to clause 20.9.

17.1a   To the extent that ERS is required to delete or otherwise transfer Personal Data forming part of the Data and Archives pursuant to clause 11 herein, this action may only be taken with the consent of the Supervisory Authority, unless otherwise delegated by the Supervisory Authority to ERS.

17.2   All Intellectual Property Rights in the Software, ~~Service~~Technology Services, Materials and Documentation are either licensed to or are the property of ~~SITA~~ERS, and this Agreement does not convey to the Registrar any~~,~~ title or interest in them. ~~SITA~~ERS hereby provides the Registrar with a non-exclusive licence to use the Intellectual Property Rights in the Software, ~~Service, and~~ Technology Services, Materials and Documentation solely for the purposes as set out in this Agreement for the Term and thereafter where required pursuant to this Agreement or agreed between the parties.

17.3   It is ~~SITA's~~ERS's responsibility to use All Reasonable Efforts to ensure that no Intellectual Property Rights and other proprietary rights, including but not limited to copyrights, patents, and trademarks which are material to the use and operation of the International Registry are violated and to defend at its own expense any suit or proceedings based on any claim of an infringement of third party Intellectual Property Rights. Should any software or equipment procured by ~~SITA~~ERS for the operation of the Software and Technology Services be held to constitute infringement and its use is prevented or limited, ~~SITA~~ERS shall modify the software or equipment so that it is not infringing yet performs the task specified in this Agreement, or remove such software, equipment or systems from operation without compromising the required performance or functionality of the overall system in all material respects.

17.4   Subject to clauses 17.5 – 17.7, ~~SITA~~ERS shall indemnify the Registrar, against any damages, costs and expenses finally awarded against the Registrar by a court or arbitral tribunal in respect of a Claim arising from the infringement of any Intellectual Property Rights of any third party unaffiliated to the Registrar in relation to (a) the use of ~~SITA's~~ERS's equipment, (b) the Software and Technology Services or (c)

equipment, proprietary or open source software supplied by ~~SITA~~ERS as contemplated in this Agreement.

17.5   If a Claim is made against the Registrar in connection with the Software and Technology Services supplied by ~~SITA~~ERS, then the Registrar shall:

(a)   promptly notify ~~SITA~~ERS in writing of the Claim or potential Claim together with all relevant facts;

(b)   not make any admissions or settlement in respect of any Claim or potential Claim without the consent of ~~SITA~~ERS;

(c)   allow ~~SITA~~ERS to defend and have full conduct of any negotiations and settlement of any Claim;

(d)   provide ~~SITA~~ERS with all information and assistance reasonably required by ~~SITA~~ERS in respect of its defence of any Claim (at ~~SITA's~~ERS's reasonable cost); and

(e)   do all things reasonable to mitigate all losses arising from the Claim

and nothing herein shall preclude the Registrar in connection with such Claim from taking all steps against ~~SITA~~ERS that a prudent claimant in its position would take vis-à-vis ~~SITA~~ERS.

17.6   The indemnity in clause 17.4 shall not apply where the Claim results from:

(a)   any modification, adaptation or development of materials used in the Software and Technology Services supplied by ~~SITA~~ERS not made by or on behalf of ~~SITA~~ERS;

(b)   any combination or use of a Service or any part thereof (including the Equipment or the Software) with any item or in a manner not authorised by this Agreement or by ~~SITA~~ERS;

(c)   ~~SITA's~~ERS's compliance with specifications provided by third parties unconnected with ~~SITA~~ERS, where such infringement would not have occurred but for such compliance; or

(d)   subject to ~~SITA~~ERS complying with clause 17.7, any subcontractor equipment, proprietary or open source software.

17.7   ~~SITA~~ERS will provide the Registrar with the benefit of any indemnity provided to ~~SITA~~ERS from a subcontractor in relation to such subcontractor's equipment, proprietary or open source software.

17.8   In the event of any Claim or where in ~~SITA's~~ERS's reasonable opinion a Claim is likely to be made, ~~SITA~~ERS may at its sole option and expense:

(a)   procure for the right to continue using the software and services supplied by ~~SITA~~ERS in accordance with this Agreement;

(b)   modify the software and services supplied by ~~SITA~~ERS or the infringing or allegedly infringing materials used by ~~SITA~~ERS so that they are no longer infringing; or

(c)   replace the software and services supplied by ~~SITA~~ERS or the infringing or allegedly infringing materials used by ~~SITA~~ERS with non-infringing services

and/or materials that offer the same or equivalent performance or functionality in all material respects.

18. Technology and Security Assurance

18.1 ERS shall ensure that International Registry System will be hosted on a cloud platform (the "Cloud") at data centers maintained and operated within the European Union under an agreement in industry standard terms (the "Service Agreement") with a globally-recognized and credible service provider (the "Cloud Provider"). ERS shall provide a copy of the Service Agreement to the Registrar and the Supervisory Authority subject to the redaction of confidential and/or commercially sensitive terms provided that such redaction does not exclude the terms and conditions related to the access to the cloud infrastructure and information. On or before the Go-Live Date, ERS shall ensure that the applicable Licensed Materials have been uploaded on to the Cloud. ERS shall ensure that applicable updates and enhancements to the Licensed Materials are uploaded to the Cloud as soon as reasonably practicable.

18.1a ERS shall comply with the terms of the Service Agreement. ERS shall notify the Registrar and the Supervisory Authority in the event of a material default for which ERS receives a written notice from the Cloud Provider, and ERS shall not terminate its contract with the Cloud Provider without first providing notice to the Registrar and the Supervisory Authority of its intention to do so.

18.2 At all times, ERS shall ensure that the Registrar or New Service Provider, as the case may be, and the Supervisory Authority have the ability to operate (or facilitate others to operate) the International Registry System and its corresponding website autonomously.

18.3 ERS will implement reasonable security standards that it determines are necessary and reflect the best practices in current use in the field of electronic registry design and operation, including those relating to security systems and networking, but in no event less than industry standards in the cloud computing/online services industry, to protect the International Registry System against unauthorized access, use, or disclosure and facilitate the International Registry System becoming ISO 270001 and GDPR compliant.

18.4 ERS will document standards for records and data management, as well as operating procedures, which will be regularly reviewed and auditable by a third party.

18.5 ERS will assist the Registrar in the creation of a business continuity plan and a disaster recovery plan for the International Registry System in accordance with industry standards but compatible with its obligations under clause 18.1, and engage in business continuity and disaster recovery exercises on an annual basis.

18.1 18.6 Registrar or its nominated representatives (such nominated representatives to be approved by SITAERS, such approval not to be unreasonably withheld or delayed) shall have the unlimited right at any time to undertake a security audit of SITA'sERS's provision of any of the Software and Technology Services and all relevant records to the extent that they relate to the availability, confidentiality and integrity of data and the confidentiality and integrity of systems pertaining to the Software and Technology Services ("**Security Audit**"). SITAERS shall ensure that Registrar

or its nominated representatives have all necessary rights of access for this purpose. For the purposes of this clause 18, the Security Audit may evaluate and test the Software and Technology Services using industry best practice (for example, ISO 1779927001), or such other standards and methods as Registrar shall, in its sole discretion, determine.

18.218.7   For the purposes of clause 18.1, SITA6, ERS will provide Registrar with all assistance which Registrar may reasonably require.

18.318.8   Subject to clause 18.69 and clause 18.710 the carrying out of any Security Audit by or on behalf of Registrar pursuant to this Agreement shall not relieve SITAERS of any of its obligations or responsibilities under this Agreement.

18.418.9   Registrar shall at the request of SITAERS ensure that Registrar's nominated representatives under this clause 18 shall treat all Confidential Information as confidential and shall comply with the obligations in clause 16.

18.518.10   In exercising any Security Audit right under this Agreement, Registrar shall and shall procure that its nominated representatives shall:

(a)   comply with any reasonable site security and health and safety regulations as notified to Registrar and/or nominated representatives; and

(b)   use reasonable endeavours not to disrupt the provision of the Technology Services and the conduct of any other business of SITAERS or any relevant sub-contractor.

18.618.11   To the extent that disruption to the Technology Services occurs as a result of exercise of the Security Audit rights in this clause 18, subject to SITAERS mitigating any disruption using reasonable endeavours, SITAERS shall not be liable for such disruption.

18.718.12   In the event that Security Audits carried out by Registrar or its nominated representatives reveal any breach by SITAERS of its obligations under this Agreement then SITAERS shall take such measures as are necessary to remedy the breach.

18.818.13   Registrar shall not exercise its right under this clause 18 to instigate a Security Audit more than twice in any Year, except where an additional Security Audit (or part thereof) is required to verify that any changes to the Software and Technology Services required as a result of a previous Security Audit have, in fact, been implemented by SITA.ERS.

18.918.14   Information to be made available by SITAERS under this clause 18 shall be limited to that relevant to the Security Audit in question, and shall in particular not require SITAERS to provide or allow access to any information relating to SITA'sERS's business terms and projects with other customers and (other than as far as is relevant to such suppliers in their roles as sub-contractors under this Agreement) suppliers.

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19.   Suspension and termination

19.1   ~~SITA~~ERS may suspend the Technology Services if any payment for any Technology Services under this Agreement is more than thirty (30) days overdue, but only after giving Registrar a further ninety (90) days' notice, in writing, of its intention so to do. During the said ninety day period the parties shall enter into consultations with a view to considering what measures might enable the payment issues to be resolved, which measures may include modifications to the Technology Services, or such other measure as the parties may consider to be effective, and on the failure of the parties to agree to any such measures, ~~SITA~~ERS shall be entitled to suspend the Technology Services at the expiry of the ninety (90) day period.

19.2   Either party may terminate this Agreement by notice to the other party with immediate effect if the other party:

(a)   commits a material breach of its obligations in this Agreement and does not remedy that breach within 30 days of receiving a notice detailing the breach and requiring that it be rectified;

(b)   is Insolvent; or

(c)   in accordance with clause 26.6, ~~SITA~~ERS is rendered permanently unable, wholly or substantially, by reason of *force majeure* to perform its obligations and meet its responsibilities under this Agreement.

(d)   The Go-Live Date does not occur by December 31, 2032.

Notwithstanding the foregoing, ~~SITA's~~ERS's exercise of its right to terminate is subject to the provisions of clause 20.8.

19.3   In the event the Registrar and ~~SITA~~ERS are at that time related parties:

(a)   clause 19.1 will not apply; and

(b)   clause 19.2 will be modified as follows:

(i)   the period specified under clause 19.2 (a) will be increased to ninety (90) days and the words "(other than by reason of that party being Insolvent)" will be added after "Agreement"; and

(ii)   after the words "is insolvent" in clause 19(2) (b), add "but this action cannot be taken earlier than 6 years after the Go-Live Date".

19.4   In the event that the Registrar is required to review its supplier arrangements to implement cost savings, ~~SITA~~ERS agrees to provide support to the Registrar in order for the Registrar to carry out its discussions with the Supervisory Authority regarding potential changes to the Technology Services provided under this MSA which would result in a reduction in the charges payable by the Registrar under this MSA or an overall cost savings to the Registrar.

20.   Consequences of termination

20.1   The parties have agreed the effects and consequences of (i) expiry or (ii) termination by the Registrar under clause 19.2, and (iii) ~~SITA~~ERS under clause 19.2 and these

SITA.

are set out at clauses 20.4 to 20.9 below.– The following provisions shall apply generally in the event that expiry, termination or any entitlement to terminate arises:

(a) in the event that the Deed of Business Continuity is not invoked on termination or expiry of this Agreement ~~SITA~~ERS shall comply with its portability obligations under clause 20.9;

(b) in the event that events or circumstances entitle either party to terminate in respect of more than one Termination Event at the same time, such party shall be entitled to elect the Termination Event more or most beneficial to it;

(c) Registrar shall be entitled on, ninety (90) days' notice in advance of the expiration of this Agreement or within thirty (30) days of termination of this Agreement by ~~SITA~~ERS or Registrar, to elect to invoke the Transition Services for the Transition Period and in that event ~~SITA~~ERS shall provide such Transition Services in the manner provided in this Agreement and without regard to the reason for expiry or termination;

(d) expiry or termination of this Agreement for any reason shall not affect or prejudice the parties' accrued rights as at the date of such expiry or termination;

(e) on expiry or termination of this Agreement for any reason all such provisions as are expressly stated to or impliedly continue thereafter shall continue; and

(f) where ~~SITA~~ERS would be entitled to receive the Software Negotiated Value, it shall only claim such amount from the New Service Provider and no other person, without affecting ~~SITA's~~ERS's right to charge a commercial licence fee to a party to whom it licenses the Software.

20.2 Upon receipt of notice of termination, and subject to its portability obligations under clause 20.9, ~~SITA~~ERS shall take immediate steps to facilitate the transition of the Technology Services and Software to the Registrar or to an entity/person designated by the Registrar in a prompt and orderly manner and shall reduce expenses to a minimum and shall not undertake any forward commitment from the date of receipt of notice of termination, including, without limitation, any capital expenditures.

20.3 The steps contemplated in this clause 20 shall include ~~SITA~~ERS :

(a) liaising with the Registrar and any entity/person designated by the Registrar to provide reasonable assistance and advice concerning the provision of the Technology Services and their transfer to the Registrar or any entity/person designated by the Registrar; and

(b) not disposing of any assets required to operate the Technology Services to the extent practicable.

20.4 **On expiry:** In the event of expiry of this Agreement then the following shall occur:

(a) if the Registrar or the Supervisory Authority requests Transition Services for the Transition Period, then ~~SITA~~ERS will provide such services;

(b) the Registrar shall pay to ~~SITA~~ERS in arrears the Transition Fees as applicable; and

(c) the New Service Provider or the Registrar and ~~SITA~~ERS shall enter into a licence agreement substantially in the form of the Model License Agreement

subject to the payment by the New Service Provider or the Registrar to ~~SITA~~ERS of Software Negotiated Value within a three year period.

20.5   **Termination Event** – In the event of termination of this Agreement by ~~SITA~~ERS in accordance with

(a) clause 19.2 (a); or

(b) clause 19.2 (b) (after taking into account clause 19.3),

then the following shall occur:

(i) if the Registrar or the Supervisory Authority requests Transition Services for the Transition Period, then ~~SITA~~ERS will provide such services;

(ii) the Registrar shall pay to ~~SITA~~ERS in arrears the Transition Fees as applicable and

(iii) clause 2.2 of the Software Security Agreement shall apply and if there is a New Service Provider, it and ~~SITA~~ERS shall enter into a licence agreement substantially in the form of the Model License Agreement subject to the payment by the New Service Provider to ~~SITA~~ERS of Software Negotiated Value within a three year period.

20.6   **Termination Event** – In the event of termination of this Agreement by the Registrar in accordance with clause 19.2 (a) or (b) then the following shall occur:

(a)   if the Registrar or the Supervisory Authority requests Transition Services for the Transition Period, then ~~SITA~~ERS will provide such services to the extent it is legally able to do so, if it is Insolvent);

(b)   the Registrar shall pay to ~~SITA~~ERS in arrears the Transition Fees as applicable; and

(c)   clause 2.5 of the Software Security Agreement will apply and the Registrar and ~~SITA~~ERS shall enter into a licence agreement substantially in the form of the Model License Agreement subject to the payment by the New Service Provider or the Registrar to ~~SITA~~ERS of the Software Negotiated Value (subject to any discount applicable thereto) within a three year period.

20.7   **Termination Event** – In the event of termination of this Agreement in accordance with clause 19.2 (c) then the following shall occur:

(a)   if the Registrar or the Supervisory Authority requests Transition Services for the Transition Period, then ~~SITA~~ERS will provide such services (to the extent it is legally able to do so);

(b)   the Registrar shall pay to ~~SITA~~ERS in arrears the Transition Fees as applicable; and

(c)   If there is a New Service Provider, ~~SITA~~ERS shall, at the New Service Provider's request (unless unable to do so by reason of *force majeure*), enter into a licence agreement with the New Service Provider substantially in the form of the Model License Agreement subject to the payment by the New Service Provider or the Registrar to ~~SITA~~ERS of the Software Negotiated Value within a three year period.

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20.8   **Termination Event –** In the event that either party has the right (without taking into account this subclause) to terminate this Agreement pursuant to clauses 19.2 (a) or (b) and an Invocation Notice is received by ~~SITA~~ERS pursuant to the Deed of Business Continuity, notwithstanding clause 19, the Agreement will not be terminated, the Deed of Business Continuity shall thereupon become operative and this Agreement shall remain in force pursuant thereto.

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20.9 Upon termination or expiration of this Agreement then:

(a) ~~SITA~~ERS shall ensure the portability of all Software and Documentation used for the purposes of the operation of the Technology Services but excluding any Software developed exclusively in relation to the provision of Ancillary Services;

(b) For Software and Documentation subject to portability as described in clause 20.9(a) used under licence, ~~SITA~~ERS shall use All Reasonable Efforts to ensure portability of the licences under the relevant licence agreements to the extent permissible under applicable law and software vendor practice, at the same fee unless otherwise agreed by the Registrar, by commercial agreement and subject to any third party licence fees. ~~SITA~~ERS shall furnish evidence of portability of the licences to the Registrar upon demand;

(c) For Software, and associated Documentation, individually developed by ~~SITA~~ERS or its Subcontractors other than Software developed exclusively in relation to the provision of Ancillary Services, ~~SITA~~ERS shall ensure portability in accordance with the Software Security Agreement (where applicable) and pursuant to a licence agreement substantially in the form of the Model License Agreement;

(d) Upon receipt of a notice of termination or a notice of non-renewal of this Agreement, ~~SITA~~ERS shall maintain a copy of all updated Software, source code(s) and Documentation and the updated system design used for the purposes of the Technology Services, until their subsequent transfer to the New Service Provider or a person or entity designated by the Registrar, in accordance with this clause 20;

(e) Both parties will return all property in its possession belonging to the other party, including all Confidential Information;

(f) Registrar will pay to ~~SITA~~ERS within thirty (30) days of the effective date of such termination or expiration, all charges due and payable; and

(g) under the direction of Registrar, ~~SITA~~ERS shall ensure that all data, including the Data and Archives, relating to the Technology Services are destroyed and/or made unusable and shall provide evidence of the same to Registrar.

21. Warranties and Undertakings

21.1 ~~SITA~~ERS warrants and undertakes that the Software will perform substantially in accordance with the software specifications.

21.2 ~~SITA~~ERS warrants and undertakes that it will provide the Technology Services with reasonable care and skill that can be expected from a competent communications and information technology services provider operating in the information technology industry.

21.3 ~~SITA~~ERS warrants the International Registry System does not infringe any Intellectual Property Rights of any third party at the Go-Live Date and undertakes that it will not do so during the Term.

21.4 Subject always to clause 21.5 below ~~SITA~~ERS warrants and undertakes that it shall use reasonable endeavours to ensure that there are no errors or omissions in the

Data and Archives but, save as provided in clauses 21.6 below, accepts no liability for any errors or omissions that may exist.

21.5   Registrar recognises that the Data and Archives delivered by ~~SITA~~ERS on an "as is" basis and ~~SITA~~ERS assumes no responsibility regarding the use or the results of use of the Technology Services and or any Data and Archives in terms of correctness, accuracy, reliability or otherwise other than in clauses 21.4 and 21.6. Responsibility for using or relying upon the Technology Services, the Data and Archives for Registrar's business use lies exclusively with Registrar.

21.6   If there are serious errors or omissions in an edition of the Data and Archives delivered by ~~SITA~~ERS due to the fault of ~~SITA~~ERS or wilful manipulation by ~~SITA~~ERS or its employees or agents, Registrar may within seven days after delivery of that edition of the Data and Archives, notify ~~SITA~~ERS and ~~SITA~~ERS will re-constitute the Data and Archives at Registrar's request as soon as possible and in any event within twenty-four (24) hours and at no additional cost and redeliver that edition of the Data and Archives to Registrar. In such case ~~SITA~~ERS shall have no further liability to Registrar whatsoever in respect of errors or omissions in that edition of the Data and Archives.

21.7   Registrar acknowledges that software in general is not error free and agrees that the existence of such errors shall not constitute a breach of this Agreement. Registrar agrees that its sole remedy arising from a breach of the warranty under this Agreement in relation to errors in the Software is to notify ~~SITA~~ERS of a defect in the Software and provide a reasonably detailed written description of the defect to Registrar (the "**Defect**"). Thereupon, ~~SITA~~ERS shall use its reasonable efforts to correct the Defect according to the priority levels, response and solution objectives set out under the Service Level Service schedule, provided that ~~SITA~~ERS is satisfied that the Defect is of a nature of a malfunction, as opposed to a modification of the Software.

22.   Limitations of Liability

22.1   External Dependencies

The System and Technology Services provided under this MSA rely on the public Internet to support user access and so any unavailability of the Internet due to restricted or no access from a customer server, a failure by an Internet Service Provider or a general failure of the Internet in whole or in part, may cause a loss of the System and Technology Services for which ~~SITA~~ERS will not be liable under this MSA. Equally, ~~SITA~~ERS will not be liable under this MSA for a failure on the site or of the IT environment of another organisation through which access to the System and Technology Services is available or if, in order to protect the security or facilities of the System and Technology Services, ~~SITA~~ERS decides to disable the System and Technology Services or access to it.

22.2   Subject to clause 22.5 below, ~~SITA~~ERS excludes all implied representations, warranties, conditions and other terms whether statutory, collateral or otherwise, relating to the subject matter of this Agreement.

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22.3 Subject to clause 22.5 below, neither party shall be liable to the other for:

(a) indirect, special and consequential loss; or

(b) loss or corruption of data, loss of business revenue, loss of profits (whether direct or indirect), failure to realise expected profits or savings and any other economic loss of any kind)

in contract, negligence or other tort, under any statute or otherwise howsoever arising from or in relation to this Agreement.

22.4 Subject to clause 22.5 below and excluding the indemnity in clause 17.4, SITA's and any liquidated damages payable under Clause 15, ERS's total liability to Registrar for loss or damage of any kind not excluded by clause 22.2, however caused (whether in contract, negligence or other tort, under any statute or otherwise howsoever) arising from or in relation to this Agreement for all incidents related or unrelated in any period of twelve (12) months shall not exceed an aggregate amount equal to the annual Charges payable by the Registrar for such period.

22.5 Neither party excludes or limits its liability to the other party:

(a) for death or personal injury to the extent only that the same arises as a result of the negligence of that party, its employees or authorised agents;

(b) for fraud or fraudulent misrepresentation;

(c) arising under clause 12 of the Sale of Goods Act 1979 or clause 2 of the Supply of Goods and Services Act 1982; or

(d) for any other liability that it is prevented from restricting or excluding by law;

save in the case of (a)-(c) where that liability can be excluded or limited under applicable laws.

22.6 SITAERS shall maintain throughout the term of this Agreement suitable insurance from reputable insurers or underwriters in respect of all sums that it may become legally liable to pay to Registrar or other parties pursuant to this Agreement.

23. Insurances

23.1 **Insurance**. SITAERS agrees to keep in full force and effect and maintain at its sole cost and expense the following policies of insurance with the specified minimum limits of liability for the duration of this Agreement:

(a) **Workers' Compensation and Employer's Liability Insurance** in full compliance with, and if required by, the applicable Laws of the state and/or country in which the work is to be performed or the country of hire (whichever is applicable). Each such policy shall be endorsed to include an alternate employer or borrowed servant endorsement. The limits of liability of Workers' Compensation Insurance shall be not less than the limits required by applicable Law. The limits of liability of Employer's Liability Insurance with minimum limits of $1,000,000.00 per employee by accident, $1,000,000.00 per employee by disease, $1,000,000.00 policy limit by disease (or, if higher, the policy limits required by applicable Law);

(b) **Commercial General Liability Insurance** (including coverage for Contractual Liability assumed by ~~SITA~~ERS under this Agreement, Premises-Operations, Completed Operations--Products, Independent Contractors) providing coverage for bodily injury, personal injury and property damage with combined single limits of not less than US$1,000,000.00 per occurrence, US$2,000,000.00 in the aggregate;

(c) **Professional Liability** (also known as Errors and Omissions Liability) Insurance covering acts, errors and omissions arising out of ~~SITA's~~ERS's operations or Technology Services that includes coverage as follows:

  (i) coverage for software and operations development work, implementation, testing, training and maintenance of software and systems, including coverage for copyright and trademark protection;

  (ii) coverage for: (x) web and application hosting services including coverage for copyright and trademark protections and (y) network risk coverage for damages related to security breaches and unauthorized access including privacy damages, data destruction and misappropriation of data; and

(d) Professional Liability (Errors and Omissions Liability) Insurance policies shall have a limit of liability of no less than US$5,000,000.00 per occurrence and in the aggregate and with a retroactive date no later than the signature of this Agreement. ~~SITA~~ERS further agrees that Professional Liability/Errors and Omissions Insurance will be maintained for two years following the termination of this Agreement. Any incidents, accidents, claims or potential claims of which ~~SITA~~ERS has knowledge shall be communicated to Registrar within fifteen (15) days of such knowledge.

23.2 Each policy shall provide that it will not be cancelled or materially altered except after thirty (30) days' advance written notice to Registrar. Should any policy expire or be cancelled during the period of this Agreement and ~~SITA~~ERS fails to immediately procure replacement insurance as specified, Registrar reserves the right (but not the obligation) to procure such insurance and to deduct the cost thereof from any sums due to ~~SITA~~ERS under this Agreement. All insurance required under this section shall be primary insurance and any other valid insurance existing for Registrar's benefit shall be excess of such primary insurance. ~~SITA~~ERS shall obtain such endorsements to its policy or policies of insurance as are necessary to cause the policy or policies to comply with the requirements stated herein.

23.3 **Certificates**. ~~SITA~~ERS shall provide Registrar with certificates of insurance evidencing compliance with this article (including evidence of renewal of insurance) signed by authorized representatives of the respective carriers for each year that this Agreement is in effect. Each certificate of insurance shall provide that the issuing company shall not cancel, reduce, or otherwise materially alter the insurance afforded under the above policies unless notice of such cancellation, reduction or material alteration has been provided at least thirty (30) days in advance to Registrar.

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24. Notices

24.1 A notice, approval, consent or other communication in connection with this Agreement must be in writing, signed by the sender, and marked for the attention of the person identified in the details set out in clause 24.4 below.

24.2 They must be:

(a) delivered by hand and a receipt obtained at the address set out in the details;

(b) sent by prepaid, registered mail to the address set out in the details; or

(c) sent by ~~fax~~email to the ~~fax number set out in the details, with a signed copy of the fax sent by prepaid, registered mail to the~~email address set out in the details.

If the intended recipient has notified a changed postal address, or ~~fax number~~email address, then the communication must be to that address, or ~~fax number~~email address.

24.3 In the interests of business continuity, copies of all notices delivered pursuant to clause 19 shall be sent to the Supervisory Authority at the same time as they are delivered to the other party hereto.

24.4 Any notices given by the parties shall be addressed as follows:

Registrar:	To:	Regulis S.A. L-1330 Luxembourg, 48, boulevard Grande-Duchesse Charlotte, Grand-Duché de Luxembourg
~~SITA:~~		Email : [ISC to insert]
ERS:	To:	~~SITA Information Networking Computing (Ireland)~~Enterprise Registry Solutions Limited, ~~Building 1, Letterkenny Office Park, Windyhall, Letterkenny, Co. Donegal~~ Level 2, Number 4, Customs House Plaza, Harbourmaster Place, Dublin, Ireland
Supervisory Authority:	To:	The Secretary General, Intergovernmental Organisation for International Carriage by Rail (OTIF) Gryphenhübeliweg 30 CH - 3006 Berne *On behalf of the Supervisory Authority* ~~Fax: + 41 (0)31 359 10 11~~ E-mail: info@otif.org

25. Dispute resolution

25.1 If a Dispute arises the parties undertake in good faith to use all reasonable endeavours to settle the dispute expeditiously.

25.2 Neither party may otherwise commence court proceedings or arbitration relating to the Dispute except where that party seeks urgent interim or interlocutory relief.

25.3 Any party claiming that a Dispute has arisen may give a written notice (the "**Dispute Notice**") to the other party. The Dispute Notice must:

(a) identify the party's representative for negotiations relating to the Dispute, being a person with authority to settle the Dispute on behalf of that party; and

(b) set out succinctly the issues that are the subject of the Dispute and, with relevant particulars, a description of the circumstances giving rise to the Dispute and the relief sought including, to the extent possible, any amount claimed.

25.4 The recipient of the Dispute Notice must within 14 days of receipt of the Dispute Notice reply in writing to the other party. The Reply must:

(a) identify the recipient's representative for negotiations relating to the Dispute, being a person with authority to settle the Dispute on behalf of the recipient; and

(b) set out succinctly the recipient's response to the matters set out in the Dispute Notice and any additional matters the recipient considers relevant.

25.5 The representatives designated above will make whatever investigations each considers appropriate and, within 60 days of receipt of the Reply, use their reasonable endeavours to resolve the dispute on a "without prejudice" basis.

25.6 If the dispute is not resolved within this time, then the parties must resolve the Dispute by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force. The arbitration will be conducted in ~~London~~Dublin, in the English language and using one arbitrator.

26. General

Assignment

26.1 Subject to clause 10 and with the approval of the Supervisory Authority, either party may assign or otherwise deal with all or any of its rights under this Agreement, with the written consent of the other party, which shall not be unreasonably withheld or delayed.

Variation and waiver

26.2 A provision of this Agreement or a right created under it, may not be varied or waived except in writing, signed by the parties to be bound.

Discretion in exercising rights

26.3 A party may exercise a right or remedy or give or refuse its consent in any way it considers appropriate (including by imposing conditions), unless this Agreement expressly states otherwise.

SITA

Partial exercise of rights

26.4   If a party does not exercise a right or remedy fully at a given time, then the party may still exercise it later.

Entire Agreement

26.5   This Agreement, the Software Security Agreement and the Deed of Business Continuity contain the entire understanding between the parties and supersede any prior understandings and agreement between them respecting this subject matter. Each party agrees that it shall have no remedies in respect of any representation or warranty (whether made innocently or negligently) that is not set out in such agreements. No party shall have any claim for innocent or negligent misrepresentation based upon any statement in this Agreement.

Force majeure

26.6   Force majeure as used herein means acts of God, war, civil commotion, terrorist act, pandemic or insurrection and which neither party is able to overcome. As soon as possible after the occurrence of any cause constituting *force majeure*, ~~SITA~~ERS shall give notice and full particulars in writing to the Registrar of such *force majeure* if ~~SITA~~ERS is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Agreement. If the Registrar agrees that a *force majeure* has occurred, it shall so notify ~~SITA~~ERS in writing, specifying the date of the *force majeure*, and then the following provisions shall apply:

   (a)   the obligations and responsibilities of ~~SITA~~ERS under this Agreement shall be suspended to the extent of its inability to perform them and for as long as such inability continues;

   (b)   if ~~SITA~~ERS is rendered permanently unable, wholly or substantially, by reason of *force majeure* to perform its obligations and meet its responsibilities under this Agreement, the Registrar shall be entitled to terminate this Agreement on the same terms and conditions as are provided for in clause 19; and

   (c)   for the purpose of the preceding subparagraph, the Registrar may consider ~~SITA~~ERS permanently unable to perform in case of any period of suspension in excess of thirty (30) days. Any such period of thirty (30) days or less shall be deemed temporary inability to perform.

Convention not to apply

26.7   The International Convention on the Sale of Goods does not apply to this Agreement.

Exclusion of third party rights

26.8   The parties agree that, the parties to this Agreement do not intend that any term of this Agreement will be enforceable by virtue of the Contracts (Rights of Third Parties) Act 1999 by any person that is not a party to it.

SITA.

Severability

26.9 If any provision of this Agreement is found by any court, tribunal or administrative body of competent jurisdiction to be wholly or partly illegal, invalid, void, voidable, unenforceable or unreasonable it shall to the extent of such illegality, invalidity, voidness, voidability, unenforceability or unreasonableness be deemed severable and the remaining provisions of this Agreement and the remainder of such provision shall continue in full force and effect.

Export/Import control compliance

26.10 Registrar will, in relation to all services and rights it receives under this Agreement, comply with the applicable United Nations, United States, European Community and other country laws and regulations relating to governmental export/import control regulations, including the United States Presidential and Congressional prohibitions against trade and commerce with certain named countries, including those administered by the United States Office of Foreign Asset Control.

Conflicting Terms

26.11 In the event of conflict, the following order of precedence shall prevail;

    (a) any signed order approving Change Control;

    (b) amendments to the Agreement and schedules thereto

    (c) Schedules to the Agreement;

    (d) this Agreement (aside from schedules hereto).

Survival

26.12 The following Clauses will survive termination of this Agreement and will remain in full force and effect following the termination of this Agreement: clauses 16, 20, 21, 22.1 to 22.4, 24, 26, 27 and 28.

27. Governing law

27.1 This Agreement shall be governed by and construed in accordance with the laws of England and Wales.

28. Definitions and interpretation

28.1 **Definitions**

The following words have these meanings in this Agreement and the recitals:

Acceptance Criteria means the technical, functional and non-functional criteria as agreed in the test strategy as agreed between the parties prior to the commencement of PAT.

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Agile Methodology is a process for building software in an iterative and incremental manner where requirements and solutions evolve through collaboration. It does not rely on a fully formed specification of the system to be available before software development commences.

All Reasonable Efforts, when used in respect of an obligation under this contract, means diligent attempts to carry out such obligation using the standard that a reasonable motivated person in the same circumstances and of the same nature as the acting party would take.

Ancillary Service means any service, that is not a Registrar Service, utilising the resources of the International Registry and which is authorized by the Registrar and the Supervisory Authority under the Registrar Contract including but not limited to using the website, branding, personnel and data of the International Registry.

Archives or **Data Archives** means all Data permanently stored in the system of the International Registry for archiving purposes ~~and all Data mediums on which such Data may be permanently stored, such as CD-Roms, disks, tapes etc. but excluding hardware installations, such as PCs, servers, hard disks etc.~~.

Cape Town Instruments means the Convention and the Protocol on the Convention of International Interests in Mobile Equipment on Matters specific to Aircraft Equipment (ICAO Doc. 9794), signed at Cape Town on 16 November 2001.

Change Control means the processes and procedures, set out in Schedule 5 for approving changes to this Agreement or to the specifications for the International Registry.

Charges means the charges set out in Schedule 3 ("Pricing and Payment") in the manner set out in that schedule and any other amounts payable hereunder by the Registrar to ~~SITA~~ERS.

Claim means any claim, demand or action for infringement, or alleged infringement, of any patents, copyright, trademarks, design rights or trade secrets made by a third party.

Convention means the Convention on International Interests in Mobile Equipment, opened for signature in Cape Town on 16 November 2001.

Effective Date means the date of signature of this Agreement.

Confidential Information means all information furnished or disclosed, in whatever form or medium, by the Discloser to the Recipient before, on or after the date of this Agreement relating to the business, technology or other affairs of the Discloser or any of its affiliates. Confidential Information includes all of the trade secrets, designs, technical specifications, business plans, marketing plans, know-how, data, contracts, documents, business concepts, customer lists, customer data, costs, financial information, profits, billings, referral sources, existing or future services, products, operations, management, pricing, financial status, goals, strategies, objectives and agreements of the Discloser and any of its affiliates, all of which is deemed confidential and proprietary.

SITA.

Data and Archives means the information entered by the users of the International Registry, information relating to the users themselves, financial information relating to user licences, registrations and searches, registration statistics and all such other data (whether archived or not) relating to the International Registry, Data and Data Archives.

Data or Data Bases means the data or data bases generated in the operation of the International Registry or collected in consequence of or in the course of the operation of the International Registry in each case in relation to Registrar Services**.**

Day means a calendar day**,** and includes Saturdays, Sundays, and official public holidays.

Deed of Business Continuity means the deed signed on the Effective Date by the Supervisory Authority, ~~SITA~~ERS and the Registrar.

Discloser means the party disclosing Confidential Information.

Dispute means any dispute, controversy, difference or claim between the parties as to the construction of this Agreement, the rights or obligations of a party or any other matter arising out of or relating to this Agreement including any question regarding the existence, validity or termination of this Agreement.

Documentation means all documents, manuals and other information, whether in printed, electronic or other form, which are necessary for the operation of the International Registry, including in respect of the use of Software.

Effective Date means the date of execution of this Agreement.

Fee Threshold means the amount of [one million nine hundred thousand Euro (€1,900,000~~).~~).]

Final Acceptance Certificate means the certificate signed by the Registrar confirming the successful completion of the PAT and FAT.

Go-Live Date means the date that the Protocol enters into force pursuant to Article XXIII(1) of the Protocol.

Go-Live Operation Date means the date the Registrar issues the Final Acceptance Certificate in accordance with clause 7 (Acceptance).

Indemnified Parties means the Supervisory Authority, the Preparatory Commission, the Secretariat, as well as the officials, agents, servants, representatives, co-chairpersons, employees and subsidiary bodies of the Supervisory Authority, Preparatory Commission, and the Secretariat and an Indemnified Party means any one of them.

Initial Term means the period of time commencing on the Effective Date and expiring ten (10) Years from the Go-Live Date.

SITA.

Insolvent means having an administrator appointed, being in receivership, in liquidation, in provisional liquidation, wound up, subject to any arrangement, assignment or composition, protected from creditors under any law, dissolved (other than to carry out a restructure while solvent) or being otherwise unable to pay debts when they fall due or having something with the same or a similar effect happen under the laws of any jurisdiction.

Intellectual Property Rights means all intellectual property rights including current and future registered and unregistered rights in respect of copyright (including rights in software and databases), database rights, domain names, websites, designs, circuit layouts, trade markstrademarks, patents, inventions and discoveries, rights in Confidential Information, and all other intellectual property as defined in article 2 of the Convention establishing the World Intellectual Property Organisation 1967.

International Aircraft Registry means the registry established under the authority of the Cape Town Instruments.

International Registry means the international registry for railway rolling stock as established by the Convention and the Protocol.

International Registry System means all Data and Archives, software (including but not limited to the Licensed Materials) and the operational and security protocols required to operate the International Registry in accordance with the MSA.

Invocation Notice has the meaning set forth in the Deed of Business Continuity.

Licensed Materials shall have the meaning set forth in the Software Security Agreement

Materials means all trade secrets and know how in software which show, display, describe or contain information about other material (including without limitation graphical user interfaces, screen layouts, user command sets, functional structures, database structures, tables, stored procedures and business logic.

Model Licence Agreement means the model agreement as set out in Schedule 1 to the Software Security Agreement.

New Service Provider means any third party provider of the Registrar Services which replaces the Registrar who cannot be a direct competitor of ERS without the prior written consent of ERS.

Notification Date means the date that the Ratifications Task Force notifies the Secretariat of the Target Date pursuant to clause 7.2 of the Registrar Contract.

Notification to Begin Date means the date which is no more than twenty four (24) hours after the Notification Date

Personal Data means any data defined as such under the Data Protection Act 19982018 or successor UK legislation thereto.

Preparatory Commission means the Preparatory Commission established pursuant to Resolution No. 1 of the Luxembourg Diplomatic Conference to act as Provisional Supervisory Authority until the Go-Live Date.

Project Implementation Plan means the detailed Project Plan in Schedule 6 as amended from time to time by the parties.

Protocol means the Luxembourg Protocol to the Convention on International Interests in Mobile Equipment on Matters Specific to Railway Rolling Stock, signed in Luxembourg on 23 February 2007.

Provisional Acceptance Certificate means the certificate signed by the Registrar confirming the successful completion of the PAT.

Ratifications Task Force means the task force constituted under clause 7.1 of the Registrar Contract.

Recipient means the party receiving the Confidential Information.

Registrar Contract means the contract between the Registrar and the Preparatory Commission signed on the Effective Date.

Registrar Services means the International Registry services described in clause 9 of the Registrar Contract.

Regulations means the regulations made or approved by the Supervisory Authority in accordance with Article 17(2)(d) of the Convention, as amended from time to time.

Regulations Draft First Edition means the version of the Regulations that will be issued by the Preparatory Commission prior to the Go-Live Date as the draft First Edition of the Regulations, and which will be based on the Baseline Regulations (as attached to the Registrar Contract) and modified, where appropriate, to incorporate by analogy the changes from the 5th8th edition to the edition of the regulations being, as at the Notification Date, the most latest approved by the Council of the International Civil Aviation Organisation (ICAO), in respect of the operation of the International Aircraft Registry (minimum the 6th9th edition).

Secretariat means the Secretariat to the Supervisory Authority referred to in Article XII(6) of the Protocol.

Service Levels means those service measurement parameters as described in Schedule 4.

~~**Services** means the services described under this Agreement and more specifically in the System Design Document (Schedule 2).~~

Software means the version of the software used for the operation of the International Registry on or after the Go-Live Date.

Software Negotiated Value shall have the meaning set forth in the Software Security Agreement and payable in accordance with the Model Licence Agreement.

Software Security Agreement means the Software Security Agreement signed by ~~SITA~~ERS, the Registrar and the Preparatory Commission on the Effective Date.

Supervisory Authority means

SITA

(a) from the Commencement Date to the Go-Live Date – the Preparatory Commission acting in its capacity as Provisional Supervisory Authority for the future Supervisory Authority;

(b) from the Go-Live Date – The Supervisory Authority established in accordance with Article XII(1) of the Protocol.

Supplemental Charge means an amount equal to sixty percentage points (60%) of gross revenues from fees received by the Registrar for Identifier Reservation Services, ~~Professional User Account Services~~ and other services pursuant to the Registrar Contract increasing to ninety-two percentage points (92%) once the Fee Threshold has been met.

System means the system made up of the hardware, infrastructure, software and the Software which is made available by ~~SITA~~ERS to the Registrar to obtain the Final Acceptance Certificate in accordance with clause 7 (Acceptance) and any subsequent changes in accordance with the Change Control Procedure in Schedule 5.

Target Date means the date as determined in accordance with the Registrar Contract.

Technology Services means the services provided by ERS under this Agreement and more specifically in the Design, Implementation and Operational Requirements (Schedule 1).

Term means the term of this Agreement pursuant to clause 2 herein.

Termination Event means an event under this Agreement pursuant to which the Registrar is entitled to terminate the Agreement.

Test Strategy means an outline that describes the testing approach of the software development cycle to a product/solution. Test Strategy describes how the product risks of the stakeholders are mitigated at the test-level, which types of tests are to be performed and which entry and exit criteria apply.

Tax means value added tax, sales tax, excise tax, gross receipts tax and withholding taxes, and any similar tax which may be applicable thereto, together with any related interest, penalties, fines and expenses in connection with them except if imposed on the overall net income or a party.

Transfer Date means the date as determined in accordance with the Deed of Business Continuity.

Transition Fees means reasonable consideration for the provision of the Transition Services by ~~SITA~~ERS, taking into account the time incurred by ~~SITA~~ERS, to be agreed with ~~SITA~~ERS, or in the absence of agreement determined by the Supervisory Authority.

Transition Services means the activities below:
- any activity the Registrar has to carry out at the request of the Supervisory Authority to move the operation of the International Registry to the New Service Provider;

- any training for the New Service Provider to support and develop the Software; and

- project management services for the migration of the International Registry to the New Service Provider.

SITA.

Transition Period means the period up to twelve (12) months as the Registrar or the Supervisory Authority may elect for which the Registrar requests and during which ~~SITA~~ERS shall supply the Transition Services.

User Manual means the user manual similar to the International Aircraft Registry User Manual but specifically amended for the International Registry.

User Registration means that a prospective user of the International Registry is able to use the user registration functionality as described in the ~~System~~ Design ~~Document~~, Implementation and Operational Requirements (Schedule ~~2~~1) to allow the registration to be processed by Registrar.

Year means a period of 12 months starting on the Go-Live Date or the anniversary thereof.

28.2 Reference to terms

Unless the contrary intention appears, a reference in this Agreement to:

(a)   this or the "Agreement" and this "MSA" means this agreement and includes the schedules, which form part of this agreement for all purposes;

(b)   a "party" or the "parties" is to the party or the parties (as the case may be) to this Agreement and includes any permitted assignees of a party;

(c)   the word "person" includes an individual, a firm, a corporation, an unincorporated association, government, state or agency of state, association, partnership or joint venture;

(d)   the words "include", "including", are not used as, nor are they to be interpreted as, words of limitation;

(e)   a statutory provision includes that provision as from time to time modified or re-enacted or consolidated whether before or after the date of this Agreement.

28.3 Headings

Headings are inserted for convenience only and do not affect the interpretation of this Agreement.

28.4 Construction

No rule of construction applies to the disadvantage of a party because that party was responsible for the preparation of, or seeks to rely on, this Agreement or any part of it.

EXECUTED as an agreement

For ~~SITA~~ERS   For Registrar

Name   ....   Name

Title   ....   Title

SITA

Signature .... Signature

Date .... Date

SITA

AMENDED AND RESTATED MASTER SERVICES AGREEMENT

SCHEDULE I

DESIGN, IMPLEMENTATION AND OPERATIONAL REQUIREMENTS

This note summarises the principal duties and obligations of the Registrar concerning the setting up and running of the International Registry.

1.   The International Registry ("Registry") will facilitate the registration of, and searches against, international (security) interests, such as leases or asset pledges in relation to railway rolling stock as well as prospective international interests[1]. It will design and implement the necessary electronic forms to collect the correct information for registration of international interests (and of prospective and fractional interests)[2] and assignments, subordinations, and subrogation thereof as well as searches against those interests. Similar facilities will be needed for the registration of, and search against, a notice of sale of individual items of railway rolling stock. Registrations of international interests entered into the International Registry data base must be searchable in chronological order of receipt, with the file recording the date and time of receipt. The Registry will also need to have a mechanism for notifying parties who have already registered international interests of any subsequent registrations on the same asset, for discharging international interests, registering pre-existing interests[3] and national interests, correcting errors and facilitating user name changes.

2.   Critically, the Registry will be able to register an international interest against a group of assets (for example, 1,000 wagons) with each asset having its own unique identification (URVIS[4]) number and allow searches against such groups, which would be separately identified with a special file number established by the Registry or the user. The Registry will provide for agreed (between the creditor and debtor) substitutions or modifications of the asset group.

3.   A special process is required to register non-consensual rights and interests under Article 40 of the Convention, requiring the asset(s) concerned to be marked with URVIS numbering and to block, as far as reasonably determined, abuse.

4.   Both the registrations and searches will be conducted seamlessly through the internet 24/7/365. Registrations and searches will be conducted through an online portal as well as mobile applications. The Registry and all data will be hosted in the cloud at data centres maintained and operated within the European Union under a separate contract with Microsoft Azure, AWS or another globally recognised and credible cloud service provider (the "Cloud Provider") and the data should be backed up in a different location (or region) separate to the source region for business continuity or disaster recovery. The Supervisory Authority will be notified as to the name of the Cloud Provider and be provided with a copy of the contract with the Cloud Provider, subject to the redaction of confidential and/or commercially sensitive terms. Additional functionality should be contemplated as the Registry evolves, for

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[1] And searches against creditors and debtors but only with their consent.
[2] As required under section 5.3 of the Regulations. It will be important to include in the online form for registration the jurisdiction in which the debtor is located. This can, for example, be done by a drop-down menu. If the registration is by reference to the URVIS number, the form will need to include a provision whereby the registering party will confirm compliance with the UN ECE Model Rules on the Permanent Identification of Railway Rolling Stock
[3] See Article 60 of the Convention as potentially modified by a declaration made pursuant to Article 60(3) as revised by Article XXVI of the Protocol.
[4] See below.

example, registering interests on assets through the use of QR codes or other form of asset authentication or validation codes.

5.   The Registry will need to provide priority search certificates showing the interests registered against a specific item of rolling stock either on demand or under a "standing order" system as well informational, contracting state and Registry user entity search certificates on demand, in each case against payment.

6.   The Registry will provide a closing facility so that a succession of transactions can be closed and registered sequentially.

7.   User access will be through a digitally secure multifactor authentication system with standard two factor (minimum) access system (similar to password and QR access systems used by banks) and not be dependent on pre-authorised computers. The Registry will provide a facility for individuals to create online accounts. Upon initial setup, individuals will be considered "unverified". Unverified users cannot perform registrations, only searches.

8.   An individual can verify themselves by providing identifying information to the Registry. Upon verification, the user is considered "verified" and can now perform a registration on their own behalf. A verified user will also be able to designate alternates with full authority to make registrations (but not to appoint alternates) subject to ID verification by the Registrar[5].

9.   To operate on behalf of a legal entity, the verified user must submit a request to qualify and set-up such legal entity as a party qualified to make registrations in the Registry. This process must include evidence that the verified user has sufficient privileges to act on behalf of the entity.[6] Once this process is completed, the verified user will be able to perform a registration on behalf of the legal entity. The verified user will also be able to manage access to the legal entity, i.e., add other verified users who can perform transactions on behalf of the legal entity.

10.   Verified users will be able to set up their own pre-funded, privileged, direct access accounts with direct secure access to the Registry.

11.   The Registrar will prepare official Procedures[7] dealing with the logistics of its services, and terms and conditions for users, to be approved by the Supervisory Authority.

12.   The Registry will publish and abide by the fee schedule for its services, as approved by the Supervisory Authority, but may introduce discounts and incentives as long as they are non-discriminatory.

13.   The Registrar will set up, manage and maintain a secure (TLS1.2+ and proper SSL certificates and OWASP WCAG 2.1 or later guidelines) user-friendly applications and website available 24/7/365 with SLA as set out in Attachment I to Supervisory Contract using the Registry domain owned and made available by the Supervisory Authority and will upload official and other[8] information to its website as directed by the Supervisory Authority.

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[5] The process will need to provide functionality to access hierarchical user access where a super user can assign different sets of roles to the other users (alternates) working for the super user.
[6] The technical design should include a facility that allows the verified user to set up a group of qualified entities.
[7] As authorised by the Regulations.
[8] For example, declarations of compliance with the Model Rules on marking of rolling stock (and revocation of such declarations) with a link to the UNECE website.

14. The Registry will utilise a third-party PCI[9] compliant secure payment gateway which accepts credit card and other payment types for payment for services. The Registrar must not accept cash payments or payments in cryptocurrencies.

15. The Registry will also create a highly secure data storage system and secure digital access to the Registry for users.

16. The Registry will also facilitate secure direct access to the Registry from other national registries, through which registrations are to be made.

17. The Registry will store and automatically issue unique identification numbers (URVIS) for railway rolling stock and, if requested by a registered user, may also issue such numbers for a class of components[10]. This number will be 16 digits, including a check digit using the Luhn mod 10N algorithm (no leading zero). The Registrar may wish to facilitate requests for customised numbers.

18. The Registry will issue confirmations when relevant data about an entity (e.g. name) changes.

19. The Registry will monitor any glitches its procedures and equipment may produce, correct any resulting errors and issue corresponding notices to affected parties.

20. The Registry will provide some filings or contracts for information purposes, provided that these documents do not affect the rights of any person.

21. The Registry will provide a staffed helpdesk during European office hours, an FAQ page and a help feature on its website, including detailed instruction videos and manuals.

22. The Registry will complete and provide evidence of third-party Registry system testing (including user acceptance, functional, load and security testing), as well as run complete penetration testing by a recognised CREST approved penetration testing organisation in advance of go-live, along with documentation of Registry standards for records, data and operating procedures, which will be reviewed regularly and externally auditable, at the Registrar's cost, based on a schedule agreed with the Supervisory Authority.

23. On the Go-live date, the Registry must be GDPR compliant. Within a reasonable period of time in the context of industry standards and in alignment with the project implementation plan, the Registry will become compliant with ISO 27001 and other ISO and non-ISO standards considered appropriate by independent third party auditors, as agreed upon in advance by the Registrar and Supervisory Authority[11].

24. The Registry must maintain and make available on the Registry website a privacy policy detailing how personal data is collected and processed and for what purpose, as well as establish a system for opting into any website cookies and to deal with subject access requests.

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[9] The Payment Card Industry Data Security Standard.
[10] E.g. wheel sets or brakes.
[11] Names to be agreed in advance; auditor costs are for the Registrar.

25.   The Registry will document a business continuity plan and a disaster recovery plan and will undertake annual business continuity and disaster recovery exercises. This will also be subject to an independent third party audit.

26.   The Registry will be compliant with applicable international sanctions and EU rules on money laundering, bribery and corruption.

27.   The Registry will need to manage and respond to a complaint process.

28.   The Registry must maintain updated registration statistics and shall publish them in an annual report. This report shall be electronically accessible to any person.

29.   Currently, the Registry will operate only in English but there could be the possibility of adding additional languages at a later date.

30.   The Registry will operate under Regulations issued by the legal successor to the Preparatory Commission, the Supervisory Authority, that come into operation on the day the Protocol enters into force in contracting states.

31.   The Registry will issue guidance notes from time to time concerning the implementation of the Regulations and Procedures affecting its operation. It will also need to make electronic copies of all of the aforementioned documents available to the public at no cost.

32.   The Registrar and the Registry may offer ancillary services with the prior written consent of the Supervisory Authority.

33.   The Registrar will maintain a regular dialogue with the Supervisory Authority, acting through the Secretariat (OTIF), and pay the Secretariat its pre-agreed fees.

34.   The first Registrar, Regulis S.A. ("Regulis"), or companies within its group have detailed experience of running asset registries. To that end, Regulis may use proprietary software and/or open access software. It is a clear condition of its retainer that the Registrar holds all data concerning the security interests, the website and the Registry domain on behalf of the Supervisory Authority and may not use such data, website or domain other than for providing the Registry services except where authorised by the Supervisory Authority.

35.   The Registrar will operate the Registry for a minimum term of ten (10) years. There must be a facility to upgrade storage and operational software as is usual in the industry.

All Schedule 1: Statement of Work

36.   1.   Purposedata on the Registry must be kept in a format that allows its unrestricted portability in a readable form using open source or generally available licensed software.

SCHEDULE II

SYSTEM DESIGN DOCUMENT

Intentionally deleted, as replaced by Design, Implementation and Operational Requirements in Schedule I.

SCHEDULE III

PRICING AND PAYMENT

The figures below are provided as an indicative estimation of the set-up and operational costs of the Registrar and ERS. The cost table below is based on the indicative costs provided in the attachment approved as part of the 2014 contract.

It is important to note that these costs are indicative estimates and will be refined and further detailed during design, establishment and development phases. Given that these costs are also based on 2014 estimates, it is anticipated some overall adjustments to account for matters including market adjustments and cost of living increases may be required for certain items (i.e., insurance, salaries).

The purpose of this Schedule is to describe the System and Services provided by SITA to the Registrar which in summary consist of the following:

- software development services based on the International Aircraft Registry application;
- software support services;
- maintenance services;
- hosting services;
- Registry Official services;
- Certificate Authority services; and
- project management services in accordance with the Project Schedule (Schedule 6).

2.   Requirements

2.1   The Registrar's business requirements include the following:

- The System usability will be in line with industry best practice in accordance with an external auditing procedure as carried out in accordance with clause 18 (Technology and Security Assurance). Changes necessary to remain in line with industry best practice will be introduced through the Change Control Procedure in Schedule 5.

- Live operations will begin within twelve (12) months of the Notification to Begin Date as per the Project Plan.

- The requirements defined in the System Design Document Schedule 2, or agreed changes in subsequent versions through the Change Control Procedure in Schedule 5.

- Design, build, commission and operation of the International Registry as specified in System Design Document Schedule 2, or agreed changes in subsequent versions through the Change Control Procedure in Schedule 5.

- 99.6% Service Availability of the System.

- 8am to 6pm, (Irish Business Hours, excluding Irish Public Holidays) technical support of the infrastructure and application available electronically and by telephone.

- Performance – the application must be designed to handle the volume of transactions estimated in the System Design Document.

- Reporting information – Registrar requires access to the raw statistics information to be able to generate reports on a regular or ad hoc basis. Data shall be in a standard format, which can be imported into 3rd party software packages (e.g. in CSV format).

- Project, operational and service management.

2.2   Future Requirements (outside the scope of this MSA):

* Multi-lingual user interface

* Multi-currency

3.   System Overview

3.1   The System is based on the International Aircraft Registry application to provide the functionality described in the Regulations and will include, but will not be limited to, the following:

A high integrity Registration database

1.

2. User Application and Approval functionality

3. Asset Registration functionality

4. Asset searches functionality (informational and priority)

5. Administration User support functionality

6. Resilient architecture hosted at two (2) locations

7. Data synchronisation between the two (2) locations

8. Logs of all transactions

9. Security and access control infrastructure

10. Internet access

Help desk and support infrastructure

11.

12. Payment infrastructure

13. Tax calculator

14. Production of electronic invoices, credit notes etc

15. Certificate Authority capability

16. URVIS identifier system

Multiple registration and search capability for Users

17.

All as specified in detail in the Regulations.

4. Responsibilities

4.1 The Services provided under this MSA by SITA to the Registrar include:

- Infrastructure design, procurement, commissioning and testing
- Software design, development, testing and deployment
- Operational
  - Software Support and bug fixing
  - Database administration
  - Security management
  - System Monitoring and management for all physical infrastructure and software components including server operating systems and database management systems
  - Hosting, including equipment refresh after five years
  - Up to date technical Documentation
- Registry User Support
  - Provision of competent and trained registry official staff
  - Provide System functionality support to users on behalf of the Registrar
  - Second line business support
  - Development of user training material
  - Online training sessions
  - User vetting
- Payment gateway system
- Digital Certificate Certification Authority
- Reporting of operational statistics and information
- Facilitation of training
  - Arranging training of Registrar Staff at the International Aircraft Registry

4.2 SITA and the Registrar shall carry out their respective responsibilities as set out below and agreed between the parties in accordance with the Change Control Procedure in Schedule 5.

Establishment

Phase   SITA Responsibilities
Software Development

-

  o The International Aircraft Registry Software will be extended to provide the full functionality in the Functional specification which will be based upon the Regulations Draft First Edition.

    - SITA will develop the functional specification for approval by the Registrar to match the requirements of the Regulations Draft First Edition.

    - SITA will use an iterative development process with the Registrar and Supervisory Authority.

- o The Application Design will be reviewed by an independent qualified engineer or security specialist company from a security perspective with particular emphasis on the secure coding standards used on the components of the system that guarantee data integrity – such as digital signatures and tamper checking etc.

- o A comprehensive test of the Software will be conducted including regular unit and integration tests during development, UAT testing, security review and non functional testing. Reports will be provided at each stage.

- Registry Officials

  - o Selection and hiring of three (3) Registry Officials to a standard similar to the Registry Officials on the International Aircraft Registry.

  - o Training: The outputs will be training course material which will be used by SITA for an initial training course (expected to be 1 day). The material for further internal courses, if required.

- Familiarisation Training

  - o Registry Officials will be provided with initial familiarisation training, prior to Go Live Date, through a secondment, of at least three months, to the International Aircraft Registry (at SITA's expense) where they will be trained in the procedures of the International Aircraft Registry and will work as International Aircraft Registry Officials. Upon completion, the Registry Officials will return to their duties in the International Registry and prepare for Go Live Date.

  - o Subject to the Registrar paying for all necessary Registrar travel and subsistence costs the Registrar Director of Operations will be provided with an opportunity for familiarisation training, including on the duties of a Registry Officials and on the arrangements which Aviareto has in place for the operation of the International Aircraft Registry.

  - o SITA will facilitate familiarisation training for the Registrar with the MD of Aviareto on the governance structures and controls used at Aviareto including arrangements for working with the supervisory authority, the industry through representative and advisory bodies, insurance procurement and compliance controls which the International Aircraft Registry has put in place.

  - o SITA will make the Registry Officials and any other relevant SITA staff available for familiarisation training with the Rail industry and Secretariat on a not to interfere with the Services basis with travel and subsistence paid by the Registrar.

- Infrastructure

  - o Design a suitable platform – providing an equivalent platform to that proposed in the System design document (Schedule 2). Data integrity and security is paramount. The design document will be the property of the Registrar.

- o Procure, install, commission, test and hand over with adequate support documentation and processes the infrastructure i.e. the hardware and 3rd party software and associated warranties on which the International Registry operates and the hosting and support infrastructure for the International Registry

- o PKI – Install PKI gateway software and necessary firewall rules and networking to connect to PKI supplier.

- o Payment gateway – Install payment gateway software and necessary firewall rules and networking to connect to PKI supplier

- Network Operations

  - o Install management systems which can actively manage and monitor all network nodes, servers, firewalls, and other equipment and software

- Data Centre Hosting

  - o Provide a resilient hosted environment for Primary and Disaster Recovery operations.

  - o Adequate physical security

  - o Hands On support

- Operational Service Planning and Preparation

  - o Develop, document, and test documentation which describes how the operational service will be delivered, in conjunction with the Registrar and any hosting sub-contractor

  - o Prepare for operational readiness by training of staff and exercising the plans

- Project Documentation including:

  - o Functional specification using the Contour system
  - o Process Flow Diagrams for the System
  - o Processes, adapted from the International Aircraft Registry ISO 27001 and ISO 9001 systems, suitable for the International Registry at Go Live Date.
  - o International Registry Infrastructure Diagram with description
  - o User Manual
  - o Operations Manual for use by the SITA Hosting and Operation staff (including procedures for incident handling, change management)
  - o System Security Document
  - o Disaster recovery policy and procedure
  - o Test plan
  - o Project Plan and ongoing project reviews from establishment until Go Live Date including Application development, infrastructure procurement and installation, staff preparation etc.

- Customise website appearance under Registrar direction implementing SITA's obligations herein but, subject thereto, following the basic structure of the International Aircraft Registry website with material variations from this specification being subject to the Change Control Procedure in Schedule 5.

- Acceptance testing.

- Commissioning and non-functional testing at hosting and back-up locations

Ongoing Operational Phase – SITA Responsibilities

- Data Protection Arrangements

- SITA will comply with its duties under the applicable data protection legislation

- Software Support

  - Second and Third Level software support will be provided from 8am to 6pm, Irish Business Hours, Monday to Friday (excluding Irish Public Holidays) i.e. defect investigation, replication, reporting, recording, fix development, testing and deployment. New releases (which extend the functionality of International Registry) will be dealt with through the Change Control Procedure in Schedule 5.

- Registry Officials Services

  - Registry Officials shall vet, train, and support users of the International Registry web site in accordance with procedures approved by the Registrar. Registry Officials will provide users with telephone assistance to explain how users can use the International Registry, make payment, and efficiently conduct business. Registry Officials will work in teams of two or three. Teams are rostered to cover the main business hours of our worldwide users.

  - Management of Registry Officials by SITA so that Registry Officials can provide support to users during normal Irish business hours. Registry Officials will provide all of the services required under the Regulations and currently practised by the International Aircraft Registry Officials at the Effective Date of this MSA detailed procedures will be agreed with the Registrar in accordance with the Change Control Procedure in Schedule 5.

  - If transaction volumes exceed the capacity of the three (3) Registry Officials, additional Registry Officials will be added through the Change Control Procedure in Schedule 5.

- Infrastructure

  - Hosting in data centre/s in Luxembourg suitable for business critical IT systems.

  - Maintaining and managing the infrastructure including equipment, operating systems and off the shelf software such as Oracle etc.

  - Infrastructure administration and support including

- All hardware and software

- Storage

- Oracle Database

- Network and security equipment

- Patch Management

o Reporting – Comprehensive Monthly Operations Reports (by 20th of following month) supplemented by ad-hoc reports including, *inter alia*, incident reports when requested. The reporting, which will cover all activities under this Agreement including consolidating the reports of subcontractors used by SITA to deliver services under this Agreement, will be as specified by the Registrar. Data and reports required by the Regulations and Procedures (issued pursuant to the Regulations).

o Securing the infrastructure by, *inter alia*, patch management on all devices, monitoring of all equipment for security breaches and facilitating regular and ad-hoc external security reviews.

o Manage PKI gateway and establish processes to manage certificate renewal and support of PKI software and issues. Ensure adequate expertise is available.

o Manage payment gateway and establish processes to support payment gateway software and issues. Ensure adequate expertise is available.

o Project Management of infrastructural changes arising from the above

o Management of a robust change management process which will be agreed between any third party hosting suppliers, SITA and the Registrar

o Update the Infrastructure Design document as changes are made and provide copies to the Registrar.

o In the case Disaster is declared, ensure the timely implementation of the DR plan in conjunction with the Registrar.

o Annual DR testing

- Management

o Report and Billing raw statistic generation

o Provision, configuration and maintenance of a CRM system allowing ROs to handle email or phone queries. The CRM will be fully accessible to the Registrar.

o Provision of a Phone system or service supporting ACD and reporting on call statistics to such as calls received, handled, abandoned, not staffed, abandon times and other basic ACD call statistics.

o Provision of a software requirements gathering system i.e. Contour which will accessible to SITA and the Registrar.

- Technical support for data issues such as when Tamper Check triggers or when registrations are left on the queue unprocessed.

General Registrar Responsibilities

The obligations of the Registrar shall include, but not exclusively, the following:

- Specification of the interface with Registrar accounting system
- Banking arrangements to support payment of fees by end users
- Provision to SITA of the Regulations and Procedures issued pursuant thereto, the Convention and the Protocol and clarification/explanation of these documents where necessary
- Sign off System design specifications using an incremental development methodology
- Define/agree reporting interface requirements
- Provide a single point of contact for project technical and commercial issues
- Sign off any project change orders as required
- Marketing requirements including names and URLs

Agreement of report formats, which shall be fully in place within three (3) months of Go Live Date.

-

- The Registrar will provide to SITA summary information on its contract with the Supervisory Authority and where relevant, at the discretion of the Registrar, a copy of that contract to SITA.
- Where possible arrange familiarisation training for the benefit of the Registry Officials with the rail industry and OTIF.
- Review and approval of procedures to be adopted by the Registry Officials for the Registry Official Services

Delivery Plan

- SITA will carry out its obligations in accordance with the Project Schedule in Schedule 6 subject to the following assumptions:
  - the following timescales shall remain:

ID	Name	Costs	Start	Included Items	Finish
1	**Phase**Phase 1 – Finalise Negotiations and Sign	**Costs**	02 June 2014**Included Items**		12 Nov 2014
7	Phase 2 – Drive Initial Ratifications		11 Dec 2014		03 Aug 2015
12	Phase 3 – PreEstablishment and Development ActivitiesCosts of the Registrar	€235,000	13 Nov 2014Legal Expenses, Hiring Costs, Administration and Set-Up		15 Jan 2016
		€435,000	Personnel		
		€155,000	Audit and Professional Services		

Annual Registrar Operating Costs (subject to inflation adjustments)	€163,000	Audit, Insurance and Other Services		
	€26,000	Secretariat Charges		
~~23~~	~~Phase 4~~ Establishment ~~Phase~~and Development Costs of the Prime Subcontractor	€515,000	~~03 Aug 2015~~Infrastructure, Security and Set-Up	~~18 Jul 2016~~
~~54~~		~~Phase 5 – Live Operational Phase (Go Live Date)~~€565,000	Software Configuration and Development	~~15 Jul 2016~~ ~~21 Jul 2016~~
		€105,000	Software Audit and Testing	
		€100,000	Design, Administrative and Other Expenses	
Annual Operating Costs of Prime Subcontractor (subject to inflation adjustments)		€430,000	Personnel	
		€698,000	Application Maintenance and Support, Hosting, Security, Certificates and Testing	
		€125,000	Insurance, Audit, Facilities and Other Expenses	

Comments in margin: Celle eliminate; Celle eliminate; Celle eliminate

- ~~Progress shall be monitored using regular status reports against a Project Schedule in Schedule 6 and progress meetings between Registrar and SITA. The Proposed Schedule assumes:~~
  1. ~~Signature of this MSA by the middle of Dec 2014~~
- ~~Adjustments to these dates will be reflected in the working Project Schedule.~~

Schedule 2: System Design Document

System Design ERS may second its personnel to another part of ISC or to third parties at arm's length. Rates and income therefrom shall be credited against its yearly operating costs.

SCHEDULE IV

SERVICE LEVEL AGREEMENT

1. **Purpose**

The purpose of this Schedule is to describe the indicative design for the System. System must meet the system requirements below. The technical design of the System will be similar or functionally equivalent to the indicative design noted below in paragraph 3 below.

The purpose

The Software will be based upon the functionality of the International Aircraft Registry software at the Notification Date and the Regulations Draft First Edition.

The Software will also include the following features

- Multiple asset registration (with multiple registration file number)
- Multiple asset search facility
- Ability to include running numbers as part of a registration
- Informational searches against running numbers, which returns the URVIS numbers and information similar to that included in the International Aircraft Registry Informational Search.

System Performance Estimates:

The System must be capable of handling the following transaction volumes

1. One hundred (100) simultaneous users logged on at peak and fifty (50) on average
2. Five Thousand (5,000) registrations made per month with a peak of five hundred (500) per day or one (1) per minute.
3. Four Thousand (4,000) search certificates issued per month with a peak of four hundred (400) per day or one (1) per minute.

For the avoidance of doubt, a registration of multiple items is counted as one registration.

2. **System requirements**

Introduction

The following are the minimum system requirements for the System.

Environment - Telecommunications

The System shall provide:

1. Accessibility using a current standard telecommunications protocol, e.g., Transmission Control Protocol/Internet Protocol (TCP/IP), and the World Wide Web. The protocol defines a common set of rules and signals that enables computers on the network to communicate.
2. Version-level compatibility between the server operating system (OS), the server, Relational Database Management System (RDBMS), and the software.
3. Fault-tolerance, i.e., the ability of a system to respond to an unexpected hardware or software failure. This is subject to the reduced design being proposed to reduce initial costs where resilience of the primary site will rely on the Disaster Recovery site.
4. A web-based system, with multi-tiered architecture, having the flexibility to optimize performance and reduce resource bottlenecks. For example, these components may include:

a. The presentation processing logic layer (the application code that interacts with a device, e.g., end user's terminal).
b. The business processing logic layer (the application code that uses the input data to perform business tasks).
c. The data manipulation logic layer (the application code that manipulates data within the application).
d. The database management system processing layer (the actual processing of the database data that is performed by the Database Management System (DBMS)

Environment – Workstation
1. The System shall provide access to users through common Internet browser products, released within the past two years. The Internet browser must be capable of employing data encryption, with the ability to access an Internet or Intranet web site. This is subject to the system, in this regard, being similar to that in use for the International Aircraft Registry.
2. The System shall be compatible with a workstation or resources found in a typical office automation setting and an upward compatible processor to allow Software to run not only on the computer for which it was designed, but also on newer, larger, and more powerful models without converting the data. This is subject to the System, in this regard, being similar to that in use for the International Aircraft Registry
3. The encryption and user verification systems must permit the registered users to access the International Registry using a hardware-specific digital certificate issued by the International Registry which creates a secure channel to the International Registry.

Database
The System shall provide, subject to the manufacturer limitations, data access methods to ensure adequate system and data availability for system users as follows:
1. Data integrity and processing consistency by defining system level validation rules and business logic at the server database;
2. Capabilities to perform hot backups to ensure high system availability while supporting up-to-the-minute database recovery;
3. Enhanced configuration management support through a centralized implementation of business logic;
4. Flexible access by users needing data access through other commercial-off-the-shelf software packages, e.g., downloads to manipulate data on a spreadsheet;
5. Automated tools to assist in analyzing the data in respect to System performance.

Security
The System's security shall provide:
1. Firewalls to prevent unauthorized access to or from private networks. For greater security, data will be encrypted;
2. The ability to restrict access to the System, or to particular features of the System, to registered users;

3. A feature to logoff registered users because of inactivity;
4. Limitations of access to appropriate System components, i.e., administrative database functions, data entry, views, or reporting of users based on roles, privileges, and access availability.
5. Limitation of access for users to the operating system. Access will be only available through the presentation layer.
6. Software encryption processing that occurs between the client application layer and the software server. All transactions for registration will utilize data encryption while in transmission.
7. An on-line method to create and assign user identifications and passwords.
8. The System shall include automated tools to record pertinent data in respect of the security and to provide assistance in analyzing this data.
9. Physical access security shall be required to the central service site.

Maintenance
The System must be regularly maintained, with maintenance to include, but not be limited to, hardware, software and telecommunication systems. All maintenance problems must be resolved as soon as possible and so as to ensure system availability in accordance with system reliability requirements. If a maintenance problem cannot be resolved immediately, the Registrar must be notified that the problem is being addressed and the approximate time it will take to resolve it.

Connect Times
Connect times should allow for time outs that take account of the fact that the internet connections may function at different speeds in different regions. The System shall provide for Intranet 6 connect times for an entire action regardless of the number of users according to industry best practice as determined in accordance with clause 18 (Technology and Security Assurance).

Application Infrastructure - Data
The data elements to be accommodated and maintained in the database shall include:
1. The information entered by registered users in relation to each transaction on the International Registry;
2. The fee collected for each transaction (the amount of the fee and a brief description of the fee);
3. Date/time stamps, user identifications and details of encrypted access keys; and other information as may be reasonably required pursuant to the Regulations.
4. The system shall provide, where available in the Oracle database system proposed,:
    a. The flexibility to add new data fields to support changes in the System processes and regulatory requirements without excessive data modification.
    b. Unlimited capacity for new data elements in the database.
    c. Configuration management for software releases.

Application infrastructure - Edits

1. The database shall have editing capability to display guidance when incorrect data is entered using list boxes, text boxes, check boxes or other GUI standards, to ensure compliance with Regulations.
2. The System functionality shall ensure no transaction on the System (such as the registration of an International Interest) may be finalised until the fee prescribed by the Regulations has been paid to the International Registry.
3. The System functionality shall validate new data to ensure accuracy and consistency with existing data. For example, inconsistency of new data may prevent its entry into the system, such as inconsistency of assignment information with original interest.

Application infrastructure - Applications

The System shall reliably support On-Line Transaction Processing (OLTP), transaction based access where the computer responds immediately to user requests, including rollbacks and commits, i.e., rollback is the process of restoring protected resources to the state at the last commit point and commit is the process that causes the changes to the protected resources to become permanent. Data entry locking shall occur at the row level (record level) and provide other users and processes read access to "in-transaction" data.

Application infrastructure - Interfaces

The System shall provide the capability for reasonable state-of-the-art interfacing to heterogeneous (unlike) systems and databases including national and regional registries.

Application infrastructure - Reporting

The System shall be capable of generating statistical and ad hoc reports, e.g. statistical reports on peak periods or selected transactions processed in a particular period.

Application infrastructure - Support

As part of the user's logon process, a configuration management function shall be included that allows for automatic distribution of software enhancements from servers to client workstations.

Technology enhancements

Technology enhancements will be implemented, subject to the Change Control process in Schedule 5, in accordance with best industry practice in order for the system to remain current with advancing technology.

3. **Indicative System Design for International Registry**

The System will be similar to the following indicative design or an appropriate alternative at the time of design:

Data Centre Hosting

The proposed Data Centre
- Two separate data centres in Luxembourg, either geographically separated or in two parts of the same complex but adequately separated to ensure high availability, will provide hosting for the Primary and DR infrastructures, respectively.
- Each data centre will provide a single private rack with 2 kW of electrical power capacity and remote "Hands and Eyes" services.
- The data centre will provide suitable Internet access, providing public IP addresses in each location.
- The two data centres will be connected via a high-speed interconnection with a standard SLA that can support the overall SLA.

**Primary Site Infrastructure**

The proposed Primary site infrastructure is as follows:
- A single Check Point IP295 external firewall managed by a SMART-1 appliance.
- A single Cisco ASA 5510 internal firewall.
- One Sun Fire X2270 M2 Web and one Management server.
- One Sun Fire X4170 M2 Application and one Database server.
- A single Cisco 2911 router to provide secure inter-site connectivity

- Cisco Catalyst 2960 switches at each tier.
- A Quantum Scalar i40 tape library with a single LTO-4 tape drive.
- A Fujitsu ETERNUS DX90 S2 iSCSI disk array with replication option.

The Sun servers will run the Solaris 10 operating environment and Solaris Containers will be used to isolate workloads and minimise software license requirements.

The servers will provide internal resilience features including disk mirroring via Solaris ZFS, redundant NICs via IPMP, and redundant fans and power, where available.

Apache v2.0 (or later) will used for the Web server and Apache Tomcat application server will be used to support the International Registry application.

Oracle Database Standard Edition One has been proposed to support the System database, which provides substantial cost savings over Enterprise Edition. Oracle Standard Edition One is available for servers with up to two processor sockets. Replication of changes to the primary database storage to the second site will be provided by the ETERNUS disk array Advanced Copy Manager's Remote Copy license.
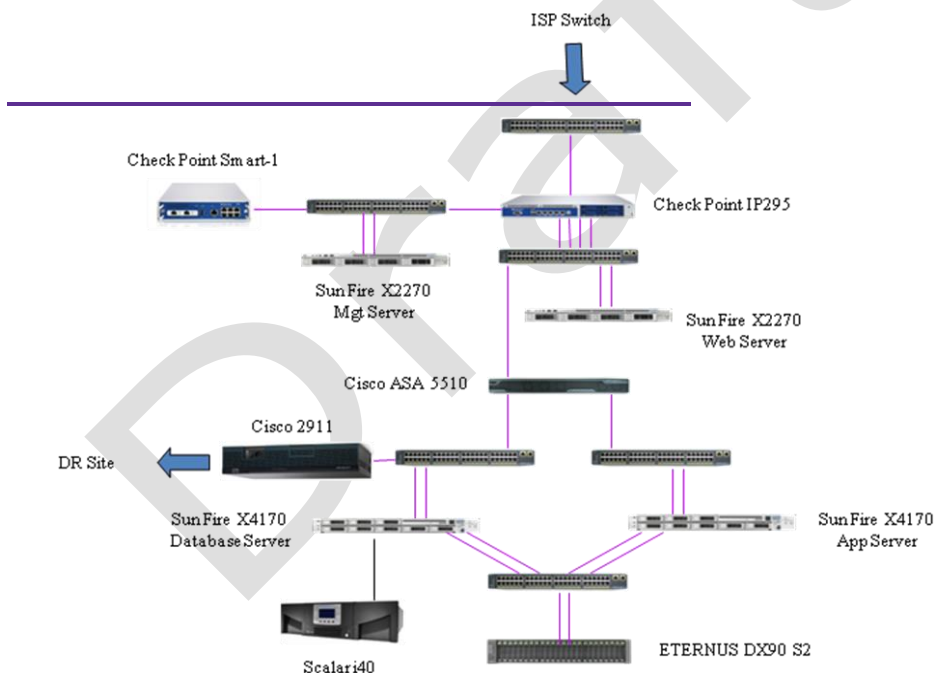
All servers and devices will log to a central Solaris container and Splunk will be employed to search, monitor and analyse log file data. Backups will be performed to the Quantum tape library under the control of NetBackup. All offsite database backups will be encrypted.

DR Site Infrastructure

The proposed DR site infrastructure is as per the Primary site. The DR site will host both Disaster Recovery and Pre-Production environments.

Managed Service Design for the infrastructure hardware and software

A Managed Hosting and Infrastructure Service will be provided to support the International Registry infrastructure from Dublin and includes the following:

- Network Operations Centre – Monday to Friday, 09:00 to 17:30 (excluding Public Holidays)
- Service Desk – Monday to Friday, 08:00 to 18:00 (excluding Public Holidays)
- Service Delivery Management – Monday to Friday, 09:00 to 17:30 (excluding Public Holidays)
- Data Centre Monitoring – Monday to Sunday, 00:00 to 24:00

Availability & Resilience

The dual site design will provide resilience for the service. Should a component at the primary site fail, all traffic can be routed through the secondary site following a manual process. Due to the use of Oracle replication in maximum Protection mode, the database at the secondary site will always be identical to that at the primary site.

Equipment

- Check Point Firewalls – The perimeter firewalls are Check Point IP295 appliances. Tight integration with Check Point management and enforcement points ensures simple deployment.
- Cisco ASA Firewall – The internal firewall is a Cisco ASA 5510 firewall.

Servers

All servers have the following high availability measures:

- Host Network Ports – Each host has dual connections to the core network thus protecting against port failure. In the case of servers connecting to the iSCSI network, there are also dual ports providing this connectivity.
- SAN Network Ports – Hosts that require SAN connectivity have redundant Host Bus Adapters (HBAs) connecting them to the SAN switches providing resilience against a HBA or SAN Switch failure. Path failure is provided by EMC PowerPath.
- Mirrored Disks – All server disks are mirrored so that they can survive a disk failure.
- Multiple Power Supplies – All servers, with the exception of the Sun X2270 web servers, have multiple power supplies so that they can continue to operate in the event of a power supply failure.

Replication

The core component of the System is the underlying Oracle database. Oracle Data Guard is implemented to maintain a standby copy of the primary database in the DR location. Data Guard provides the management, monitoring and automation software to create and maintain one or more synchronised standby databases that protect data from failures, disasters, errors and corruption.

Backup and Recovery
Backup and recovery is provided by NetBackup Enterprise in the DR location, as per production, to facilitate backup of operating system files, application binaries, database binaries and data. The NetBackup domain consists of a single NetBackup master server, which manages the NetBackup catalogue, schedules, policies and media, and two NetBackup media servers, one per location, which write/read data to/from LTO-4 tapes in a local Quantum Scalar i40 tape library.

Schedule 3: Pricing and Payment

1. Purpose

The purpose of this Schedule is to set out the Charges payable by the Registrar to SITA and rebates credited by SITA to the Registrar.

All pricing in this Schedule is based on the following:

- Unless otherwise stated, all Charges are expressed in Euro

- These are the only charges payable under this MSA, unless agreed and varied in writing.

- The Charges do not include any Taxes, and the Registrar shall pay (or reimburse SITA for the payment of) all Taxes arising in connection with the Services. If a law requires the Registrar to deduct, on account of Taxes, any amount from payment due to SITA under this MSA, then the Registrar agrees that SITA may gross up the amount payable to include such additional amounts as may be necessary, such that SITA receives the amount it would have received had no withholding tax been imposed:

2. Service Charge

A monthly charge as shown in the table below, commencing on Go Live Date, payable monthly in arrears.

Year	Monthly Amount
Year 1	€115,437
Year 2	€117,169
Year 3	€118,926
Year 4	€120,710
Year 5	€122,521
Year 6	€124,358
Year 7	€126,224
Year 8	€128,117
Year 9	€130,039
Year 10	€131,990

3. **Supplemental Charge**

The parties have agreed that for certain System functionality and Registry Official Services the Registrar shall pay to SITA a Supplemental Charge.

SITA shall levy the Supplemental Charge on the Registrar for the provision of Identifier Reservation Services and Professional User Account Services and other services as may be agreed between the Parties and approved by the Supervisory Authority from time to time where:

- **Identifier Reservation Services** means a facility to reserve specific unique identifiers for railway rolling stock

- **Professional User Account Services** means a facility for professional users to request authorisation to make registrations on behalf of other parties in the International Registry

- **The Supplemental Charge** means an amount equal to 60% of gross revenues from fees received by the Registrar from users for Identifier Reservation Services, Professional User Account Services and other services as may be agreed between the Parties from time to time and approved by the Supervisory Authority increasing to 92% once the Fee Threshold has been met

4. **Variations**

The Service Charge or any other charge may only be varied through the Change Control Procedure as set out in schedule 5.

Change Control shall not apply with respect to SITA establishment costs of one million two hundred and forty-one thousand nine hundred and fifty one Euro (€1,241,950) nor shall any financing charges on this amount be allowed.

Schedule 4: Service Level Agreement (SLA)

1.   Purpose

The Purpose of this Schedule is to describe the Service Levels and Key Performance Indicators that apply to the Technology Services.

2. General
2.

If the Service Levels or Key Performance Indicators in this Schedule 4 are not met, the parties will review the resources and operational procedures in use with a view to increasing efficiency or capacity, the latter through the Change Control Procedure in Schedule 5, as necessary.

3. **Key Performance Indicators**

For the purposesPurposes of the Key Performance Indicators that apply to the Registry Official Services it is assumed that user and transaction volumes can be managed by a fixed resource of three (3) Registry Officials working aan eight (8) hour day each. Where user and transaction volumes rise above those which can be managed by the three (3) Registry Officials, additional Registry Officials will be recruited in accordance with the Change Control Procedure in Schedule 5 and until such Registry Officials are recruited, the Key Performance Indicators for the Registry Official Services shall be suspended. The following are the Key Performance Indicators of the System, and these will be tracked and reported monthly to the Registrar:

- Number of accounts vetted per monthmonths under each category;
- Average time taken to approve or decline an account once all data is received;
- Number of registrations per month, by category;
- Number of searches per month, by category;
- Customer cases opened and closed, average time to close, category of cases;
- Service availability and down timedowntime categorized by planned and unplanned;
- Web Trendstrends data (geographic use of web site)website); and
- Official complaints received.

As experience with the Registry Official Services develops, targets may be agreed between the parties for these Key Performance Indicators.

Initially the only target will be foror Service Availability for which service credits will apply, as described below.

4. Operational Procedures

~~The flow diagram below provides an indicative illustration of the process flow for supporting customers of the IR.~~
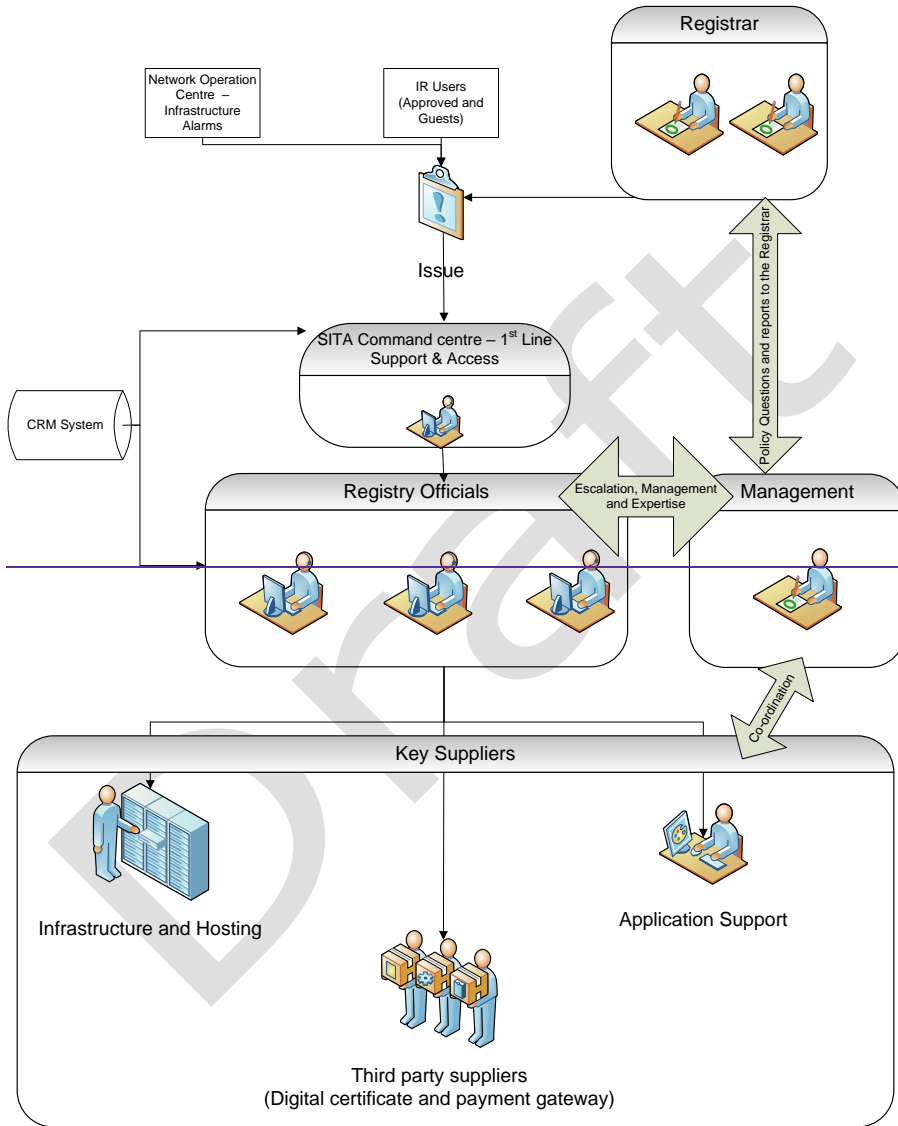
The operational procedures for logging and tracking calls, incidents and issues will be agreed between the parties before the Go Live Date and will be in line with ITIL best ~~practice~~practices.

The procedure will cover, at a minimum~~.~~:

- Authorized personnel
  - ~~Personnel~~ Calls can be logged by all users of the system ~~or~~ by the Registrar or its staff.
- Call ~~Handling, prioritisation~~handling, prioritization, categorization ~~priority~~
  - Priority 1 calls should be responded to within one (1) hour with a target restore time of four (4) hours.
- Call monitoring
- Status and ~~Escalation Updates~~escalation updates
- Problems not caused by ~~SITA SITA~~ERS
  - ERS will, within its resources, ~~co-ordinate~~coordinate issues when it is unclear where the problem lies. ~~SITA~~
  - ERS will manage the relationship with all contractors necessary to operate the service.
- Problems relating to the commercial operation of the International Registry will be handled by the Registry Officials (~~SITA~~ERS staff) but policy issues will be escalated to the Registrar.

5. **Service Levels and Service Credits**

~~SITA~~
ERS shall operate the Technology Services so as to meet the Service Availability Service Level, where Service Availability is defined below, subject to the conditions herein. Contracted Support Hours will be from 08:00 to 18:00 Dublin time Monday to Friday, excluding Irish ~~Public Holidays~~public holidays.

"**Service Availability**" means that the System is operational, fully functional and available to any user (but not including general ~~Internet~~internet access and ~~External Dependencies described in Schedule 1 paragraph 4 , which is~~external dependencies that are outside ~~SITA~~ERS' control) for 99.6% of the time in any calendar month. The 0.4% non-availability does not include planned (e.g. system maintenance) which shall be carried out, outside of normal business hours.

~~SITA~~
ERS shall provide the Technology Services in accordance with the relevant Service Level, standards and procedures, detailed within this Schedule or subsequently agreed between the parties in writing.

In the event that the Technology Services (or an element thereof) do not meet the Service Levels (or any one of them), Service Credits shall be calculated and accrued to Registrar in accordance with this Schedule 4.

Where the Technology Services delivered by ~~SITA~~ERS fail to meet the Service Levels (or any one of them), ~~SITA~~ERS shall (without prejudice to any other right or remedy available to Registrar) ensure that Services are promptly restored to at least the levels defined within the Service Levels.

In the event that ~~SITA~~ERS fails to meet the Service Availability target of 99.6% in any calendar month, Service Credits shall be accumulated in accordance with the following table:

Service Availability in a calendar month	Service Credit Percentage
>= 99.6%	0%
>= 98.6% < 99.6%	1%
>= 97.6% < 98.6%	2%
>= 96.6% < 97.6%	3%
>= 95.6% < 96.6%	4%
>= 94.6% < 95.6%	5%
<>= 94.6%	6%

The percentage shall be a percentage of the recurring ~~Service~~service monthly ~~Charge~~charge as set out in ~~paragraph 2~~ Schedule 3. For the avoidance of doubt, and as an example, if the availability in a month is 96.8% (and assuming for simplicity that the ~~Service~~service monthly ~~Charge~~charge is ~~EUR50~~€50,000) the Service Credit would be ~~EUR1~~€1,500, being 3% of ~~EUR50~~€50,000.

~~4.8.2~~

Service Credits shall be calculated at the end of each calendar month and accrued to the Registrar during the course of each ~~Year~~year. In the second month of the following ~~Year, SITA~~year, ERS shall issue a credit note to the Registrar for the total amount of the accrued Service Credit. Registrar shall deduct this amount from sums due to ~~SITA~~ERS. If ~~this~~the Amended and Restated Master Services Agreement (the "Agreement") is terminated for any reason, any accrued Service Credits shall become immediately payable to the Registrar. If this Agreement has reached the end of the Initial Term or an extended term and has not been renewed or further renewed (as appropriate), accrued Service Credits for the final ~~Year~~year (or lesser period, if applicable) shall be paid to the Registrar by ~~SITA~~ERS within sixty (60) days of the end of the Agreement.

If the Service Credit ~~amount exceeds $~~amounts €20,000 at any time, the Registrar will be entitled, upon making the request in writing, to the deduction of the accrued amount from the next invoice.

Schedule 5: Change Control Procedure

SCHEDULE V

CHANGE CONTROL PROCEDURE

1. Change Order Proforma

Both parties should use the following format if appropriate:

1. 1. Description of ~~Change~~ [ ]change

2. 2. Origin and ~~Reason~~reason for ~~Change~~ [ ]change

3. 3. Reference ~~Documentation~~documentation or regulation [ ]

4. 4. Assumptions ~~& Dependencies~~ [ ]and dependencies

5. 5. Effect of ~~Change~~ [ ]change

6. 6. Details of ~~Change~~ [ ]change

7. 7. If applicable, impact on ~~Project Milestones, Delivery and Acceptance Dates~~project milestones, delivery, and acceptance dates [ ]

8. 8. Implementation costs
   a. ~~Costs~~ Annual [ ]
   b. One ~~Off~~ [ ]-time

9. 9. Terms ~~& Conditions~~and conditions if varied from ~~the~~ contract [ ]

10. Agreement dated [ ]

10. ~~Signed~~Date of agreement on ~~behalf of SITA~~ ~~Signed on behalf of~~ change order between ERS and Registrar

_____   _____
11. Signatures of ERS and Registrar on change order

2. Change Order Process

Both parties must adhere to the following:
- • Personnel with the appropriate authority or their nominated delegate may at any time request, and ~~SITA~~ERS may at any time recommend~~,~~ changes or additions to the Software and/or Technology Services.

- A Change Request should be submitted to ~~SITA~~ERS in writing, with the following details:
  - o Name and contact details of person requesting the change; and
  - o Supporting details relevant to the specific change action using the format above.
- Neither party shall be obliged to agree to any request or recommended change but neither party shall unreasonably withhold its agreement to such request. ~~SITA~~ERS notes that the Registrar may require approval from the Supervisory Authority prior to giving its approval.
- ~~SITA~~ERS shall advise the Registrar of any impact of any requested or recommended change on the price and timescales.
- Until such time as any change is formally agreed, ~~SITA~~ERS shall continue to perform and to be paid for the ~~Service~~Technology Services as if such change had not been requested.
- The parties shall respond in writing to, or shall meet to discuss, the proposed change as soon as practical.
- Any agreement to a requested or recommended change shall become valid as an amendment to the ~~Service~~Technology Services only when recorded in writing and signed by ~~authorised~~authorized representatives of both parties in the ~~Change~~Charge Order format ~~specified in the Agreement~~specific above.

3. **Payment**

Payment shall be as follows:

~~I.~~(a)   20% of ~~CR payable~~Change Request on order~~.~~
~~II.~~(b)   25% on delivery for acceptance~~,~~
~~III.~~(c)   20% on successful Acceptance Testing~~,~~
~~IV.~~(d)   35% upon release to production

Schedule 6: Project Schedule

1. Purpose

The Purpose of this Schedule is to set out an indicative project implementation schedule. The Project Schedule is divided into two basic parts. Part 1 of the Project Schedule focuses on those activities up to the point where the Software development Service commences. Many of the part 1 activities take place prior to the signature of this MSA however as such activities relate directly to the activities following the signature of this MSA they are therefore reflected below (Part 1). Part 2 of the Project Schedule involves those activities that occur as part of the Software development and operational implementation of the System. Both Part 1 and Part 2 of the Project Schedule include suggested owners for the particular task.

Part One – Pre Software Development Commencement

		Task Name	Duration	Start	Finish	Resource Names
1		Phase 1 - Finalise Negotiations and SIGN	118 days	Mon 6/2/14	Wed 11/12/14	
2		Contract Finalization	4 days	Mon 6/2/14	Thu 6/5/14	SITA,Prep Comm
3		SITA Approval Process	39 days	Fri 6/6/14	Wed 7/30/14	SITA
4		PrepComm Approval Process	81 days	Wed 7/9/14	Wed 10/29/14	Prep Comm
5		Director Rail Co Assigned	0 days	Wed 8/20/14	Wed 8/20/14	SITA
6		Contract Signatures	1 day	Wed 11/12/14	Wed 11/12/14	SITA,Prep Comm
7		Phase 2 - Drive Initial Ratifications	168 days	Thu 12/11/14	Mon 8/3/15	
8		RegCo Agree Ratification Strategy	48 days	Thu 12/11/14	Mon 2/16/15	Regulis,Prep Comm
9		RegCo Attend conferences and meetings to drive ratification	120 days	Tue 2/17/15	Mon 8/3/15	Regulis,Prep Comm
10		Viable Ratifications exist, Target Date Set & Fees Agreed	0 days	Mon 8/3/15	Mon 8/3/15	Regulis,Prep Comm
11		Project Mgr Assigned (part time initially)	0 days	Mon 8/3/15	Mon 8/3/15	SITA
12		Phase 3 - Pre Development Activities	307 days	Thu 11/13/14	Fri 1/15/16	
13		Key Contracts to Draft Stage / Regs&Proc	210.5 days	Thu 11/13/14	Thu 9/3/15	
14		Expose Draft Regulations (Attach II (App 2 - Baseline Regs) to Contract)	21 days	Thu 11/13/14	Thu 12/11/14	Regulis,Prep Comm
15		Set Up Governance Arrangements	22.5 days	Tue 8/4/15	Thu 9/3/15	Prep Comm,Regulis
16		Approve Regulations Draft 1st Edition (v1 for Development)	0 days	Mon 8/3/15	Mon 8/3/15	Prep Comm
17		Official Notification to Begin Development	0 days	Mon 8/3/15	Mon 8/3/15	Prep Comm,Regulis,SITA
18		Investment Phase	119 days	Tue 8/4/15	Fri 1/15/16	
19		Establish SITA Delivery/Development Team	20 days	Tue 8/4/15	Mon 8/31/15	SITA
20		Begin Hiring Registrar Team	45 days	Tue 8/4/15	Mon 10/5/15	Regulis
21		Formalize Key Support Contracts (Hardware, Data Center, Facilities, Certificates, Credit Card processing)	60 days	Tue 8/4/15	Mon 10/26/15	SITA,Regulis
22		Negotiate and Sign Other necessary Contracts	119 days	Tue 8/4/15	Fri 1/15/16	SITA,Regulis

	ⓘ	Task Name	Duration	Start	Finish	Resource Names
23		⊟ **Phase 4 - Establishment Phase**	**250 days?**	**Mon 8/3/15**	**Mon 7/18/16**	
24	⚑	Development Kick Off Meeting	2 days	Tue 8/4/15	Wed 8/5/15	SITA,Regulis
25	⚑	Hire Operations Staff (RO)	59 days	Wed 1/6/16	Mon 3/28/16	SITA
26	⚑	Operations Staff Training (RO)	59 days	Tue 3/8/16	Fri 5/27/16	SITA
27		⊟ **Software Component**	**150 days**	**Tue 8/18/15**	**Mon 3/14/16**	
28	⚑	Requirements Specification Agreed	10 days	Tue 8/18/15	Mon 8/31/15	Regulis,SITA
29	▦	Functionality Review Meeting 1	0 days	Mon 10/26/15	Mon 10/26/15	SITA,Regulis,Prep Comm
30	▦	Functionality Review Meeting 2	0 days	Mon 12/7/15	Mon 12/7/15	SITA,Regulis,Prep Comm
31	▦	Functionality Review Meeting 3	0 days	Mon 2/1/16	Mon 2/1/16	SITA,Regulis,Prep Comm
32	▦	Functionality Review Meeting 4	0 days	Mon 3/14/16	Mon 3/14/16	SITA,Regulis,Prep Comm
33		⊟ **Hardware Components**	**151 days?**	**Tue 9/1/15**	**Tue 3/29/16**	
34	⚑	Hardware Design Confirmed	10 days	Tue 9/1/15	Mon 9/14/15	SITA,Regulis
35	⚑	Hardware Configuration and Test	20 days	Tue 2/2/16	Mon 2/29/16	SITA
36	⚑	Final As-Built System Design documentation	1 day?	Tue 3/29/16	Tue 3/29/16	SITA
37		⊟ **Test and Acceptance**	**63.67 days**	**Mon 4/11/16**	**Fri 7/8/16**	
38	▦	PAT and Acceptance Criteria Submitted to Registrar	0 days	Mon 4/11/16	Mon 4/11/16	SITA,Regulis,Prep Comm
39	▦	Draft User manual provided to Preparatory Commission	0 days	Mon 4/25/16	Mon 4/25/16	SITA,Regulis
40	▦⚑	PAT	3.33 days	Tue 5/31/16	Fri 6/3/16	SITA,Regulis,Prep Comm
41	▦	FAT	3.33 days	Tue 7/5/16	Fri 7/8/16	SITA,Regulis,Prep Comm
42		⊟ **Operations Support Model**	**25 days**	**Thu 4/21/16**	**Thu 5/26/16**	
43	⚑	Operations Services Guide	25 days	Thu 4/21/16	Thu 5/26/16	SITA
44		Operations Support in Place	0 days	Thu 5/26/16	Thu 5/26/16	SITA,Regulis
45		⊟ **Administrative Establishment**	**238 days**	**Mon 8/3/15**	**Thu 6/30/16**	
46	▦	Establish Office (Regulis S.A.)	0 days	Mon 8/3/15	Mon 8/3/15	Regulis
47	▦	OTIF and Unidroit announce appointees to the Supervisory Authority per Article XII of the Luxembourg Protocol	0 days	Fri 4/22/16	Fri 4/22/16	OTIF,UNIDROIT
48	⚑	Establish Office (SITA Ops)	20 days	Wed 2/3/16	Tue 3/1/16	SITA
49	⚑	Initial Procedures Review	20 days	Mon 5/16/16	Fri 6/10/16	SITA,Regulis

	ⓘ	Task Name	Duration	Start	Finish	Resource Names
49	⚑	Initial Procedures Review	20 days	Mon 5/16/16	Fri 6/10/16	SITA,Regulis
50	▦	Final Procedures Review	9 days	Mon 6/20/16	Thu 6/30/16	
51		⊟ **Phase 5 - Regulations - Ready to Go Live**	**250 days?**	**Tue 8/4/15**	**Mon 7/18/16**	
52	▦	Draft Changes to Regulations	15 days	Mon 5/9/16	Fri 5/27/16	Supervisory Authority
53		Regulations will be published for public comment	1 day?	Tue 8/4/15	Tue 8/4/15	
54	▦	Sign Off Regulations First Edition	36 days	Mon 5/30/16	Mon 7/18/16	Supervisory Authority
55		⊟ **Phase 6 - Live Operational Phase (Go Live Date)**	**4 days**	**Fri 7/15/16**	**Thu 7/21/16**	
56	⚑	Agree Procedures	1 day	Fri 7/15/16	Mon 7/18/16	SITA,Regulis
57	⚑	Verify Completion of System Testing (FAT)	1 day	Fri 7/15/16	Mon 7/18/16	SITA,Regulis
58	⚑	Review Pre-Operations Check List	3 days	Mon 7/18/16	Thu 7/21/16	SITA,Regulis
59		Go Live	0 days	Thu 7/21/16	Thu 7/21/16	SITA,Supervisory Authority

Schedule 7: Contract Management Procedures

Draft

SCHEDULE VI

PROJECT SCHEDULE

INDICATIVE PROJECT IMPLEMENTATION PLAN

The Project Implementation Plan will be developed in conjunction with key Preparatory Commission stakeholders utilising proven registry and project management methodologies. It will include activities related to key streams including technology, operational preparation, contract and ratification efforts, advancement of regulations and Registrar establishment.

Specific to the registry technology, it is anticipated that implementation will occur over a 9-12 month period, including design and engagement with key stakeholders, and extensive testing. The technology project plan will include three primary phases: definition, implementation and transition. The following table captures key activities anticipated in each of the phases.

Definition (0-3 months)	Implementation (6-9 months)	Transition (0-3 months)
• Stakeholder engagement • User interface/user experience design and workshops • Workflow design and development • Project plan • Project backlog development	• Project backlog refinement • Configuration and development activities • Implementation utilising DevOps • Testing (including automated testing, regression testing, nightly test runs, cyber security testing, accessibility compliance testing and performance testing)	• User acceptance testing • Non-functional testing (including security and penetration testing) • Training and development of online tutorials

The above items are for illustrative purposes only. A completed project implementation plan, as agreed to between the Registrar and the Supervisory Authority, will be provided at a later date.

1   CONTRACT MANAGEMENT ~~SUPPORT CONTACTS~~PROCEDURES

1.   ~~SITA~~Management Support Contacts

ERS will provide management support for the Technology Services to the Registrar from a nominated contact point ~~i.e. the General Manager or a nominated Registry Official.~~(the "Contact Person").

The ~~SITA General Manager~~Contact Person will be responsible for ~~co-ordinating~~coordinating technical and operational support for all Technology Services provided to the Registrar, for performance monitoring and reporting, for the project management of any new services or software or hardware required and for the overall management of the Technology Services provided to the Registrar. The ~~General Manager~~Contact Person will also be responsible for commercial matters and the Service Levels.

Within the Registrar, ~~co-ordination~~coordination of the Technology Services will be the responsibility of ~~the Operations Director.~~an operations director or similar position to be communicated to ERS. Contract management and change control authority will be the responsibility of ~~the Registrar Managing Director. They~~a managing director or similar position to be communicated to ERS. These people will provide ~~the~~primary service management interface with ~~SITA~~ERS.

~~2   Service Review Meeting~~**SERVICE REVIEW MEETING**

2.

All the Technology Services will be reviewed at regular ~~Service Review Meetings~~service review meetings attended by nominated personnel from both parties. A service review meeting~~Service Review Meeting~~ will be held on a monthly basis or as otherwise agreed. ~~As a minimum, this meeting will be attended by:~~The Registrar and ERS shall jointly determine who from each party is required to be present at service review meetings.

- ~~SITA personnel: General Manager~~

- ~~Registrar personnel: Operations Director~~

The normal agenda for the ~~Service Review Meeting~~service review meeting will include, but is not limited to:

- Services delivered over the previous period;
- Performance against the Service Levels;
- Exceptions and non-performance against Service Levels;
- Repeat fault diagnosis and remedial action taken; and
- Any other matter deemed necessary to the efficient delivery of the Technology Services.

3. ~~The yearly~~ **Contract Review Meeting**

A yearly contract review meeting will be driven by the performance over the previous twelve (12) month period. However, in the first ~~Year a Contract Review Meeting~~year, a contract review meeting will take place three (3) months and no later than four (4) months from the date of the successful completion of the Final Acceptance Testing. ~~As a minimum, this meeting will be attended by:~~The Registrar and ERS shall jointly determine who from each party is required to be present at yearly contract review meetings.

- ~~SITA personnel: General Manager~~

- ~~Registrar personnel: Managing Director~~
  ~~Operations Director~~

The normal agenda for the ~~Contract Review Meeting~~contract review meeting will include, but is not limited to:

- Review of ~~SITA's~~ERS' performance of the Technology Services (including, without limitation, performance against Service Levels~~)~~):
- Registrar/~~SITA~~ERS financial performance:
- Review of the Registrar business case and assumptions:
- Review of the ~~Annual Report~~annual report on the operation of the International Registry, prior to its submission to the Supervisory Authority:
- ~~Areas~~Area of innovation and improvement:
- Outline plans and changes to the Technology Services anticipated in the short to medium term future:
- Health, safety, and compliance issues: and
- Review of the Regulations and Procedures approved pursuant to the Regulations.

4. **Other Ad Hoc/Technical Meetings**

Other ad hoc or technical meetings will be arranged, as necessary, between the Registrar and ~~SITA~~ERS.

SCHEDULE VIII

ANCILLARY SERVICES

None