



INVITATION FOR BIDS FOR THE
PROVISIONING OF AN AUTOMAED CREW SCHEDULING AND RESOURCE MANAGEMENT SYSTEM
FOR
SRILANKAN AIRLINES

REFERENCE NO: CPIT/ICB 08/2020

CHAIRMAN,
MINISTRY PROCUREMENT COMMITTEE,
SRILANKAN AIRLINES LIMITED,
COMMERCIAL PROCUREEMNT DEPARTMENT (IT PROCUREMENT),
AIRLINE CENTRE, BANDARANAIKE INTERNATIONAL AIRPORT,
KATUNAYAKE,
SRI LANKA.

Dear Sir/Madam,

IFB NO: CPIT/ICB 08/2020

INVITATION FOR BIDS FOR THE PROVISIONING OF AN AUTOMATED CREW SCHEDULING AND RESOURCE MANAGEMENT SYSTEM FOR SRILANKA AIRLINES.

SriLankan Airlines hereby invites tenders for the provisioning of an automated Crew Scheduling and Resource Management System for SriLankan Airlines. The bid document is attached herewith.

Bid should be submitted in a **sealed envelope** with the IFB number clearly marked on the top left corner of each envelope addressed to **Senior Manager Commercial Procurement, SriLankan Airlines Limited, Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka** by 11.00a.m. (Sri Lankan time: GMT +0530) on 03 November 2020.

The Bid Acknowledgement form attached to the document must be completed and returned by fax to +94 (0) 19733 5218 or e-mail to tharaka.hindurangalage@srilankan.com and sarath.jayathunga@srilankan.com by 20 October 2020.

Any inquiry/clarification about the Tender should be e-mailed [to tharaka.hindurangalage@srilankan.com](mailto:tharaka.hindurangalage@srilankan.com) and sarath.jayathunga@srilankan.com to reach on or before 12 October 2020.

Bids will be opened at 11.15a.m. (Sri Lankan time: GMT +0530) on 03 November 2020 at SriLankan Airlines, Airline Centre, BIA, Katunayake, Sri Lanka. Kindly note that 01 representative per bidding company is permitted to be present at the tender opening. Please contact any of the above, well in advance for the arrangement of Security clearance.

Yours Faithfully,

**CHAIRMAN OF MINISTRY PROCUREMENT COMMITTEE,
MINISTRY OF TOURISM AND AVIATION.
ON BEHALF OF SRILANKAN AIRLINES LIMITED**

Section I. Instructions to Bidders (ITS)

A: General	
1. Scope of Bid	<p>1.1 The Purchaser named in the Data Sheet invites you to submit a bid for the supply of Service/solution as specified in Section III - Schedule of Requirements for use at SriLankan Airlines Ltd for the use within the Bandaranaike International Airport premises.</p> <p>Upon receipt of this invitation you are requested to acknowledge the receipt of this invitation and your intention to submit a bid.</p>
B: Contents of Documents	
2. Contents of Documents	<p>2.1 The documents consist of the Sections indicated below.</p> <ul style="list-style-type: none">• Section I. Instructions to Bidders• Section II. Data Sheet• Section III. Schedule of Requirements• Section IV. Bids Submission Form• Section V. General Conditions• Annexure A: Technical/General Specifications & Compliance form• Annexure B: Price schedule format• Annexure C: Bid Security Declaration Form• Annexure D: Performance Security Form• Annexure E: Clientele Information Form• Annexure F: Sample Contract Agreement• Annexure G: Bid Acknowledgement Form• Annexure H: Vendor Information Form
C: Preparation of Bids	
3. Documents Comprising your Bid	<p>3.1 The document shall comprise the following:</p> <ul style="list-style-type: none">• Sections IV - Bids Submission Form.• Annexure A: Technical/General Specifications & Compliance form• Annexure B: Price Schedule Forms B-I & B-II• Annexure C: Bid Security Declaration Form• Annexure E: Clientele Information Form

4. Bid Submission Form	4.1 The Bidder/s shall submit the Bid Submission Form using the form furnished in Section IV. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
5. Prices	5.1 Unless stated in Data Sheet, all items must be priced separately in the Price Schedule Form at Annexure B. 5.2 The price to be quoted in the Bids Submission Form shall be the total price of the Bids. 5.3 Prices quoted by the bidder shall be fixed during the period specified in ITS clause 8.1 and not subject to variation on any account. A Bid submitted with an adjustable price shall be treated as non-responsive and may be rejected.
6. Currency	6.1 The bidders shall quote in United States Dollar (USD) or in Sri Lanka Rupees (LKR). 6.2 For evaluation and comparison proposes, SriLankan Airlines shall convert all bid prices expressed in foreign currencies into Sri Lankan Rupees using the selling rates prevailed at the date of closing of bids as published by the Central Bank of Sri Lanka.
7. Documents to establish the Conformity of the Services	7.1 The Bidder/s shall submit an original certificate from the proprietor to demonstrate that it has been duly authorized by the proprietor to supply this Service/solution in Sri Lanka.
8. Period of Validity of bids	8.1 Bids shall remain valid for a period of one hundred eighty (180) days after the bid submission deadline date. If the full validity period is not properly indicated, SriLankan Airlines reserves the right to obtain re-confirmation from the bidder/s that the Bid is valid until the date specified above. 8.2 In exceptional circumstances, prior to the expiration of the bid validity date, Sri Lankan Airlines may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing.

<p>9. Bid Security Declaration</p>	<p>9.1 The bidder/s shall furnish as a part of its bid, a Bid-securing Declaration, using the Bid-securing Declaration form included in Annexure C.</p> <p>9.2 Any bid not accompanied by a substantially responsive Bid securing Declaration in accordance with 1TB Sub-clause 9.1, Shall be rejected by Sri Lankan Airlines as non-responsive.</p> <p>9.3 Bid Securing Declaration may be executed:</p> <p>(a) If a Bidder/s withdraw its bids during the period of Bid validity specified by the Bidder/s on the Bid Submission from,</p> <p>(b) If a Bidder/s does not agree to correctable of arithmetical errors in pursuant to 1TS Sub-Clause 15.3</p> <p>(c) If the successful Bidder/s fails to:</p> <p>i) Sign the contract in accordance security with 1TS Sub-Clause 23.3;</p> <p>(ii) Furnish a performance Security in accordance with 1TS Clause 24;</p>
<p>10. Format and Signing of Bids</p>	<p>10.1 The bids shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder/s. Please ensure all documents are duly signed and stamped in the given area when forwarding.</p>

D: Submission and Opening of Bids	
11. Submission of Bids	<p>11.1 Bidders shall submit their bids by registered post, courier or by hand in a sealed envelope.</p> <p>11.2 The bidder shall submit the proposals for the following two financial options separately (either both options or single option) in the price schedule forms attached at Annexure B-I & B-II.</p> <p>1) Financial Option I - Fully Managed Service model including Installation, Commissioning, Warranty, Maintenance with end to end Support for 5 years through a Service Level Agreement (SLA) and the system to be <u>hosted at the Vendor location</u>. Refer price schedule form attached at Annexure B-I.</p> <p>2) Financial Option II - Fully Managed Service model including supply & Installation, Commissioning, Warranty, Maintenance with end to end Support for 5 years through a Service Level Agreement (SLA) and the system to be <u>hosted at SriLankan premises</u>. All infrastructure requirements for the overall solution needs to be supplied by the Bidder. Refer price Schedule form attached at Annexure B-II.</p> <p>The bidders have the option to submit their proposal either for both options or for a Single option. Sri Lankan Airlines has the sole authority to select the most responsive option based on the proposals submitted by the Bidders.</p> <p>11.3 The sealed envelope shall bear the specific identification of this quotation exercise as indicated follows.</p> <p style="padding-left: 40px;">“Bid for the provisioning of an automated Crew Scheduling and Resource Management System for SriLankan Airlines (CPIT/ICB 08/2020)”</p> <p>.11.4 The bidder shall submit the proposals in the price schedule forms attached at Annexure B.</p> <p>11.5 Completed Technical (un-priced) and Financial proposal should be submitted in two separate sealed envelopes with the tender reference no. CPIT/ICB 08/2020 and the Bidding Company’s name and the type of proposal (Technical or Financial) clearly marked on the top left corner of the envelope. The Bid Submission Form (Section IV) and the Bid Securing Declaration (Annexure C) should be submitted in a separate envelope along with the Financial proposal.</p>
12. Deadline for Submission of Bids	12.1 Bids must be received by SriLankan Airlines to the address set out in Section II, “Data Sheet”, and no later than the date and time as specified in the Data Sheet.
13. Late Bids	13.1 SriLankan Airlines shall reject any bids that arrives after the deadline for submission of bids in accordance with ITS Clause 11.1 above.

<p>14. Opening of Bids</p>	<p>14.1 SriLankan Airlines shall conduct the opening of quotation in the presence of the Bidder/s at the address, date and time specified in the Data Sheet.</p> <p>14.2 A representative of the bidder/s may be present and mark its attendance.</p> <p>14.3 Presence of the Bidder/s will not necessarily ensure the selection of the proposed goods.</p>
<p>E: Evaluation and Comparison of Bids</p>	
<p>15. Non conformity-ties, Errors, and Omission</p>	<p>15.1 Provided that a Bid is substantially responsive, SriLankan Airlines may waive any non-conformities or omission in the Bid that do not constitute a material deviation.</p> <p>15.2 Provided that a bid is substantially responsive, SriLankan Airlines may request that the Bidder/s submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities of omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder/s to comply with the request may result in the rejection of its Bid.</p> <p>15.3 Provided that the Bid is substantially responsive, SriLankan Airlines shall correct arithmetical errors on the following basis:</p> <p>(a) If there is discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of SriLankan Airlines there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit shall be corrected.</p> <p>(b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail, and the total shall be corrected; and</p> <p>(c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.</p> <p>15.4 If the Bidder/s that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be dis qualified and its Bid-Securing Declaration shall be executed.</p>

16. Clarifications	<p>16.1 To assist in the examination, evaluation and comparison of the bids, SriLankan Airlines may, at its discretion, ask any Bidder/s for a clarification of its bids. Any clarification submitted by a Bidder/s in respect to its bid which is not in response to a request by the Purchaser shall not be considered.</p> <p>16.2 Bidder/s request for clarifications and the response shall be in writing by SriLankan Airlines' address specified in the Data sheet.</p>
17. Responsiveness of Bids	<p>17.1 SriLankan Airlines will determine the responsiveness of the bids to the documents based on the contents of the bids received.</p> <p>17.2 If a bid is evaluated as not substantially responsive to the documents issued, it may be rejected by SriLankan Airlines.</p>

<p>18. Evaluation and Comparison of bids</p>	<p>18.1 The following factors & methodology will be used for evaluation.</p> <p><u>Minimum Eligibility Criteria</u></p> <ul style="list-style-type: none"> I. The Bidder should have at least 05 years of industrial experience in terms of provisioning of Crew Scheduling and Resource Management Services with relevant expertise. II. The Bidder should have experience in serving at least 05 international Airlines with similar or higher fleet capacity (25 to 35 aircrafts with mixed aircraft configurations) with end to end Crew Scheduling and Resource Management services. III. The solutions proposed should comply standard APP / API stated under Part 3.7 of Annexure A with regard to-Automated Crew Scheduling and Resource Management services. IV. The proposed systems should be configurable to the SriLankan Airlines' Crew Rostering & Optimizing and Resource management procedures. V. The Bidder should comply with Data retention policies, General Data Protection Regulation (GDPR) and other applicable legislative and regulatory requirements. VI. The Bidder should be able to meet the mandatory business and technical requirements under Part 03 in Annexure A of the RFP. VII. The vendor proposal should accommodate flexible fleet sizes (blocks of number of aircrafts, i.e. 1-5 aircrafts, 6-10 aircrafts, 41-45 aircrafts) with clear cost structures where SriLankan Airlines has the ability to request for a suitable block deemed by any adhoc situation. VIII. The proposed system should capable of configuring or customized legality rules according to the IATA 756 manual <p><u>Evaluation Criteria</u></p> <ul style="list-style-type: none"> IX. The Bidder's point-by-point compliance with general, technical & functional requirements under Annexure A of the RFP. It is essential that the Bidder clearly indicates any limitations and/or deviations. X. System awareness, Strength of Technical support, service levels and service credit scheme requirements under Part 6 in Annexure A of the RFP. XI. Ability to integrate with SriLankan IT systems requested under Annexure A Part 3.15 of the RFP. XII. The Bidder's capability of carrying out on-site Product demonstrations, site visits. Proof of Concept (POC) & business user cases to verify RFP specifications & performance. XIII. User awareness & Technical Training requested under Part 4.17 and 7.2.16 in Annexure A of the RFP. XIV. Customer feedback on at least 03 existing projects of similar systems implemented at enterprise level during past 03 years. XV. Preferred Implementation lead time is 6 months or less. Maximum implementation lead time is 11 months. Length of the implementation period will be considered as an evaluation factor. XVI. Future enhancements and roadmap (short term, medium term and long term). Usefulness/quality of User Interfaces (UI) and User Experiences (UX). XVII. Total final cost of the project for 05 years period. XVIII. Credit terms specified in the price schedules at Annex B-I and B-II or better. Length of the credit granted, and payment terms will be considered as an evaluation factor.
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19. Training and Development	19.1 Comprehensive user training for minimum of 25 staff on the proposed solution free of charge. Training plan should be provided for the proposed system during the cutover and a subsequent refresher training plan also should be provided for 05 years. System vendor should have qualified trainers to train the staff members.
20. Financial Capability	20.1 The bidder/s shall furnish documentary evidence that it meets the following financial requirement(s): Audited financial statements for the last 03 years
21. SriLankan Airlines Right to Accept any Bids, and to Reject any or all Bids.	21.1 SriLankan Airlines reserves the right to accept or reject any bids, and to annul the process and reject all bids at any time prior to acceptance, without thereby incurring any liability to bidders
F: Award of Contract	
22. Acceptance of the Bids	22.1 SriLankan Airlines will accept the bids of the Bidder/s whose offer is not necessarily the lowest evaluated bid and is substantially responsive to the Bid document requirements.
23. Notification of acceptance	23.1 SriLankan Airlines will notify the successful Bidder/s, in writing, that their bid has been accepted. 23.2 SriLankan Airlines has the discretion to award the tender in full, part or cancel the tender or award the tender to a single bidder or several bidders. 23.3 After notification, SriLankan Airlines shall complete the contract, and inform the successful Bidder/s to sign it. 23.4 Within seven (7) days of receipt of such information, the successful Bidder/s shall sign the contract.
24. Performance Security	24.1 Within fourteen (14) days of the receipt of notification of award from SriLankan Airlines, the successful Bidder/s, if required by SriLankan Airlines, may furnish the Performance Security amounting to a minimum amount of 10% of the total value of the contract, using the Performance Security Form included in Annexure D. SriLankan Airlines reserves the rights to request for higher valued Performance Security, if required. 24.2 Failure of the successful Bidder/s to submit the above-mentioned Performance Security when requested or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event, SriLankan Airlines may award the Contract to the next lowest evaluated Bidder, whose offer is substantially responsive and is determined by SriLankan Airlines to be qualified to perform the Contract satisfactorily.

Section II: Data Sheet

ITB Clause Reference	
1.1	The Purchaser is: SriLankan Airlines Address: Commercial Procurement Department, SriLankan Airlines, Airline Centre, Bandaranayake International Airport, Katunayake
7.1	Proprietor's authorizations is required.
9.1	Bid-securing Declaration, using the Bid-securing Declaration form included in Annexure C is required.
11.1	The address for submission of Bids is : Attention : Senaka De Soysa Address : Senior Manager Commercial Procurement Commercial Procurement Department, Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka Telephone : +94 197732666
12.1	Deadline for submission of bids is on or before 03 November 2020, 11.00 a.m. SriLankan Time (GMT +5:30) Details should be provided to the following address one day in advance to arrange security clearance if the bidder/s wishes to hand deliver bids and participate for bid opening. Attention: Tharaka Hindurangalage Address: SriLankan Airlines Limited, Commercial Procurement Department (IT), Airline Centre, Bandaranaike International Airport, Katunayake , Sri Lanka Telephone: +94 (0) 19733 1845 Facsimile number: +94(0) 197335218 Electronic mail address: tharaka.hindurangalage@srilankan.com
15.2	For <u>Clarification of bid purposes</u> only, SriLankan Airlines' address is: Attention: Tharaka Hindurangalage Address: SriLankan Airlines Limited, Commercial Procurement Department (IT), Airline Centre, Bandaranaike International Airport, Katunayake , Sri Lanka Telephone: +94 (0) 19733 1845 Facsimile number: +94(0) 197335218 E-mail address: tharaka.hindurangalage@srilankan.com and sarath.jayathunga@srilankan.com All <u>Clarifications should be submitted to the above</u> address by 12 October 2020

Section III - Schedule of Requirements

Provisioning of an automated Crew Scheduling and Resource Management System for SriLankan Airlines -
CPIT/ICB 08/2020

Line Item #	Description of Goods/service	Qty	Unit of Measure	Final Destination	Delivery Date
01	Provisioning & implementation of an organized, cohesive and functional fully automated Crew Scheduling and Resource Management System for SriLankan Airlines to handle end to end Crew scheduling & Resource management requirements as stated in this document. The Solution should include product customization to meet business, regulatory and government requirement, integration with relevant IT systems - both airline and external systems which includes, border control immigration systems standard interfaces (Type B, SFTP, Type X and any other standard robust mechanisms), third party software components, middleware support, Comprehensive backend infrastructure support, well established overall product support for SriLankan to meet the required SLA with 24/7.	01	Each	IT Division of SriLankan Airlines	Based on the project implementation timelines

Section IV - Bid Submission Form

THIS IS A COMPULSORY FORM. NON-SUBMISSION OF DULY FILLED/SIGNED FORM SHALL RESULT IN REJECTING THE BID.

[The Bidder/s shall fill in this Form in accordance with the instructions indicated no alterations to its format shall be permitted and no substitutions will be accepted.]

Date:

To: SriLankan Airlines

We, the undersigned, declare that:

- (a) We have read and have no reservations to the document issued;
- (b) We agree to supply conforming to the documents issued and in accordance with the Schedule of Requirements of the following Service/solution [insert a brief description of the System/solution];
- (d) The total price of our Bid without Tax, including any discounts offered for 05 years is:
 - 1) Option 1 - [insert the All-inclusive total project cost for 5 years in words and figures];
 - 2) Option 2 - [insert the All-inclusive total project cost for 5 years in words and figures];

Note: Please note that the prices indicated in this Bid submission form should be same as the All-inclusive total project cost for 5 years indicated in the below Price schedule forms referred as Annex B-I & B-II.

- (e) The total price of our Bid including Tax (if relevant), and any discounts offered for 05 years is: [insert the total bid price in words and figures];
 - 1) Option 1 - [insert the All-inclusive total project cost with Tax for 5 years in words and figures];
 - 2) Option 2 - [insert the All-inclusive total project cost with Tax for 5 years in words and figures];
- (f) Our bid shall be valid for the time specified in ITB Clause 8.1
- (g) We understand that our bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us.
- (h) We understand that you are not bound to accept the lowest evaluated bid or any other bids that you may receive.

Signed: [insert signature of the duly authorized person]

Name: [insert complete name of person signing the Bid Submission Form]

Date

Section V - General Conditions

- I. Bidder" means the proprietor of the brand or an authorized distributor for the proprietor. In the event where the bidder is an authorized distributor, it is mandatory an Authorized Distributor Status letter from the Proprietor is submitted to SriLankan Airlines along with the bid to avoid rejection of the bid.
- II. The bidder/s should arrange product demonstrations at SriLankan Airlines premises at the bid evaluation stage. All applicable expenses including airfare should be borne by the bidder/s.
- III. If required, SriLankan Airlines requires to inspect the solution/product at the evaluation stage by SriLankan Airlines' personnel (minimum 2 passengers), same has to be arranged by the bidder/s at a client site to inspect the proposed product. All applicable expenses excluding airfare (airfare means- SriLankan Airlines' destinations only) shall be borne by the bidder/s.
- IV. All on-site & off-site expenses (Transport, Communication & all other incidental expenses) related to the project implementation, maintenance & support etc. within the 5-year contract period, should be borne by the successful Vendor.
- V. If accepted, it is mandatory that the bidder/s signs the Contract Agreement - Sample Contract Agreement is at Annexure F.
- VI. In order to ensure continuity of supply of Service/solution to SriLankan Airlines in the event of a disruption to bidder's operations, please provide details of alternative arrangements available within the agreed cost and specifications of product.
- VII. Upon delivery and/ or completion of installation of the system/solution, SriLankan Airlines shall perform User Acceptance Tests (UAT) to determine that the service/solution is operating in conformance with SriLankan Airlines 's published performance specifications for the service/solution and any other requirements agreed to by the parties (hereinafter "Specification) as indicated in the Specification Sheet.
- VIII. If SriLankan Airlines find that the delivered service/solution does not comply with the Specifications stated in this Agreement, SriLankan Airlines in its discretion has the right to either reject or request modification to the service/solution to compliance with the Specifications on free of charge basis. Modification will not affect the Warranty/ Service Levels provided hereunder. If the service/solution is rejected SriLankan Airlines shall recover any and all money paid, and any service penalties incurred due to rejection of the system/solution.
- IX. Please state whether your company has appointed a local agent for SriLankan Airlines supply & delivery of Solution and services to be procured under this bid exercise. If so, please submit a separate bidder information form including the information of the local agent.
- X. Advance payment is not acceptable. 45 days credit from the date of commissioning and acceptance by UL is required.

ANNEXURE A - Technical/General Specifications & Compliance Sheet

Name of the Bidder :
Name of the Principal :
Name of the Manufacturer :

1. INTRODUCTION

1.1. Purpose

SriLankan Airlines Limited, the national carrier of Sri Lanka is accepting proposals for an automated solution to handle Crew Scheduling and Resource Management solution. The requirement of SriLankan is described in this document, anticipating proposals from the reputed innovative supplier’s worldwide.

The purpose of this document is to provide the business and technical requirements specific to SriLankan airlines and to identify and select an industry standard high-quality solution which could provide dynamic and optimal process and functionalities to maximize the benefits for SriLankan Airlines.

The solution should support industry standard system architecture and standard common-off-the-self hardware and peripheral devices leveraging the benefits of the existing infrastructure as described in this RFP. Bidders interested in submitting proposals to provide such solutions are required to follow the recommended guidelines and instructions contained in this Request for Proposals. In the event it becomes necessary to revise any part of this RFP, revisions will be provided by addendum.

1.2. Description

The main objective and the goal is to enhance the business processes there by deploying industry standard, robust, scalable and innovative software solution that will replace current semi-automated flight crew planning and resource management system which includes crew planning, tracking, vacation planning, movement control and crew web portal. Further the proposed solution should bridge the gap in current manual processes (which is described in this document in later chapters) carried out by crew scheduling department. The proposed solution should be ideally accessed from anywhere (thin / light weight software module) for instant information by flight crew / selected user group.

1.3. Objectives

Key Objectives

- Equal flight distribution among the crew based on the defined rule set
- Flight Requests should be processed automatically without manual intervention thus ensuring the execution of defined criteria.
- Crew Off day requests should be processed automatically and the desired results need to be generated to the respective parties.
- Ability to generate auto rosters based on the defined criteria and it should produce accurate and optimal roster.
- Crew API (GD) details should be auto processed and transmitted to defined destinations via standard communication methods
- Crew leave requests should be automatically processed on defined criteria and the award should be done automatically.
- Comprehensive report generation mechanism.
 - Crew flown hours report (planned vs. actual)
 - Crew off days report (requested vs. actual , history)
 - Roosted and actual Flown sectors (individual , per category etc) reports
 - Training reports (by date, individual , category)
 - Any Ground activity report
 - Accurate block hour report
- Crew reporting and tracking mechanism (crew check-in)
- Display of correct crew leave history information.
- Web based crew information access application/ portal
 - Individual roster
 - Flown roster
 - Individual training records
 - Category information eligibility of number of sectors based on category)
 - Allowance / newsletters / crew notifications
 - Flight swaps (Period Swap / Duty to Duty Swap) facility should be available as an in-built system functionality. Further the functionality should be able to check the legality and facilitate the request through the system by individual crew members without admin interfere
- Vacation Planner
- Crew notification (email /SMS)
- Crew Tracking tool
 - Show expiries (training recurrences)
 - Show rule violations including flaying duty period
 - Show available vacancies and standby periods
- Man power calculation for any schedule before publishing
- Roster patterns & crew pairing creation
- System Generated roster patterns should comply expected level of fatigue
- Simulator for running different set of scenarios (rules/categories/patterns)
- System audit trial for action performed
- Ability to provide allowance calculations.
- Man power requirement calculation for a given schedule based on set of rules defined by the administrator
- Custom configurable rule engine to facilitate dynamic rule customization by average non-technical user.
- Fatigue measurement display board is expected to assess the fatigue levels of crew.

- The system should facilitate crew scheduling functionalities for flights which transports only cargo, based on the regulatory and company requirement.

2. OVERVIEW

2.1. Background

SriLankan Airlines, the National Airline of Sri Lanka, is an award winning carrier with a firm reputation as a global leader in service, comfort, safety, reliability and punctuality. Launched in 1979, SriLankan is currently expanding and further diversifying its wide range of products and services in order to drive the country's on-going boom in tourism and economic development.

The airline's hub is located at Bandaranaike International Airport in Colombo, providing convenient connections to its global route network of 60 destinations in 33 countries in Europe, the Middle East, South Asia, Southeast Asia, the Far East, North America and Australia.

The SriLankan Airlines fleet currently consists of a total of 25 aircraft. With the five year business plan it is expected to increase the fleet up to 34. The current fleet is comprised of

- I. Airbus 330-300.
- II. Airbus 330-200.
- III. Airbus 320.
- IV. Airbus 321.
- V. Airbus 320 Neo.
- VI. Airbus 321 Neo.

At present flight crew planning and resource management us a semi-automated process. With the increase in fleet & frequencies and mainly having different types of aircraft types in the current UL fleet, it is not possible to perform crew scheduling related functionalities with semi- manual manner. Further the flight crew planning system is a hosted solution system which is accessed via Citrix client. To access individual crew rostering and other related information for flight crew, separate web based information portal is provided at the vendor location.

System generated MIS report requirement is a main concern of the management which cannot be dynamically catered when the flight crew rosters are done in semi-manual manner. Therefore management reports, resource utilization reports and other MIS reports has to be prepared manually leading to major accuracy issues.

Communicating/dispatching relevant information/ documents (crew APIs, etc) to local and overseas stations / authorities is limited and done in more manual manner.

The Current System is integrated with SriLankan Airlines Flight scheduling system, Flight Planning System and few other sub systems via standard interfacing method.

3. Business Requirement

This will describe overall functional requirement. The system must have the following feature that are matching in each identified functional area.

3.1. Crew data configuration and management

Basic crew data are handled in HR system and should be delivered to the new CMS. The operational crew data should be handled in the CMS and if necessary should be transferred to HR,

- 3.1.1 Basic Crew information – The Basic information should be defined in the system which could be referred at many different stages to provide end users with meaningful information
 - 3.1.1.1 Staff Number
 - 3.1.1.2 Full Name
 - 3.1.1.3 Last Name
 - 3.1.1.4 Last name with initials
 - 3.1.1.5 Call name
 - 3.1.1.6 Present Address
 - 3.1.1.7 Permanent/Emergency address
 - 3.1.1.8 Email address
 - 3.1.1.9 Home Phone
 - 3.1.1.10 Mobile Phone
 - 3.1.1.11 Religion
 - 3.1.1.12 Civil Status
 - 3.1.1.13 NIC Number
 - 3.1.1.14 Photograph
 - 3.1.1.15 Language proficiency of each crew member
 - 3.1.1.16 Batch Number
 - 3.1.1.17 Nationality
 - 3.1.1.18 Birth Date
 - 3.1.1.19 Locker Number
 - 3.1.1.20 Provision for any other fields.

- 3.1.2 Operational Crew Data – The operational data could be defined at different stages so that system can refer them during calculation and report generation.
 - 3.1.2.1 Pick-up point, route and distance
 - 3.1.2.2 Transport Type (UL, ECD, etc)
 - 3.1.2.3 Spouse staff no (if in crew)
 - 3.1.2.4 Group code
 - 3.1.2.5 Grade, date appointed
 - 3.1.2.6 Languages
 - 3.1.2.7 Passport, visa and vaccinations expiries
 - 3.1.2.8 Qualifications and additional qualifications
 - 3.1.2.9 Seniority number
 - 3.1.2.10 Leave groups

- 3.1.3 Interface to define Pairing rules
The system should support to define the set of rules that will impact on calculating the paring for given roster periods.
- 3.1.4 Fatigue measurement display board is expected to assess the fatigue levels of created pairings.

3.1.5 SMS facility to send messages

The system should have the facility to send text messages to any recipients or group of recipients via the system functionality.

3.1.6 Ability to facilitate Cargo only flight by defining relevant configurations

The system should facilitate cargo only operations and the relevant configuration options should be made available on the system itself.

3.2. Integrated Flight Schedule

Flight schedule should offer an interactive graphical display of either a manually entered schedule or one imported from other systems (SSIM format / excel format) in compatible format. This should keep all relevant flight leg information readily available

3.2.1 Flight Number, Departure city, arrival city, leg number, timings etc

Automatic determination of crew composition based on aircraft and / or flight

- Airport data
- Daylight saving times
- Voyage log
- Graphical display of aircraft rotations
- Scenarios must be possible

3.2.2 The system should be capable to handle IATA formatted ASM/SSM/ MVT messages, these messages should be either captured by a SITA telex address, email box, XML web service, database sync, etc.

The following are the list of message types generated from the scheduling system

- MVT
- MVA
- EQT
- TIM
- NEW
- CNL
- RR
- DIV

3.2.3 The system should be capable to process SSIM data file to capture the next schedule information

3.2.4 The integrated flight schedule should display the passenger book load from reservation system (Amadeus)

3.3. Crew training and validity

Crew training and check should offer a solid administration module for keeping track of initials and recurrent training's as well as checks. It also should adhere to define own course structure. The system should assist in monitoring history and due dates, and the necessary reports. The module should be fully integrated with the Crew Schedule module for easy assignment including qualifications and validation checks. The module should have a monitoring system that prompts warnings to the users for expiries in advance avoiding any violations due to training expiries.

3.3.1 Ability to define training parameters and retrieve training information. The following requirements need to be facilitated by the system

3.3.1.1 User definable training structure

3.3.1.2 Multiple aircraft types

3.3.1.3 Scheduling of class room training's

3.3.1.4 Automatic aircraft recency check updating

3.3.1.5 Planning of simulator availability and usage

3.3.1.6 Training history records

3.3.1.7 Due date/expiry warning system with colour indicators/flags/pop-ups

3.3.1.8 Rule engine

3.3.1.9 3 landings Repeated from 3.3.1.4.

3.3.2 The system should have the ability to handle following training courses (minimum):

3.3.2.1 Evacuation

3.3.2.2 Safety

3.3.2.3 Fire drill

3.3.2.4 Security

3.3.2.5 Medical

3.3.2.6 Grooming Checks

3.3.2.7 Dangerous Goods

3.3.2.8 CRM

3.3.2.9 First aid

3.3.2.10 On-board Service Check

3.3.2.11 Ditch-Drill

3.3.2.12 SMS

3.3.2.13 PPC – MFF crew [Ability to entre SIM Instructor (SFE) conducted details]

3.3.3 Ability to define/create courses, group courses (define course parameters). System should be able to capture following parameters to handle training;

3.3.3.1 Training Abbreviation

3.3.3.2 Training Name

3.3.3.3 Last done date

3.3.3.4 Due date

3.3.3.5 End date

3.3.3.6 Earliest date

Training Abbreviation – Short code to identify training. Maximum 5 characters (DGR – Dangerous Goods Regulation)

Training Name – Free text field to specify the name of the training

Last Done Date – Last performed date

Due date – Last done date + Interval (Ex. Recurrent CRM training is valid for a year. Therefore, if crew member X follow a recurrent CRM course on 21st Oct 2019, his Recurrent CRM is due by 31st Oct 2020)

Earliest date – user definable period for warning. For example if the due date is 8th March 2011 and if the warning period is one month, then the earliest date would be 8th February 2011.

3.3.4 SIM for recurrent training

Should have the ability to buy simulator sessions based on simulator requirement analysis. Capability of assigning and tracking expiries.

3.3.5 Auto allocation / Rostering of crew members to training slots.

3.3.5.1 The system should have the facility to check the expiry of training needs.

3.3.5.2 Breakdown of the tech crew members by month

3.3.5.3 The expiry of the crew member's training needs need to be looked at three months before.

3.3.5.4 Crew member category need to be taken into consideration when rostering

3.3.5.5 Crew member need to be considered when assigning crew to training rosters

3.3.5.6 Admin should be able define rules as how the crew members should be picked up for training (how many pilots/ how many FO's / How many leading / How many pursers)

3.3.5.7 Admin should have the flexibility to manually adjust the training slot without affecting the optimal roster and all changes need to be recorded.

3.3.5.8 Ability to capture SER/SOC recencies for each crew member and when Crew list is viewed for a particular flight the recencies of SER and SOC to be displayed on the side with the expiry date.

3.3.5.9 Sector recencies to be automatically checked.

3.3.5.10 Training Reports

Comprehensive training reports need to be generated by the system to analyse trends, recurrences, compare actual and planned training sessions.

3.3.5.11 A special report for Crew Competency Certificate is mandatory.

Graphical view of training calendar should provide comprehensive information

❖ Selection of a training slot should list all the participants and the facilitator

❖ Class room information

❖ Transport information

3.3.5.12 Flight Crew training to be automatically tracked and to be notified instantly to the administration / normal users. This should happen based on the user defined parameters on the system itself.

3.4. Crew pairing

Crew pairing should offer a variety of functions to generate pairing schemes from the flight schedule. It should offer an extensive crew composition support and many display filters that enable the planner to select only relevant pairings. Crew pairing must provide cost information, capacity diagrams, deadheading information, hotel information, taxi information (to be checked) and Etc. All actions in the pairing module to be checked by the rule engine.

3.4.1 The system should facilitate easy creation of crew pairing and the following functional areas should be covered

3.4.1.1 Graphical display of flights – and pairing scheme simultaneously

- ❖ Easy pairing constructions (such as drag and drop)
- ❖ Decision support functions
- ❖ Full rule engine support
- ❖ Freeze and release pairings
- ❖ Automatic pairing generations and optimization should consider room sharing, couple rosters
- ❖ Accommodate multiple crew bases
- ❖ Split and combine pairings
- ❖ Handling of daily allowances
- ❖ Determination of optimal pairing positions (cost control of standard crews)
- ❖ Check on open pairings
- ❖ Check on uncovered flight positions
- ❖ Maintenance of standard dead- headings (example use of DH)
- ❖ Extensive update mechanism for flight changes
- ❖ Determination of crew meals for inflight support
- ❖ Hotel information
- ❖ Crew capacity histogram (distribution per month & positions)

- ❖ Pairing cost with breakdown
 - ✓ Hotel cost
 - ✓ Transport cost
 - ✓ Crew allowances
- ❖ Different selections of pairings
- ❖ Accommodate multiple crew bases
- ❖ Fatigue measurement display board is expected to assess the fatigue levels of created pairings.
- ❖ System audit trail for action performed
- ❖ Cost functions
- ❖ Night out /overnight calculation

3.4.1.1.1 Comprehensive training logs for pairing for a given roster to be generated via the system.

3.4.1.1.2 Logs for Planning rosters vs. Actual rosters to be generated for a given period by the system

3.4.2 Following Statistical Reports need to be produced by the system

Inflight

- ❖ Man-days per week for Purser, LSS, Flight Stewards and Flight Stewardesses
- ❖ Standby (SB) man-days per week for Purser, LSS, Flight Stewards and Flight Stewardesses
- ❖ Flight hours for week Purser, LSS, Flight Stewards and Flight Stewardesses

- ❖ Actual number of crews for Purser, LSS, Flight Stewards and Flight Stewardesses per month
- ❖ Stewardesses per month
- ❖ Night out /overnight reports

Tech

- ❖ Man-days per week for Captains, Co-pilots and Cruise pilots incl. different qualifications
- ❖ SB man-days per week for Captains, Co-pilots and Cruise pilots incl. different qualifications
- ❖ Flight hours per week for Captains, co-pilots and Cruise pilots incl. different qualifications
- ❖ Actual number of crews for Captains, co-pilots and Cruise pilots incl. different qualifications per month
- ❖ Instructor ratio
- ❖ Night out /overnight reports

3.5. Crew Schedule / planning

Crew Schedule module is the piece of software that is used to assigning crew either manually or automatically. It should allow users to easily take requests, mandatory recurrent training, and block hours, off days, night outs, vacations and standby duties into account. The rule engine supports day – to –day planning by automatically checking the legality of the generated schedules

- 3.5.1 The system should facilitate main functionalities related to crew pairing creations, which includes loading of schedule from scheduling tool up to generation of optimal pairing.
- ❖ Graphical display of pairing and crew line schedules simultaneously
 - ❖ Easy assignment function using drag and drop
 - ❖ Handling of duties containing flight and non- flight activities
 - ❖ Flights statistics and counters
 - ❖ Extensive update mechanism for pairing changes
 - ❖ Check on uncovered pairing positions
 - ❖ Full rule engine support
 - ❖ Automatic schedule generations (with flight and cabin crew optimal utilization)
 - ❖ Automated Request handling (Request for off days, Flights etc.)
 - ❖ Recurrent training assignment
 - ❖ Handling of simulator sessions and familiarization flights
 - ❖ Stand-by assignment – optimum and effective based on the schedule
 - ❖ Indication to the scheduler on medical, passport etc. expiry
 - ❖ Accommodate multiple crew bases
 - ❖ E-mail and SMS facility for roistering
 - ❖ Auto generated rosters need to be saved.
 - ❖ Subsequent changes carried out for roster before published need to be tracked (Save).
 - ❖ Flown history to be check and considered for tech crew planning functionalities
 - ❖ Seniority and priority defined for tech crew members for a specific time period (12 months) to be calculated during the planning process.
 - ❖ The list of crew who is defined as cruise pilots to be optimally utilized by the system based on the defined rules and parameters
 - ❖ The cabin crew composition for specific flights / sectors should be configurable and customizable by the crew admin users without depending on the product supplier/ vendor.
 - ❖ Entitlements for parings based on the available crew and frequency should be calculate for cabin crew
 - ❖ Auto generation of patterns and allowance of the schedule crew to be sent to respective stations.
 - ❖ Ability to facilitate crew planning activities with regard to Cargo only

3.6. Crew tracking

Crew tracking module should manage all crew – related issues during the day of operations. It should offer functions for crew check-in /out and disruption handling. Comprehensive decisions support is to be available for situations where replacements need to be found in case of illness, traffic changes, delays, etc.

3.6.1 System must facilitate the easy tracking of crew members activities that includes the following.

- ❖ Real- time graphical display of flight and crew status
- ❖ Real- time graphical display of individual crew line schedule
- ❖ Keeps track of To- do-list
- ❖ Change control for crew notification
- ❖ Crew check- in indicators
- ❖ Voyage log handling
- ❖ Crew communications
- ❖ Indication to the tracking staff on medical, passport etc expiry
- ❖ An audit trail component should be included
- ❖ E-mail and SMS facility for roster tracking
- ❖ Rule engine support to check the legality of flights and crew rosters
- ❖ Automate the Recovery Process (Assigning the standby crew) according to the given criteria (e.g. Historical data, Seniority, Lesser destruction,crew fatigue levels)
- ❖ The published roster graphical display should be available for comparison against the actual roster with requested flights checks and assigned duties
- ❖ The published original roster should display the requested flights to the crew control department to take necessary actions.
- ❖ Landing pilot which is captured via system integration (ACARS/ WEB service / MQ)to be displayed for each flight
- ❖ Duty Calculation of crew assigned on standby need to be shown.
- ❖ The system should automatically pick the correct crew members by minimizing the productivity calculation and optimizing the disruptions. The system should be capable of suggesting this based on defined parameters.
- ❖ Most suitable crew replacement should be suggested based on standby by the system.
- ❖ Optimization of stand by crew based on the peak/off peak of flights schedule. This should be provided on daily basis to optimize the operation.
- ❖ Crew details should be generated on specified report formats (Chinese crew lists ,GDs
- ❖ Facilitate tracking crew for of cargo only flights and its related activities.

3.7. Crew API/APP

The proposed system should provide a separate module to generate Crew API/APP (Advanced Passenger Information/Advanced Passenger Processing) which need to be sent automatically to required Immigration system directly or via service provider (SITA)

3.7.1 The proposed system should be able to send Crew API/APP for below stations for onward flight as well as return flights.

Station	Crew API /Crew APP	Comply/Not Comply
MEL	Crew APP	
SIN	Crew APP	
LHR	Crew API	
RUH	Crew APP	
JED	Crew APP	
DMM	Crew APP	
AUH	Crew APP	
CAN	Crew API	
PEK	Crew API	
PVG	Crew API	
DXB	Crew APP	
MCT	Crew APP	
NRT	Crew API	
BAH	Crew APP	

- 3.7.2 The proposed system should support all standard Crew API format including O2B and any other latest version.
- 3.7.3 The proposed system should support all standard Crew APP format such as Crew APP Version 3, Version 4, Version 5, Version 6 or any other latest format which will be released in future.
- 3.7.4 Crew API and Crew APP message generation time should be a configurable variable which can be configured based on station. E.g: MEL Crew APP should be generated 4 hours prior to departure and SIN APP should be generated 2 hours prior to departure.
- 3.7.5 The system should send a notification to the given SriLankan recipient list (email addresses) to notify that Crew API/APP has been generated from the system.
- 3.7.6 Availability of 24X7 monitoring mechanism to ensure the Crew API/APP has successfully delivered to station/Immigration to avoid any possible penalties for the airline.
- 3.7.7 In an event of deciding to start new destination station by SriLankan Airlines, the system provider should provide the required support on configuration as well as end to end testing without any additional cost for the airlines.

3.8. Vacation planning

System should support flexible, easy to use and rule driven vacation planning module integrated to the system itself to facilitate vacation planning activities. This should be ideally consisting of the vacation administration, process execution module and the end user interaction module where crew members can log their vacation requirements. Crew vacation planning module is very important to administrate and plan leaves of tech and cabin crew. The system should support for different types of leave types (Annual, Casual, Maternity, Long sickness, approved No-pay). Further it should be integrated with company HRIS system which is currently managing the leave of SriLankan staffs including cabin and tech crew.

Crew training and check should offer a solid administration module for keeping track of initials and recurrent training's as well as checks. It also should adhere to define own course structure. The system should assist in monitoring history and due dates, and the necessary reports. The module should be fully integrated with the Crew Schedule module for easy assignment including qualifications and validation checks

- 3.8.1 Ability of handling annual leaves of Flight crew and cabin crew separately with two different rule sets
- 3.8.2 The system should be capable of setting the vacation planning period (annual, monthly or quarterly) which can be configured separately for Cabin and Flight crew.
- 3.8.3 Ability to set the vacation bidding period which can be configured separately for Cabin and Flight crew.
- 3.8.4 The system should have the facility to track the annual leave balances of previous years and Individual Leave balances should be derived based on carried forward leaves and this year entitlement.
- 3.8.5 Per day annual leave Quota limits should be set for each category (Captain, First Officer, Purser (PUR), Cabin Supervisor (CS), Flight Attendant (FA) and etc)
- 3.8.6 The proposed system should support below Vacation Bidding Criteria for Flight Crew
 - Flight Crew should be given access to bid for their Block Annual Leave and the number of leave days of a Block should be a variable which can be configured. This Block Annual leave should have a main bid and "n" number of alternative where "n" should be a variable which can be configured.
 - In addition to Block Annual Leave, there should be a facility to bid for "n" number of "Ad-Hoc" leave request where the number of days of a "Ad-hoc" can be varied from 1 to 7 and the "n" should be a configurable variable.
- 3.8.7 The proposed system should support below Vacation Awarding Criteria for Flight Crew
 - Criteria for annual awarding of Block Annual Leave is the Group Wise Rotation Basis where Captains and First Officers are grouped into 3 (A, B and C). In each year one of the groups will be in the priority (e.g.: 2020 Group A is highest priority and 2021 Group B is the highest priority) and the system should award them the according to seniority within the group.
 - In the event if the daily quota has been already exceeded the next alternatives should be considered automatically.
 - The remaining two groups will be awarded on availability basis considering the seniority.
 - The proposed system should support the above explained criteria (Group wise Rotation Basis) for "Ad-hoc" leave awarding for Flight Crew.
- 3.8.8 The proposed system should support below Vacation Bidding Criteria for Cabin Crew
 - Cabin Crew should be given access to bid for their Block Annual Leave and the number of leave days of a Block should be a variable which can be configured. This Block Annual leave should have a main bid and "n" number of alternatives where "n" should be a variable which can be configured.
- 3.8.9 The proposed system should support below Vacation Awarding Criteria for Cabin Crew
 - Criteria for Cabin Crew Block Annual Leave awarding should be carried out automatically based on the seniority with in the any Cabin Crew Category.
 - And awarding should be able to carry out separately for each of the Cabin Crew Category (PUR, CS, FA) considering their quota limits.
 - In the event if the daily quota has been already exceeded the next alternatives should be considered automatically.

- 3.8.10 Flight Crew and Cabin Crew should be given the access of Crew Web Portal or Crew Mobile APP where they can bid for their annual leave, view their leave balance and leave awarding status.
- 3.8.11 Below reports should be available on the proposed system.
- Individual leave balances report.
 - Daily Leave Utilization Report (Monthly Breakdown)
 - Fleet wise report for First Officers (A320/330)

3.9. Aircraft movement control

Aircraft Movement Controls should show the movement of the individual aircraft on a real-time graphical display. This module is fully integrated with the crew tracking module. Colour changes, special indicators and warning messages should offer a total view of daily operations. The module needs to provide an efficient interface to self-definable underlying information, such as cargo and passenger list, fuelling data and maintenance records. Moreover, the aircraft schedule changes could be carried out through ASM/ SSM or manual drag and drop methods

3.9.1 The aircraft movement functionality should ideally show the current status of the flight schedule in graphical format, this should include the below characteristics.

- ❖ Real – time graphical display of aircraft rotations
- ❖ Flight status
- ❖ Delay information
- ❖ Connecting flights
- ❖ Crew status
- ❖ Manual update of schedule by triggering the ASM / MVT message option should be available
- ❖ Drag and Drop option for schedule changes is required (comprehensive audit trail should be available)

3.9.2 Booked load and aircraft configuration should be displayed in the movement control board

- ❖ It is required to seamlessly integrate Amadeus reservation and AIMS system to display above information.

3.10. Crew check-in/ Check-out

This module will be used at the crew control centres. Crew members will be check-in/check-out for flights using this module. Check-in/check-out should be done by scanning the figure mark which need to be then tracked and transferred to company HR System's time and attendance module. Flight and Cabin members perform check –in and check-out at Colombo airport for a given pairing.

3.10.1 Crew check-in / check-out functionality should be facilitated by the system

- ❖ Should check for flights within a defined period of time for that crew member
- ❖ Expiry of passport, license, vaccinations and etc should be prompted to check-in crew member from a defined day.
- ❖ Crew member should have a facility to send message to pre-defined people
- ❖ Crew scheduling or administration sections should be able to publish information to crew members, which will be shown after check-in.
- ❖ Crew members should be able to view or print their roster information and paring information.
- ❖ Check-in restrictions should be defined for both cabin and tech crew separately
- ❖ Crew hotel checking checkout time notification

3.11. Allowance calculation

Crew allowance calculation should be facilitated by the system itself based on user defined conditions and parameters. The system should have the facility to define below functions based on crew category (tech / cabin). Based on selection the total allowance calculation will include different rule sets.

Below mentioned information will be required to calculate meal, Productivity and duty day payments. System should be capable to provide this information.

- ❖ Block hours operated
- ❖ Meal allowances collected at overseas stations.
- ❖ Meal allowance entitlement of turn around flights.
- ❖ The system should have the ability to calculate the meal allowances for crew members who has operated cargo only flight.
- ❖ Deadhead operation information
- ❖ Crew members are entitled to minimum guarantee of 2 hours a day for a calendar month. This monthly guarantee will not be given if one of following disturbs their roster pattern.
 - ✓ Medical leave
 - ✓ Casual leave
 - ✓ Off the roster
 - ✓ Disciplinary actions
 - ✓ Ground training
 - ✓ Special request made by staff
 - ✓ Assigned only for turnaround operations
 - ✓ No pay
 - ✓ Being absent for a flight
 - ✓ Lose of hours due to a mutual change
 - ✓ Annual leave

3.11.1 Meal Allowance Calculation (Layovers)

- ❖ System should have the flexibility to define the meal allowance rates

- ❖ Allowance calculation is performed based on the Currency rates defined in the oracle finance system as the primary source, as the secondary source system should have the facility to define the rates and use them during the calculation.
- ❖ Meal allowance calculation is a monthly process and based on the figures defined in the system, administrative staff should be able to generate /produce the allowance calculation for any given period.
- ❖ Stations should have the facility to access the information via a web / light weight application for the flights arriving to that station
- ❖ Facility to define the meal types and their associated cost for each pairing type
- ❖ The cost of the meal for specific period should be defined by the admin staff
- ❖ Station should be able to list all crew members who is flying to that station and meal allowance calculation process should produce comprehensive reports to the station staff to carry out the payments
- ❖ Ability to define the meal types based on the aircrafts (Narrow body and wide body aircrafts has different meal type patterns)
- ❖ Admin should be able to change the pairing type / patterns if there is a mismatch in the actual pairing pattern (however if the crew pairings were up-to-date with the last minute changes the impact of such situations can be minimized)
- ❖ Ability to scan and upload the meal allowance sheet by station staff for the allowance paid from that respective point so that admin staff can instantly access the information.
- ❖ Facility to configure Cabin / tech crew allowance rules and their respective categories with defined criteria should be available

3.11.2 Meal Allowance Calculation (Turnaround)

- ❖ Meal allowance calculation for turnaround flights are based on flight timings.
- ❖ Turn around flight allowances are paid at the base station (Colombo) and they should be able to access the information instantly for the completed flight sectors (pairings)

3.11.3 Productivity Calculation

System should facilitate parameters and rules to calculate the productivity of tech and cabin crew members, further breakdown of each type in to their respective categories need to be facilitated and the system should calculate the allowances in to broken down category level.

The calculation logic (this is the current practise but system should be flexible to define the criteria) such as below should be facilitated when performing the productivity calculation

Productivity hours recorded more than 75 during the calendar month to be checked for mutual changes and the hours earned from same should not be paid with the extra pay of USD 5 per hour.

The Extra Pay is paid for the every hour after 75. Compare the original published hours of the mutual period against the actual earned hours during the same period is needed for the calculation.

*Acting operations to be captured and the rate difference to be paid accordingly. E.g : Acting Pursers, Cabin Supervisors etc.

* Detail breakdown reports provided presently will still be needed for verification and Audit purposes.

3.11.4 Training Instructor allowance calculation

The training admin staff should be able to assign the crew members to the scheduled training slots. The cost per day should be defined in the system so that at the end of the month the system can calculate the training instructor allowance automatically.

3.11.5 Crew Off-Day Calculation

Ability to calculate the crew-off days payment based on the parameters and criteria defined in the system. At present the crew is eligible for 8 off days for a roster period and if the dates utilized is less than 8 days the company will have to pay for the crew member based on a figure defined in the system. Further the system should be able to provide reports (Staff ID, Name, Off Days utilised and Allowance)

- ❖ It is required to track the planned verses actual crew off days for off day payments.

3.11.6 Circulation of allowance information to crew

The system should be capable to send the calculated meal allowance information to respective crew members via email / SMS, this should be an automatic process based on the system parameters.

- ❖ Layover calculation
- ❖ Turnaround calculation
- ❖ Productivity calculation
- ❖ Training Instructor allowance calculation
- ❖ Off-day payment calculation

3.11.7 Report Requirement

- A report to identify the minutes gained or lost by a mutual change to pay extra hours should be facilitated
- A Report to identifying mutual changes done by crew members when doing salary calculation. This is a critical reporting function which is widely required
- Full allowance calculation of Crew Allowance (broken down to different levels as described above) should be automatically processed and circulated to individual crew to their company email address on monthly basis. Further briefed version of the crew allowance should be text to their mobile phones as well on monthly basis.
- Ability to view both publish and actual rosters in the same window in order to identify the mutual changes.

3.12. Man power calculation

The solution should include the ability to quickly determine the minimum legal flight deck/cabin crew requirements for any given annual/seasonal commercial schedules plan with due Consideration given to national, company regulations and union agreements, management administrative office coverage requirements, introductory and recurrent training, vacation, days off and crew preferences. Crew resource requirements can be presented by base, fleet or by individual crew rank/function category.

- 3.12.1 It is required to have a manpower planning & rostering in the crew management system as a separate integrated module. The vendor should include the availability of this option.
- 3.12.2 Stand by crew to be considered while calculating man power planning requirement
- 3.12.3 Dynamic Crew requirement to be considered on daily basis by considering below factors
 - ❖ Leave
 - ❖ Flight schedule
 - ❖ Training
 - ❖ Off Days
 - ❖ Forecasting
 - ❖ Etc.
- 3.12.4 Destination wise crew requirement to be calculated and a separate report to be generated for this purpose.
- 3.12.5 Instructor requirements for training to be suggested by the system based on defined parameters.
- 3.12.6 Carder calculation should consider specific parameters such as block hours, etc. (should be able to define parameters)
- 3.12.7 Man power planning module should have facility to incorporate cargo only flights requirement.

3.13. web module for Crew

Crew members should be able to view their rosters, pairings, allowance, trainings and etc by remote login to this web module. Proper security mechanisms should be in place to protect the system from unauthorized access.

- 3.13.1 Web based application with below functionalities that is compatible with many browsers should be made available to access individual profile information, share information and notices.
- 3.13.2 Ability to request for off days
- 3.13.3 Ability to request time-off request (resting periods)
- 3.13.4 Ability to handle mutual change requests and display them online with current status (Awarded / Not Awarded / pending for Admin permission)
- 3.13.5 Period Swap (block of flight swap at once)
- 3.13.6 Rules engine to support the legality of mutual changes
- 3.13.7 View roster details of self/others
- 3.13.8 View pairing information
- 3.13.9 View allowances
- 3.13.10 Access to update personal information (only the allowed parameters by admin should be able to update by crew)
- 3.13.11 View Gender information and crew category
- 3.13.12 View training programmes and due dates
- 3.13.13 Ability to send Alert messages to crew members on expiries and other important information.
- 3.13.14 View Weather report (optional)
- 3.13.15 View leave entitlement, leave balances and Ability to request leave
- 3.13.16 View flights for their current roster with the crew flying with them
- 3.13.17 Activity list for the current and previous roster such as off days, duty days stand by days
- 3.13.18 Notices relevant to Crew under e-bulletin (admin news, hotel details, duty free notices, Flight safety information)
- 3.13.19 Interface to electronic document web system to view publications relevant to tech crew.
- 3.13.20 Facility to block the planning roster
- 3.13.21 Block roster category
- 3.13.22 Simulator briefing sheets details for given period
- 3.13.23 Allow leave bids
- 3.13.24 Main bid
- 3.13.25 Alternative bids (more than 1) – Should be able to define the configuration by admin
- 3.13.26 Web module to access the meal allowance by stations
- 3.13.27 Ensure mandatory viewing of Crew safety notices / important documents / manuals / revisions online

- 3.13.28 The system should be able to graphically display roster/s for a given period and by clicking on a specific flight, the list of crew should be displayed (staff ID, Staff Name)
- 3.13.29 Ability to upload documents (word, PDF, image), notices and bulletins via web module and allow access to permitted set of users (should have a facility to configure the permission levels and list of users).
- 3.13.30 Track and record comprehensive logs for which the online document on web has been accessed. This track of logs should clearly indicate the document access status (accessed/ Downloaded/read)
- 3.13.31 Crew leave balance facility to be available via web.
- 3.13.32 Control of the web configuration, turn on / off facility of web features and restrict/ allow display of required information should be given to given to crew control management.
- 3.13.33 Crew to check on the flight entitlement
- 3.13.34 Crew to check on the flown history by (destination /flight No)
- 3.13.35 Generate report (BLH 330/320, Flight)

3.14. Report module

A comprehensive report generating module should be available. Some standard reports should be available in the system. Airline staff should be trained to create new reports when necessity comes.

- 3.14.1 The following reports generation should be facilitated by the system
Payroll information – productivity / Meal / Duty day allowances.
- 3.14.2 Individual earnings for a period.
- 3.14.3 Total earnings – all staff list.
- 3.14.4 Average earning per crew member (category wise) for a period.
- 3.14.5 Highest earning list – all staff and category wise.
- 3.14.6 Productivity hours –individual/all staff/more than 75/less than 55.
- 3.14.7 Delayed flights – base and overseas
- 3.14.8 Actual crew check-in time at the base.
- 3.14.9 Meal allowances paid and entitlement for the layover at stations.
- 3.14.10 Annual leave report
- 3.14.11 Casual leave report
- 3.14.12 Requested off report
- 3.14.13 Mutual changes information with hours gained / lost.
- 3.14.14 Deadheading meal / productivity allowances with entitlements.
- 3.14.15 Published hours information
- 3.14.16 Winter clothing allowances due during the month.
- 3.14.17 Crew Off-day calculation report for given period for any individual crew member
- 3.14.18 Meal allowance calculation breakdown report to stations and admin staff for any given period / any individual staff.
- 3.14.19 Night out report
- 3.14.20 Hotel / Room utilization
- 3.14.21 Transport utilization report
- 3.14.22 Man-day statistic report
- 3.14.23 A report to identify the minutes gained or lost by a mutual change to pay extra hours should be facilitated
- 3.14.24 A Report to identifying mutual changes done by crew members when doing salary calculation as mostly is required
- 3.14.25 Full allowance calculation of Crew Allowance (broken down to different levels as described above) should be automatically processed and circulated to individual crew to their company email address on monthly basis. Further briefed version of the crew allowance should be able to send as a text message to their mobile phones on monthly basis.
- 3.14.26 Ability to view both publish and actual rosters in the same window in order to identify the mutual changes
- 3.14.27 Ability to generate crew member report based on their language proficiency by crew member category or group.
- 3.14.28 Ability to view Crew List for a particular flight with the recencies of SER and SOC to be displayed on the side with the expiry date.
- 3.14.29 Reports on sick leave combined with ROF(requested off), Casual/Annual/Mutual
- 3.14.30 Comprehensive report of Cabin Crew members who has exceeded 19 days medical leave /07 days casual leave
- 3.14.31 Should be able to generate a report with all Crew Scheduling comments / without comments
- 3.14.32 Whenever reports are generated the relevant fields should be column wise and it should be a tabular report format.
- 3.14.33 Leave utilization report
- 3.14.34 Whenever a report is generate for leave utilization details, total should be displayed against the respective CCM name
- 3.14.35 Employee Information Reports

- 3.14.36 Following data elements are mandatory
- 3.14.37 Address list
- 3.14.38 Employee report according to date of promotion to category (C1,C2,C3,C4,C5)
- 3.14.39 Reports on contact status
- 3.14.40 Below reports need to be available based on the comments and status tracked by the crew scheduling staff
- 3.14.41 Not contactable on standby
- 3.14.42 Not available for the pick up
- 3.14.43 Refused to operate flight
- 3.14.44 Not answered the phone
- 3.14.45 A log report should be generated which includes system generated pairings and manual pairings and these two types should be easily segregated for the users.
- 3.14.46 It is required to track the planned verses actual crew off days for off day payments.
- 3.14.47 Destination wise crew requirement to be calculated and a report to be generated.
- 3.14.48 Discretion report for tech and cabin crew should be available
- 3.14.49 Comprehensive report facility for each crew scheduling activity / function should be available to average users.
- 3.14.50 Customizable report module should be available for average users to create / generate adhoc report requirement.
- 3.14.51 Access to complete dataset via standard interface is required to configure BI for dynamic report and dashboard requirement.
- 3.14.52 Fatigue report for each roster (Daily fatigue monitoring) should be available
- 3.14.53 Report on planned vs. Actual roster should be available (graphical and tabular)
- 3.14.54 Landing pilot for flights to be displayed for a specific period as a report.
- 3.14.55 Individual leave balances report.
- 3.14.56 Daily Leave Utilization Report (Monthly Breakdown)
- 3.14.57 Fleet wise report for First Officers (A320/330)
- 3.14.58 Medical leave utilization – should generate actual numbers of days utilized and utilization after prorating
- 3.14.59 Availability of Block hour report on 330/320 fleet
- 3.14.60 Ability to generate Entitlement, flown history and specific flight history details as a report
- 3.14.61 Crew published / actual layover and turn around report with block hours and layover time for a specific period
- 3.14.62 Crew operating pattern with the crew complement for a flight schedule/specific period

3.15. Integration to other systems

The system should be integrated with few major systems hosted outside the company and many internal sub systems deployed internally.

3.15.1 Open architecture integration method

The system should support fully inbound and outbound integration in an open architecture environment. Ideally the integration mechanisms such as web service, MQ, SITA telex address, FTP and database synchronizations.

3.15.2 The following are the few critical systems identified for online integration

- AIMS scheduling system – Crew management system should be interfaced with AIMS to get the flight schedules and real-time flight status. Also CMS should push the crew information to AIMS system(ability to download the crew information-crew full name, position, category as text file is an requirement)
- HRIS (Human Resource Information System) – The basic crew information is maintained in HRIS. These information should be interfaced with the CMS. CMS should be able to keep all the data required to operational functions.
- My HR Space (Leave handling system) – CMS should have its own leave (vacation) module. The details such as leave entitlement, leave obtained, leave balances, etc should be transferred to My HR Space System.
- T&A (Time and Attendance system) – CMS should be interfaced with T&A system to get the crew check-in details.
- Payroll (Salary payment system) – Monthly crew allowance details should be transferred to payroll
- Oracle Finance – CMS should be able to get the company published exchange rates
- LIDO Flight Planning System – The CMS system should be ideally integrated with LIDO flight planning system via MQ
- Fuel Monitoring System – The crew information should be integrated with fuel monitoring system via Web service / DB synchronization method.
- Online system to store and retrieve and ensure mandatory viewing of Crew safety notices / important documents / manuals / revisions
- The following IATA formatted messages should be facilitated by the system to integrate with scheduling system (At Present AIMS)

Cancel Message

SSM
UTC
CNL XASM
UL884
14JUL16 06OCT16 4

Time Change

SSM
UTC
TIM
UL229
01MAR17 02MAR17 34
CMB1240 KWI1825

Configuration Change

SSM
UTC
CON

MJ332
17AUG16 26OCT16 3
J 321 J12Y188.J12Y188 4/UL 5/UL

Equipment Change

SSM
UTC
EQT
MJ332
17AUG16 26OCT16 3
J 320 J12Y150.J12Y150 4/UL 5/UL

New with XSAM Indicator

SSM
UTC
NEW XASM
UL884
07JUL16 06OCT16 4
J 332 J18Y251.J18Y251
CMB0400 CKG0900

New Message with XSAM Indicator

SSM
UTC
NEW XASM
MJ117
12DEC16 26DEC16 1
J 321 J12Y180.J12Y180 4/UL 5/UL
CMB1055 MLE1225

Equipment Change

SSM
UTC
EQT
UL134
01JAN17 31JAN17 124567
J 321 J16Y153.J16Y153

RPL Message

SSM
UTC
RPL XASM
UL225
16JUL16 30JUL16 36
J 320 J20Y120.J20Y120
CMB1300 DXB1740
CMBDXB 10/MJ2225

ADM Message

SSM

UTC
ADM
UL121
13JUL16 31JUL16 1234567
CMBMAA 10/MJ2121/EY2222

3.16 Application look and feel

The application user interfaces need to be organised in well-structured manner and easy navigation between information

3.16.1 Uniformity across all graphical interfaces

3.16.2 Simple terminology to communicate to average users

3.17 System administration

The system should provide facility to define user categories, user roles and, their respective functionalities, The IT system administrators ideally should have the facility to manage sessions(kill / drop / logout), and the other relevant access levels to make sure the system stability and uninterrupted services.

3.17.1 System Administration

- ❖ Access controls to be defined in the system (ie. read only, change access)
- ❖ Maintain data tables such as Aircraft and Airport
- ❖ Define user groups
- ❖ Define / change rule set with authority
- ❖ Audit track on system administrator functions
- ❖ Following user levels should be managed
 - ✓ Admin users
 - ✓ Super Users
 - ✓ Read / write user with specific roles
 - ✓ Read only user
 - ✓ Web users

3.17.2 Authentication and policy

Each user should be able to login to the system by providing unique login ID and password, the password policy should comply Microsoft password policy.

3.17.3 System Alerts

- ❖ Screening alerts on top of the roster bar such as passport expiries/ Regulatory training expiries need to be available
- ❖ Alerts on Contract expiries need to be generated by the system itself.
- ❖ Aircraft changes and time changes should be alerted to the crew users.
- ❖ In case of illegalities system alerts to be generated.

3.18 Rules engine

The system should facilitate comprehensive set of rules for different scenarios when deciding the optimal solution. The below are the broad categories of rule sets that is applicable for each optimization/ logic calculation (Rule creation/implementation /modification/ configuration should be handled by SriLankan airline system administrator)

3.18.1 Training definition rules set

System administrator should be able to define the rules related to training activates. And the rule set should be referred when determining optimal training patterns.

Tech Crew Training Rules

- ❖ Auto Landing
- ❖ Category III Landing
- ❖ Computer Based Training
- ❖ ETOPS
- ❖ Crew Resource Management
- ❖ Ditching Evacuation
- ❖ Dangerous Goods
- ❖ Fire Drill
- ❖ Annual medical Checks
- ❖ Flight Deck Medical Check for Above 60
- ❖ Security
- ❖ Slide Evacuation
- ❖ Safety Emergency Procedure
- ❖ Mix Fleet Computer Based Training A320
- ❖ Mix Fleet Computer Based Training A330
- ❖ Mix Fleet Computer Based Training A340
- ❖ Mix Fleet Pilot proficiency Check A320
- ❖ Mix Fleet Pilot proficiency Check A330
- ❖ Mix Fleet Pilot proficiency Check A340
- ❖ Non Regular Flight Check
- ❖ Pilot proficiency Check
- ❖ Regulatory Flight Check

Cabin Crew Training Rules

- ❖ Crew Resource Management
- ❖ Ditching Evacuation
- ❖ Dangerous Goods
- ❖ First Aid
- ❖ Fire Drill
- ❖ Annual Medical Check
- ❖ Security
- ❖ Slide Evacuation
- ❖ Safety Emergency Procedure
- ❖ Service On-board Check
- ❖ No DOH Duty for SF= NODOH crew
- ❖ No NRT Duty for SF= NONRT crew
- ❖ Safety on board checks

Cabin Crew Training Company Rules

Ground Training	
Name of the Training	Abbreviation
Admin	ADM
Announcement Training	SPC
Cabin Supervisor promotion	CSP
Com Craft	CCT
Corporate Social Responsibility	CSR
Cabin Supervisor Workshop	CSW
Duty Free Training	DFS
Emotional Intelligence	EMI
Etiquette	ETQ
Food & Beverage	F&B
General Training	GNT
Graduation	GRN
In-Charge Crew Training	ICT
Initial BC Training	IBC
Leadership Workshop	LSW
Meal service	MLS
On-board Evaluation 100 Questions	EVA
One on One	ONO
One World Training	ONE
Orientation	ORI
Out Bound Training	OBT
Passenger Interaction	PAX
Personality Development	PDM
Service Recurrent	SER
Service Training	SVC
Special passenger handling	SPH
Team Dynamics	TMD
Train The Trainer	TTT
Wine Appreciation	WNA

On-Board assessments	
Name of the Training	Abbreviation
On-The Job Training	OJ

Post Holder Confirmation	PC
Service Checks	SE

3.18.2 Pairing creation rule set

This should refer both hard rules and soft rules defined in the system to generate optimal pairings per roster.

- ❖ 03- Sector pairing for BOM/ KHI/ DEL turnaround flight
- ❖ Day Off required after NRT flights with layover < 30
- ❖ Hotel rules
- ❖ Layover for SIN/KUL flights duties departing from CMB between 2100 - 0500 local time
- ❖ Maximum 2 middle-east turnaround per roster period
- ❖ Maximum duty time per duty start between 1900-0559
- ❖ Minimum Days Off per 28 days
- ❖ Minimum Layover time in PEK/PVG for departure between 0000-0600
- ❖ No 4 - sector duties for flight departure from CMB between 1800-0559 hours
- ❖ training Ground Activity cannot be followed by flight

3.18.3 Optimum Roster generation rule set (Hard Rules / Soft Rules)

Hard Rules

- ❖ CAP maximum FDP Cabin
- ❖ Local Night rest required before consecutive WOCL duties
- ❖ Maximum consecutive night duties
- ❖ Maximum duty time for regular night duties
- ❖ Maximum duty time for regular WOCL night duties
- ❖ Maximum Duty time per 1 week
- ❖ Maximum Duty time per 2 weeks
- ❖ Maximum Duty time per 4 week
- ❖ Maximum Flight Duty time per duty
- ❖ maximum Standby time per duty
- ❖ Minimum rest after end of consecutive night duties
- ❖ Minimum rest after end of consecutive WOCL night duties
- ❖ Minimum rest after Standby
- ❖ Minimum rest before start of 2/3 consecutive WOCL night duties
- ❖ Minimum rest before start of consecutive night duties
- ❖ Minimum rests before start of consecutive WOCL night duties
- ❖ Minimum Rest Planning

Soft Rules

- ❖ 03- Sector pairing for BOM/ KHI/ DEL turnaround flight
- ❖ Day Off required after NRT flights with layover < 30
- ❖ Hotel rules
- ❖ Layover for SIN/KUL flights duties departing from CMB between 2100 - 0500 local time
- ❖ Maximum 2 middle-east turnaround per roster period
- ❖ Maximum duty time per duty start between 1900-0559
- ❖ Minimum Days Off per 28 days
- ❖ Minimum Layover time in PEK/PVG for departure between 0000-0600
- ❖ No 4 - sector duties for flight departure from CMB between 1800-0559 hours
- ❖ training Ground Activity cannot be followed by flight
- ❖ The below rules need to be easily incorporated into the system and should be effectively utilized in optimizations.

Rule	
1 LHR Layover	
2 NRT Layover	Arrival day + Keep next 02 days off
3 MEL Layover	
4 DMM(UL263/4) Turnaround FLT	
5 DOH(UL217/8) Turnaround FLT	Arrival day + Keep next day off
6 BAH(UL201/2) Turnaround FLT	
7 BKK Turnaround (UL406/7)	
8 SIN Turnaround (UL308/9)	
9 DXB Turnaround (UL225/6)	
10 AUH Turnaround (UL207/8)	No flight should be assigned before 2300 hours (Reporting) on the following day and from 2300lt to 0600lt , regional turnaround or a flight which consists of sector length less than 4hrs could be assigned
11 MCT Turnaround (UL205/6)	
12 DEL Turnaround (UL195/6)	
13 KHI Turnaround (UL183/4)	
14 Morning 04 sector FLT	
15 DXB Turnaround (UL231/2)	
16 DOH Turnaround (UL219/20)	Keep rest Arrival day + Next day 0001 Hrs
17 DEL Turnaround (UL197/8)	
18 LHE Turnaround (UL185/6)	
19 SIN Turnaround (UL302/3)	Keep rest Arrival day + Next day 1800Hrs
20 KUL Turnaround (UL314/4)	
21 PEK Layover (UL868)	Keep rest arrival day + Next day 1200Hrs
22 PVG Layover (UL866)	
23 SEZ Turnaround (UL707/8)	
24 BKK Turnaround (UL404/5)	
25 CGK Turnaround (UL364/5)	Arrival day + Next day 1600Hrs
26 DAC Turnaround (UL189/90)	
27 CCU Turnaround (UL187/8)	
28 DEL Turnaround (UL191/2)	One Off day before operating + 24 hours rest will remain after the flight
29 Rest Period	Keep 1730hrs from chocks on to reporting of FLTs
30 Rest Period	Keep 1730hrs rest before and after training/ ground duty from/to FLTs
31 Rest Period	Ground duty to ground duty 1200hrs rest

3.18.4 Vacation Planner rule set

There should be a facility to define set of rules which will be used during the vacation planning calculations

3.18.5 Mutual Changes Rule set (Web Module)

The set of rules defined for mutual changes should be referred when performing mutual changes for crew.

3.18.6 Flight Award rule set (flight request processing)

The rule set defined for awarding flight should be defined by the admin and the awarding process should refer it for optimal result set.

3.18.7 Allowance calculation rule set

Separate rule set for calculating allowance for cabin crew and tech crew should be facilitated, these rules should be referred when performing allowance calculation as described in the allowance calculation module.

3.18.8 The rule set should facilitate cargo only flights considering the legality and other regulations. ie: Cargo flights - FSI417 (TEMPORARY VARIATION TO THE FDP SCHEME FOR CARGO ONLY FLIGHTS DUE COVID-19)document need to be included

3.19 Mobile application for Crew

Crew members should be able to view their rosters, pairings, allowance, trainings and etc via a sophisticated mobile application. Proper log-in / authentication mechanism need to be implemented with dynamic resolution of different electronic mobile devices.

3.19.1 Apple (IOS) and Android based mobile application which includes the following features are required for the flight crew to access instant information and to make requests.

- 3.19.1.1 Ability to request for off days
- 3.19.1.2 Ability to request for flights
- 3.19.1.3 Ability to request time-off request (resting periods)
- 3.19.1.4 Ability to handle mutual change requests and display them online with current status (Awarded / Not Awarded / pending for Admin permission)
- 3.19.1.5 Period Swap (block of flight swap at once)
- 3.19.1.6 View roster details of self/others
- 3.19.1.7 View pairing information
- 3.19.1.8 View allowances
- 3.19.1.9 Access to update personal information
- 3.19.1.10 View training programs and due dates
- 3.19.1.11 Ability to send Alert messages to crew members on expiries and other important information.
- 3.19.1.12 View leave entitlement, leave balances and Ability to request leave
- 3.19.1.13 View flights for their current roster with the crew flying with them
- 3.19.1.14 Activity list for the current and previous roster such as off days, duty days stand by days
- 3.19.1.15 Notices relevant to Crew under e-bulletin (admin news, hotel details, duty free notices, Flight safety information)
- 3.19.1.16 Facility to block the planning roster
- 3.19.1.17 Block roster category
- 3.19.1.18 Simulator briefing sheets details for given period
- 3.19.1.19 Allow leave bidding
 - Main bid
 - Alternative bids (more than 1) – Should be able to define the configuration by admin
- 3.19.1.20 Ensure mandatory viewing of Crew safety notices / important documents / manuals / revisions online
- 3.19.1.21 Period Swap functionality should be available
- 3.19.1.22 Notify flight time and aircraft changes
- 3.19.1.23 Crew functions available on web need to be available on mobile as well.

4. Key Performance Indicators

SriLankan Airlines expects to achieve or would expect the following criteria with the deployment of the Schedules planning and Operations control solution.

- 4.1 It is expected to minimize the man hours spend on current (manual) crew scheduling activities/ processes.
- 4.2 Standard response time for screen refresh or data retrieval /storage should not exceed 3 seconds.
- 4.3 Even with increase of fleet the current staff capacity should be able to handle the crew scheduling activities/ processes efficiently.
- 4.4 System overall up time should be 99.99%.
- 4.5 System reliability access and security levels compliance to standards should be met.
- 4.6 The project duration including the user acceptance testing should be 4-6 months after project award. Each delivery of the milestone need to be agreed in the project plan and within the scoped project duration.
- 4.7 The product shelf life need to be minimum 7 years and during such period product upgrades and releases need to be managed and supported by the vendor.
- 4.8 PAIRING (after Planning) and PAIRING (after roster is finished with comparison planned / actual)
 - ❖ Block hours per duty days
 - ❖ Duty days
 - ❖ DH hours
 - ❖ Hotel Overnights
 - ❖ Allowances per duty days / new CMS
 - ❖ Night outs
 - ❖ Fatigue
 - ❖ Man-days
- 4.9 SCHEDULE (after roster is planned and crews informed)
 - ❖ Block hours per Crew (Average) / in new CMS
 - ❖ Days Off per Crew (Average) / in new CMS
 - ❖ Allowances (Average) / in new CMS
 - ❖ Requested OFF Days / entitled OFF Days
 - ❖ Requested Flights / entitled Flights
 - ❖ Standby per Crew
 - ❖ Night out average
 - ❖ Productivity average Fatigue
- 4.10 TRACKING (after roster is finished with comparison planned / actual)
 - ❖ Block hours per Crew (Average) / in new CMS
 - ❖ Days Off per Crew (Average) / in new CMS
 - ❖ Allowances (Average) / in new CMS
 - ❖ Requested OFF Days / entitled OFF Days
 - ❖ Requested Flights / entitled Flights
 - ❖ Sickness rate per function / fleet
 - ❖ Use of Standby per Crew (Stand by OPTIMIZATION)
- 4.11 Easy Visualization methods such as charts and graphs should be available for KPIs
- 4.12 The system should ensure that optimum use of annual leave processed within given year.
- 4.13 100% Automated vacation planning module within the ability to intervene by admin staff for adjustments and all changes need to be recorded and ability to generate audit logs
- 4.14 Provide adequate crew to operate the schedule without any lapses / legality issues thus ensuing full capability of vacation planning module.

- 4.15 100% Automated Training module
- 4.16 Annul health check of the implemented solution covering all modules to assess the level of optimization and utilization for effective and efficient operational requirement.
- 4.17 Annul refresher Training Session at SriLankan Airlines training centers to provide hands on experience on new modules upgraded on the system and to train new users of the system.

5. TECHNICAL REQUIREMENTS

Vendor should provide the required end to end infrastructure platform and its services (web services, data connectors, Queues or any other standard interface services) for the below two hosting options.

1. Hosting the total solution at the Vendor location.
2. Hosting the total solution at SriLankan premises.

In any case of above two options the vendor need to provide the hardware platform and services.

SriLankan IT Systems is an ISO/IEC 27001:2013, ISO/IEC 20000:2011 & ISO 9001:2008 certified entity. Technical information of the current SriLankan Infrastructure setup is provided below to understand the Local Installation option.

Further the Information Security compliance checklist is included under Annexure III to provide guidance the assessment of security compliance requirement.

5.1 Infrastructure (Service)

The current network structure of SriLankan Airlines is based mainly on Microsoft Windows (hereinafter referred as Windows) Windows 7/Windows 8.1/Windows 10 Clients, Windows 2008/2008R2/2012R2 and UNIX servers. Network authentication, DHCP service and WINS are provided by Windows 2008/2008R2/2012R2 servers. The network protocol is mandated to be IP. UNIX servers are used for high-end database hosting. DHCP is used for IP allocation except for Servers and Printers. The Windows 2008/2008R2/2012R2 servers are on HP BL480, BL460, DL360, DL380 and the future models of these ranges. The current operating system is Windows 2008R2 with Service Pack 1.

Separate isolate non-production environments are maintained for hosting Development, Testing, Demo instances, as required by the systems. These are maintained with identical architecture and versions and scaled to suit the development / test loads.

5.2 Web Hosting Environment

5.2.1 Web services

Operating Systems : Windows 2008(SP1)/ 2008R2/ 2012R2

Web servers : IIS 7 and IIS 7.5 (.Net framework), ASP .NET 4.5 and 4.7

Set of Web servers are load balanced with Windows IIS load balancing. Majority of the servers are virtualized with VMware or Hyper-V technologies.

Virtualization Platforms : VMWare, Hyper-V

Hosting environments : local and AWS

5.2.2 Site Architecture/Path Structure

Proposed solution could be on a platform/structure recommended by the vendor.

5.4 RDBMS

Database Environment uses mainly two RDBMS, Microsoft SQL Editions and Oracle Editions. Oracle version is Oracle 11g. MSSQL versions are 2014 and 2016.

5.5 backup Procedure

Daily online backups are taken on databases and applications as required by the systems.

5.6 Firewall

The security gateway for SriLankan corporate network is the main Firewall. All the external connectivity to the corporate network such as local PSTN dialup, Overseas IPVPN, IPSec VPN and Internet services must access through the firewall. The gateway infrastructure will provide network authentication, accounting and access control. It is also equipped with the security virus wall for all the traffic of FTP, SMTP and HTTP/HTTPS. The technologies used include Checkpoint Firewall, Microsoft TMG Servers, Cisco Secure Access Control server & adaptive security appliances.

5.7 MS Exchange Server Enterprise.

SriLankan Airlines have hybrid setup in the exchange service. Most users are running on Microsoft O365 cloud platform. However, subset of the users still based on on-prem services which are running on Windows 2008R2 & Exchange 2013 in cluster Environment.

5.8 Desktop Environment

- Internet Explorer 11.0 and above
- Windows 8.1
- Windows 10
- Windows 7
- Virtual Desktop Infrastructure. VMware Horizon View Client.(zero client/thin client)

5.9 Flexibility in System access accounts and concurrency

The vendor should provide flexibility in defining or selecting the number of user accounts/ concurrent accounts (if the licensing mechanism is based number of user accounts or concurrency) during the usage of the system. Per user account cost / per concurrency cost need to be clearly defined with ability to change it at any given time based on SriLankan Airlines request.

5.10 Total Hosting Infrastructure Solution Delivery

Supply of infrastructure, equipment, installation and testing, including any required interfaces and data connectors are considered integral part of the overall solution hence the two hosted options aforesaid need to comply delivery of total hosting infrastructure solution.

6 Service Requirements

6.1 Support Services

- 6.1.1 Telephone & Remote Support procedures for 24 X 7 to be clearly defined to enable a smooth work flow and reduce operational problems which could cause in case of time zone differences
- 6.1.2 Provide a TEST setup similar to the LIVE environment for the purpose of testing new releases, maintenance releases and amendments to the system. Access to the TEST environment shall be provided to SriLankan.

6.1.3 All new releases of the system or modifications to be tested in the TEST environment before enabling to the users.

6.1.4 Stand Availability of service levels of the system to be 99.99%.

Availability is measured as a percentage of the total time over a set period less scheduled Downtime in that period expressed as a percentage of the total time in the period.

$$\text{Availability} = \frac{(\text{Total Time in Period} - \text{scheduled Downtime}) \times 100}{\text{Total Time in period}}$$

6.1.5 Standard reports online & incident reports to be provided.

6.1.6 . More resilience in terms of a dedicated server and fallback solution is required to support the business operation and requirements (taking into consideration the fleet current and future size

6.1.7 Service levels to be defined as Critical, High, Low & Cosmetic and escalation procedures to be included as given below.

- Level 1– **Critical**- Complete service outage preventing use of the application
- Level 2. – **High** - This is defined as when the incident prevents more than 50% of users from accessing and using the Application or Complete failure of a major functional area such as making a reservation etc.
- Level 3. –**Low**-Partial failure affecting the use of the product such as Transaction failures/aborts or major validation errors.
- Level 4 –**Cosmetic**. Application Software can be used without inconvenience but an incident of cosmetic nature has occurred. On this occasion the remedy will be included in a Maintenance Release or amendment to the Source Code or next release of the Application Software as governed by the terms of the Agreement or SriLankan may order software upgrade as from time to time.

Level	Faulty severity level	Target response time	Target resolution time
1	Critical priority	Immediate	2 hrs
2	High priority	30 minutes	6 hrs
3	Low priority	4 hrs	24 hrs
4	Cosmetic priority	72 hrs	5 days

6.1.8 Fault Escalation Procedures to be followed as given below

Severity level	Vendor –Escalation Problem unresolved	Client update Service Desk
Critical priority	Support Engineer (3 hrs)	Every 1 hr
High priority	Support Engineer – (4 hrs)	Every 6 hrs or as necessary
Low priority	None	Every 24 hrs or as necessary
Cosmetic priority	None	3 days

6.2 Monitored Support

- 6.2.1 Monitored support from Monday – Sunday: 24 hours per day, 7 days per week.
- 6.2.2 Following a system failure of Critical severity, an engineer will be notified via automated messaging to perform remote diagnostic immediately and commence resolution of the fault

6.3 Change Management Procedures

- 6.3.1 Proper Change Management Procedures to be in place for future modifications or enhancements.
- 6.3.2 SriLankan shall request modifications to system via the Change Request form which is attached (annexure II) and both parties shall mutually agree on deliverable dates.
- 6.3.3 Any cost, time estimates associated with change requests should be mutually agreed by both parties.

6.4 Maintenance and Planned outages

Scheduled outages to be notified to SriLankan Service Desk via e-mail . Outages can be planned after 19.00hrs for ground based system for a maximum of one hour.

Item	Type of maintenance	Total times /year	Max. Duration each time	Pre-notify Client
1	Preventive/Corrective Maintenance	12	1 hr	48 hrs
2	Patch Application	12	1 hr	48 hrs
3	Database Re-organization	2	1 hr	48 hrs

6.5 Unplanned Outages

Contact SriLankan Service Desk for any emergency corrective actions which are not included in the planned schedule.

6.6 Backup Procedures

Ensure an adequate backup schedule is maintained for the systems provided including a back-up of data every 24 hours and an offsite data transfer once a week for use in the event of disaster recovery. A dial up link facility is required in case of a network outage at BIA.

7 OTHER REQUIREMENTS

7.1 Service Level Agreement

- 7.1.1 The award of the Application development and support services shall be conditioned on the subsequent execution of a formal written Services Contract. The Service Level agreement should be finalized and be part-and-parcel of such an agreement.
- 7.1.2 The Service Level agreement should be based on the service requirement defined on section 6.
- 7.1.3 Bidders should propose the expected Service Level Agreement with the proposals. This should include industry standard compliance components as well as penalties for non-conformity. Finalizing the Service Level Agreement with SriLankan Airlines is the responsibility of the prospective bidder/supplier.
- 7.1.4 As indicated in section 7.1.3 it is the responsibility of the bidder to submit the Service Level agreement with penalty clauses on par with the industry standards to supplement the service charges. SriLankan Airlines will evaluate the effectiveness of penalties in the context of the requirements and negotiate with the prospective bidder to improve them. Finalization of the Service Level Agreement is a prerequisite for the prospective bidders to proceed on the final evaluation.
- 7.1.5 The warranty will begin on the date that the software is deemed to be in good working order (System acceptance) and signed receipt by a designated SriLankan Airlines representative. In the event that such a written acceptance is not available, a mutually agreed date will be established for the end of warranty.
- 7.1.6 The service level agreement should be comprehensive with identified cost components for each associate available service component. SriLankan Airlines should be able to choose and pick the required service components based on their preferences. Further these components should be able to modify (add / remove) during the product usage.

7.2 Contents of the proposal

Notwithstanding to the general requirements of the RFP, the proposal should contain the following information.

- 7.2.1 General company information, date of incorporation etc.
- 7.2.2 Staff strength, their capabilities and from which countries support is rendered.
- 7.2.3 Technological skills areas and domains
- 7.2.4 Brief descriptions about key projects handled. Travel related or airline related projects
- 7.2.5 Current clientele for the proposed product
- 7.2.6 Technological Platform and development tools
- 7.2.7 Proposed hosting options and related pricing (hosting at SriLankan or any other location)
- 7.2.8 Time frame for delivering the project.
- 7.2.9 Any value additions provided in the solution
- 7.2.10 Industry standard certification
- 7.2.11 Comprehensive Disaster Recovery Plan
- 7.2.12 Post Implementation Plan – Staff Training Programs and user Guides.
- 7.2.13 Comprehensive UAT plan and test cases required
- 7.2.14 Ability to extend to SriLankan Airlines Affiliated organization.
- 7.2.15 Should indicate the implemented Version's along with the release date, year.
- 7.2.16 Comprehensive user training/administration and technical training / trouble shooting / user manuals on System should be provided with adequate documentation.
- 7.2.17 State the standard interfaces available to connect to external systems (web services)

- 7.2.18 System must be open and flexible to support future enhancements and customizations.
- 7.2.19 Should be able to pay unannounced visits to major customers of the vendor and head office.
- 7.2.20 Product brochures and catalogues are required for pre-assessment.
- 7.2.21 Business Continuity plan with clear goals towards managing the products should be submitted for the evaluation
- 7.2.22 History of flight schedule, movement information and maintenance data should be available for 12 years period of time, hence during the life span of the solution the information need to be safely retained.
 - ✓ Online Information availability - 6 years
 - ✓ Archived information - 6 Years.
- 7.2.23 Confidentiality of SriLankan Airlines data need to be safeguard by mean on non-disclosure agreement (NDA)
- 7.2.24 The vendor proposal should accommodate flexibility to increase and decrease of the number of aircrafts (As blocks) along with associated cost structure. (1-5 Aircrafts, 6-10 Aircrafts,11-15 Aircrafts, 16- 20 Aircrafts,... up to 41 -46)
- 7.2.25 The cost structure associated with the degree of automation of software components need to be defined and should be flexible during the usage period so that user should be able to add or remove the automation / software components to suite adhoc situations
- 7.2.26 The proposal should provide a comprehensive facility / clauses to subscribe / unsubscribe software components during the usage period (cost saving on low utilization). Each such independent software component / functionality should be indicated with the relevant cost associated with.

Annexure I

Complete requirement list

SAMPLE FORMAT OF THE LIST OF COMPLIANCE

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.1. crew data configuration and management				
3.1.1 Basic Crew information				
3.1.1.1 Staff Number				
3.1.1.2 Full Name				
3.1.1.3 Last Name				
3.1.1.4 Last name with initials				
3.1.1.5 Call name				
3.1.1.6 Present Address				
3.1.1.7 Permanent/Emergency address				
3.1.1.8 Email address				
3.1.1.9 Home Phone				
3.1.1.10 Mobile Phone				
3.1.1.11 Religion				
3.1.1.12 Civil Status				
3.1.1.13 NIC Number				
3.1.1.14 Photograph				
3.1.1.15 Language proficiency of each crew member				
3.1.1.16 Batch Number				
3.1.1.17 Nationality				
3.1.1.18 Birth Date				
3.1.1.19 Locker Number				
3.1.1.20 Provision for any other fields.				
3.1.2 Operational Crew Data				
3.1.2.1 Pick-up point, route and distance				
3.1.2.2 Transport Type (UL, ECD, etc)				
3.1.2.3 Spouse staff no (if in crew)				
3.1.2.4 Group code				
3.1.2.5 Grade, date appointed				
3.1.2.6 Languages				
3.1.2.7 Passport, visa and vaccinations expiries				
3.1.2.8 Qualifications and additional qualifications				
3.1.2.9 Seniority number				
3.1.2.10 Leave groups				
3.1.3 Interface to define Pairing rules				
3.1.4 Fatigue measurement display board is expected to assess the fatigue levels of created pairings.				
3.1.5 SMS facility to send messages				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.1.6 Ability to facilitate Cargo only flight by defining relevant configurations				
3.2. integrated Flight Schdeule				
3.2.1 Flight Number, Departure city, arrival city, leg number, timings etc				
3.2.2 The system should be capable to handle IATA formatted ASM/SSM/ MVT messages,				
3.2.3 The system should be capable to process SSIM data file to capture the next schedule information				
3.2.4 The integrated flight schedule should display the passenger book load from reservation system (Amadeus)				
3.3. crew training and validity				
3.3.1 Ability to define training parameters and retrieve training information.				
3.3.1.1 User definable training structure				
3.3.1.2 Multiple aircraft types				
3.3.1.3 Scheduling of class room training's				
3.3.1.4 Automatic aircraft recency check updating				
3.3.1.5 Planning of simulator availability and usage				
3.3.1.6 Training history records				
3.3.1.7 Due date/expiry warning system with colour indicators/flags/pop-ups				
3.3.1.8 Rule engine				
3.3.1.9 3 landings Repeated from 3.3.1.4.				
3.3.2 The system should have the ability to handle following training courses (minimum):				
3.3.2.1 Evacuation				
3.3.2.2 Safety				
3.3.2.3 Fire drill				
3.3.2.4 Security				
3.3.2.5 Medical				
3.3.2.6 Grooming Checks				
3.3.2.7 Dangerous Goods				
3.3.2.8 CRM				
3.3.2.9 First aid				
3.3.2.10 On-board Service Check				
3.3.2.11 Ditch-Drill				
3.3.2.12 SMS				
3.3.2.13 PPC – MFF crew [Ability to entre SIM Instructor (SFE) conducted details]				
3.3.3 Ability to define/create courses, group courses (define course parameters). System should be able to capture following parameters to handle training;				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.3.3.1 Training Abbreviation				
3.3.3.2 Training Name				
3.3.3.3 Last done date				
3.3.3.4 Due date				
3.3.3.5 End date				
3.3.3.6 Earliest date				
3.3.4 SIM for recurrent training				
3.3.5 Auto allocation / Rostering of crew members to training slots.				
3.3.5.1 The system should have the facility to check the expiry of training needs.				
3.3.5.2 Breakdown the tech crew members by month				
3.3.5.3 The expiry of the crew member's training needs need to be looked at three months before.				
3.3.5.4 Crew member category need to be taken into consideration when rostering				
3.3.5.5 Crew member need to be considered when assigning crew to training rosters				
3.3.5.6 Admin should be able define rules as how the crew members should be picked up for training				
3.3.5.7 Admin should have the flexibility to manually adjust the training slot without				
3.3.5.8 Ability to capture SER/SOC recencies for each crew member				
3.3.5.9 Sector recencies to be automatically checked.				
3.3.5.10 Training Reports				
3.3.5.11 A special report for Crew Competency Certificate is mandatory.				
3.3.5.12 Flight Crew training to be automatically tracked and to be notified				
3.4. crew pairing				
3.4.1 The system should facilitate easy creation of crew pairing				
3.4.1.1 Graphical display of flights – and pairing scheme simultaneously				
3.4.1.1.1 Comprehensive training logs for pairing for a given roster to be generated via the system.				
3.4.1.1.2 Logs for Planning rosters vs. Actual rosters to be generated for a given period by the system				
3.4.2 The system following Statistical Reports need to be produced by the system				
3.5. Crew Schdeule / planning				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.5.1 The system should facilitate main functionalities related to crew pairing creations.				
3.6. crew tracking				
3.6.1 System must facilitate the easy tracking of crew members activities that includes the following.				
3.7. crew API/APP				
3.7.1 The proposed system should be able to send Crew API/APP				
3.7.2 The proposed system should support all standard Crew API format				
3.7.3 The proposed system should support all standard Crew APP format s				
3.7.4 Crew API and Crew APP message generation time should be a configurable				
3.7.5 The system should send a notification to the given SriLankan recipient list				
3.7.6 Availability of 24X7 monitoring mechanism to ensure the Crew API/APP				
3.7.7 In an event of deciding to start new destination station by SriLankan Airlines, the system provider should provide the required support on configuration as well as end to end testing without any additional cost for the airlines.				
3.8. Vacation Planning				
3.8.1 Ability of handling annual leaves of Flight crew and cabin crew separately with two different rule sets				
3.8.2 The system should be capable of setting the vacation planning period (annual, monthly or quarterly) which can be configured separately for Cabin and Flight crew.				
3.8.3 Ability to set the vacation bidding period which can be configured separately for Cabin and Flight crew.				
3.8.4 The system should have the facility to track the annual leave balances of previous years and Individual Leave balances should be derived based on carried forward leaves and this year entitlement.				
3.8.5 Per day annual leave Quota limits should be set for each category (Captain, First Officer, Purser (PUR), Cabin Supervisor (CS), Flight Attendant (FA) and etc)				
3.8.6 The proposed system should support below Vacation Bidding Criteria for Flight Crew				
3.8.7 The proposed system should support below Vacation Awarding Criteria for Flight Crew				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.8.8 The proposed system should support below Vacation Bidding Criteria for Cabin Crew				
3.8.9 The proposed system should support below Vacation Awarding Criteria for Cabin Crew				
3.8.10 Flight Crew and Cabin Crew should be given the access of Crew Web Portal or Crew Mobile APP where they can bid for their annual leave, view their leave balance and leave awarding status.				
3.8.11 Below reports should be available on the proposed system.				
3.9. aircraft movement control				
3.9.1 The aircraft movement functionality should ideally show the current status of the flight schedule in graphical format, this should include the below characteristics.				
3.9.2 Booked load and aircraft configuration should be displayed in the movement control board				
3.10. crew check-in/ check-out				
3.10.1 Crew check-in / check-out functionality should be facilitated by the system				
3.11. allowance calculation				
3.11.1 Meal Allowance Calculation (Layovers)				
3.11.2 Meal Allowance Calculation (Turnaround)				
3.11.3 Productivity Calculation				
3.11.4 Training Instructor allowance calculation				
3.11.5 Crew Off-Day Calculation				
3.11.6 Circulation of allowance information to crew				
3.11.7 Report Requirement				
3.12. Man power calculation				
3.12.1 It is required to have a manpower planning & rostering in the crew management system as a separate integrated module. The vendor should include the availability of this option.				
3.12.2 Stand by crew to be considered while calculating man power planning requirement				
3.12.3 Dynamic Crew requirement to be considered on daily basis by considering below factors				
3.12.4 Destination wise crew requirement to be calculated and a separate report to be generated for this purpose.				
3.12.5 Instructor requirements for training to be suggested by the system based on defined parameters.				
3.12.6 Carder calculation should consider specific parameters such as block hours, etc. (should be able to define parameters)				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.12.7 Man power planning module should have facility to incorporate cargo only flights requirement				
3.13. Web Module for Crew				
3.13.1 Web based application with below functionalities that is compatible with many browsers should be made available to access individual profile information, share information and notices.				
3.13.2 Ability to request for off days				
3.13.3 Ability to request time-off request (resting periods)				
3.13.4 Ability to handle mutual change requests and display them online with current status (Awarded / Not Awarded / pending for Admin permission)				
3.13.5 Period Swap (block of flight swap at once)				
3.13.6 Rules engine to support the legality of mutual changes				
3.13.7 View roster details of self/others				
3.13.8 View pairing information				
3.13.9 View allowances				
3.13.10 Access to update personal information (only the allowed parameters by admin should be able to update by crew)				
3.13.11 View Gender information and crew category				
3.13.12 View training programmes and due dates				
3.13.13 Ability to send Alert messages to crew members on expiries and other important information.				
3.13.14 View Weather report (optional)				
3.13.15 View leave entitlement, leave balances and Ability to request leave				
3.13.16 View flights for their current roster with the crew flying with them				
3.13.17 Activity list for the current and previous roster such as off days, duty days stand by days				
3.13.18 Notices relevant to Crew under e-bulletin (admin news, hotel details, duty free notices, Flight safety information)				
3.13.19 Interface to electronic document web system to view publications relevant to tech crew.				
3.13.20 Facility to block the planning roster				
3.13.21 Block roster category				
3.13.22 Simulator briefing sheets details for given period				
3.13.23 Allow leave bids				
3.13.24 Main bid				
3.13.25 Alternative bids (more than 1) – Should be able to define the configuration by admin				
3.13.26 Web module to access the meal allowance by stations				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.13.27 Ensure mandatory viewing of Crew safety notices / important documents / manuals / revisions online				
3.13.28 The system should be able graphically display roster/s for a given period and by clicking on a specific flight, the list of crew should be displayed (staff ID, Staff Name)				
3.13.29 Ability to upload documents (word, PDF, image), notices and bulletins via web module and allow access to permitted set of users (should have a facility to configure the permission levels and list of users).				
3.13.30 Track and record comprehensive logs for which the online document on web has been accessed. This track of logs should clearly indicate the document access status (accessed/ Downloaded/read)				
3.13.31 Crew leave balance facility to be available via web.				
3.13.32 CONTROL OF THE WEB CONFIGURATION, TURN ON / OFF FACILITY OF WEB FEATURES AND RESTRICT/ ALLOW DISPLAY OF REQUIRED INFORMATION SHOULD BE GIVEN TO CREW CONTROL MANAGEMENT.				
3.13.33 Crew to check on the flight entitlement				
3.13.34 Crew to check on the flown history by (destination /flight No)				
3.13.35 Generate report (BLH 330/320, Flight)				
3.14. Report module				
3.14.1 The following reports generation should be facilitated by the system				
3.14.2 Individual earnings for a period.				
3.14.3 Total earnings – all staff list.				
3.14.4 Average earning per crew member (category wise) for a period.				
3.14.5 Highest earning list – all staff and category wise.				
3.14.6 Productivity hours –individual/all staff/more than 75/less than 55.				
3.14.7 Delayed flights – base and overseas				
3.14.8 Actual crew check-in time at the base.				
3.14.9 Meal allowances paid and entitlement for the layover at stations.				
3.14.10 Annual leave report				
3.14.11 Casual leave report				
3.14.12 Requested off report				
3.14.13 Mutual changes information with hours gained / lost.				
3.14.14 Deadheading meal / productivity allowances with entitlements.				
3.14.15 Published hours information				

Business Requirements	Fully Complied	Partially Complied	Not Complied	Remarks
3.14.16 Winter clothing allowances due during the month.				
3.14.17 Crew Off-day calculation report for given period for any individual crew member				
3.14.18 Meal allowance calculation breakdown report to stations and admin staff for any given period / any individual staff.				
3.14.19 Night out report				
3.14.20 Hotel / Room utilization				
3.14.21 Transport utilization report				
3.14.22 Man-day statistic report				
3.14.23 A report to identify the minutes gained or lost by a mutual change to pay extra hours should be facilitated				
3.14.24 A Report to identifying mutual changes done by crew members when doing salary calculation as mostly is required				
3.14.25 Full allowance calculation of Crew Allowance (broken down to different levels as described above) should be able to automatically processed and circulated to individual crew to their company email address on monthly basis. Further briefed version of the crew allowance should be text to their mobile phones as well on monthly basis.				
3.14.26 Ability to view both publish and actual rosters in the same window in order to identify the mutual changes				
3.14.27 Ability to generate crew member report based on their language proficiency by crew member category or group.				
3.14.28 Ability to view Crew List for a particular flight with the recencies of SER and SOC to be displayed on the side with the expiry date.				
3.14.29 Reports on sick leave combined with ROF(requested off), Casual/Annual/Mutual				
3.14.30 Comprehensive report of Cabin Crew members who has exceeded 19 days medical leave /07 days casual leave				
3.14.31 Should be able to generate a report with all Crew Scheduling comments / without comments				
3.14.32 Whenever reports are generated the relevant fields should be column wise and it should be a tabular report format.				
3.14.33 Leave utilization report				
3.14.34 Whenever a report is generate for leave utilization details, total should be displayed against the respective CCM name				
3.14.35 Employee Information Reports				
3.14.36 Following data elements are mandatory				
3.14.37 Address list				
3.14.38 Employee report according to date of promotion to category (C1,C2,C3,C4,C5)				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.14.39 Reports on contact status				
3.14.40 Below reports need to be available based on the comments and status tracked by the crew scheduling staff				
3.14.41 Not contactable on standby				
3.14.42 Not available for the pick up				
3.14.43 Refused to operate flight				
3.14.44 Not answered the phone				
3.14.45 A log report should be generated which includes system generated pairings and manual pairings and these two types should be easily segregated for the users.				
3.14.46 It is required to track the planned verses actual crew off days for off day payments.				
3.14.47 Destination wise crew requirement to be calculated as a report.				
3.14.48 Discretion report for tech and cabin crew should be available				
3.14.49 Comprehensive report facility for each crew scheduling activity / function should be available to average users.				
3.14.50 Customizable report module should be available for average users to create / generate adhoc report requirement.				
3.14.51 Access to complete dataset via standard interface is required to configure BI for dynamic report and dashboard requirement.				
3.14.52 Fatigue report for each roster (Daily fatigue monitoring) should be available				
3.14.53 Report on planned vs. Actual roster should be available (graphical and tabular)				
3.14.54 Landing pilot for flights to be displayed for a specific period as a report.				
3.14.55 Individual leave balances report.				
3.14.56 Daily Leave Utilization Report (Monthly Breakdown)				
3.14.57 Fleet wise report for First Officers (A320/330)				
3.14.58 Medical leave utilization – should generate actual numbers of days utilized and utilization after prorating				
3.14.59 Availability of Block hour report on 330/320 fleet				
3.14.60 Ability to generate Entitlement, flown history and specific flight history details as a report				
3.14.61 Crew published / actual layover and turn around report with block hours and layover time for a specific period				
3.14.62 Crew operating pattern with the crew complement for a flight schedule/specific period				

	Fully Complied	Partially Complied	Not Complied	Remarks
Business Requirements				
3.15. integration to other systems				
3.15.1 Open architecture integration method				
3.15.2 The following are the few critical systems identified for online integration				
· AIMS scheduling system				
· HRIS (Human Resource Information System)				
· My HR Space (Leave handling system)				
· T&A (Time and Attendance system)				
· Payroll (Salary payment system)				
· Oracle Finance				
· LIDO Flight Planning System				
· Fuel Monitoring System				
· Online system to store and retrieve and ensure mandatory viewing of Crew safety notices / important documents / manuals / revisions				
· The following IATA formatted messages should be facilitated by the system to integrate with scheduling system (At Present AIMS)				
3.15.3 Uniformity across all graphical interfaces				
3.15.4 Simple terminology to communicate to average users				
3.16 Application Look and Feel				
3.16.1 Uniformity across all graphical interfaces				
3.16.2 Simple terminology to communicate to average users				
3.17 System Administration				
3.17.1 System Administration				
3.17.2 Authentication and policy				
3.17.3 System Alerts				
3.18 Rule Engine				
3.18.1 Training definition rules set				
3.18.2 Pairing creation rule set (Please include rule set)				
3.18.3 Optimum Roster generation rule set (Hard Rules / Soft Rules)				
3.18.4 Vacation Planner rule set				
3.18.5 Mutual Changes Rule set (Web Module)				
3.18.6 Flight Award rule set (flight request processing)				
3.18.7 Allowance calculation rule set				
3.18.8 The rule set should facilitate cargo only flights considering the legality and other regulations.				
3.19 Mobile Application for Crew				
3.19.1 Apple (IOS) and Android based mobile application				
3.19.1.1 Ability to request for off days				
3.19.1.2 Ability to request for flights				

Business Requirements	Fully Complied	Partially Complied	Not Complied	Remarks
3.19.1.3 Ability to request time-off request (resting periods)				
3.19.1.4 Ability to handle mutual change requests and display them online with current status (Awarded / Not Awarded / pending for Admin permission)				
3.19.1.5 Period Swap (block of flight swap at once)				
3.19.1.6 View roster details of self/others				
3.19.1.7 View pairing information				
3.19.1.8 View allowances				
3.19.1.9 Access to update personal information				
3.19.1.10 View training programmes and due dates				
3.19.1.11 Ability to send Alert messages to crew members on expiries and other important information.				
3.19.1.12 View leave entitlement, leave balances and Ability to request leave				
3.19.1.13 View flights for their current roster with the crew flying with them				
3.19.1.14 Activity list for the current and previous roster such as off days, duty days stand by days				
3.19.1.15 Notices relevant to Crew under e-bulletin (admin news, hotel details, duty free notices, Flight safety information				
3.19.1.16 Facility to block the planning roster				
3.19.1.17 Block roster category				
3.19.1.18 Simulator briefing sheets details for given period				
3.19.1.19 Allow leave bidding				
3.19.1.20 Ensure mandatory viewing of Crew safety notices / important documents / manuals / revisions online				
3.19.1.21 Period Swap functionality should be available				
3.19.1.22 Notify flight time and aircraft changes				
3.19.1.23 Crew functions available on web need to be available on mobile as well.				

Annexure II

AUTOMATED FLIGHT / CABIN CREW PLANNING, TRACKING AND RESOURCE MANAGEMENT SOLUTION Change Request				
Customer				
System		Version		
Customer CR Reference		Date		
Brief Description of Change				
Reason for Change				
Vendor Impact Analysis				
Vendor CR Reference		Target Release		
Vendor understanding				
Outline Solution				
	Analysis	Development	Testing	Implementation
Estimated Effort				
Tentative Duration				
Estimated Cost (USD/LKR) (if applicable)				
Customer Approval				
Signed:				
Name:				
Title:				
Date:				

Annexure. B-I: Price Schedule Form for Option I

**Provisioning of an automated Crew Scheduling and Resource Management System for SriLankan Airlines - CPIT/ICB 08/2020
Fully Managed Service model including Installation, Commissioning, Warranty, Maintenance with end to end Support for 5 years through a Service Level Agreement and the system to be hosted at the vendor location.**

Name of the Bidder :

Name of the Principal :

Name of the Manufacturer :

Line Item N°	Description of Solution	Unit of Measure	Qty	Rental cost per month	Total rental cost for 60 months	Remarks
1	Cost of the Solution which covers the mandatory requirements at Annexure A.					
1.1	Implementation cost (if applicable)					
1.2	Acquisition cost (if applicable)					
1.3	License cost (if applicable)					
1.4	Integration cost with other systems (If relevant)					
1.5	Project management cost					
1.6	Scoping study (if applicable)					
1.7	Product Customization (if applicable)					
1.8	Data migration					
1.9	Training					
1.10	Hardware cost (If applicable)					
1.11	Any other requirements - Please specify					
	Total one time cost for 5 years					
2.	Variable/Recurrent charges					
2.1	System usage fee (if applicable)					
2.2	Hosting charges					
2.3	Communication charges (if relevant)					
2.4	Any other requirements - Please specify					
	Total Variable/Recurrent cost for 5 yrs.					
3.	Maintenance & Support					

3.1	Maintenance & Support Cost for the 1 st 3 years to meet the service levels stated in the Bid document.					
3.2	Maintenance & Support Cost for the 4 th year					
3.3	Maintenance & Support Cost for the 5 th year					
	Total Maintenance & Support cost for 5 years					
	All-inclusive total project cost for 5 years (Excluding Tax)					
	Total Tax amount (if applicable please specify details)					
	All-inclusive total project cost for 5 years (Including Tax)					

Payment term: Quarterly in arrears with 45 days credit from the date of the receipt of the invoice. **Please review & confirm.**
Advance payment is not acceptable. 45 days credit from the date of the receipt of the invoice.

Performance security : A bank guarantee (unconditional, irrevocable and on first written demand) of 10% of the total order value shall provide to cover both the warranty period and contract period)

Note: Please submit your financial proposal on your Company Letter Head based on the above price format & complete all the required information. Please submit your Best and Final Offer (BAFO) for evaluation.

Bid Validity:.....

Bid Security declaration: Yes/ No (to be attached with Financial bid)

Acceptance on 10% performance security:.....

Implementation lead time:

Available locations for inspection of the proposed solution/service -

Method of payment :

Bank details :

Head Office :

Account Name :

Period of Agreement : ___ years commencing from ___ until ___

Price shall be fixed for the Term of the Agreement

..... [signature of person signing the Bid]

..... [designation of person signing the Bid with frank]

Date : [insert date]

Annexure. B-II: Price Schedule Form for Option II

Provisioning of an automated Crew Scheduling and Resource Management System for SriLankan Airlines - CPIT/ICB 08/2020
 Fully Managed Service model including supply & Installation, Commissioning, Warranty, Maintenance with end to end Support for 5 years through a Service Level Agreement (SLA) and the system to be hosted at SriLankan premises. All infrastructure requirements for the overall solution needs to be supplied by the Bidder.

Name of the Bidder :

Name of the Principal :

Name of the Manufacturer :

Line Item N ^o	Description of Solution	Unit of Measure	Qty	Rental cost per month	Total rental cost for 60 months	Remarks
1	Cost of the Solution which covers the mandatory requirements at Annexure A.					
1.1	Implementation cost					
1.2	Acquisition cost (if applicable)					
1.3	License cost					
1.4	Integration cost with other systems (If relevant)					
1.5	Project management cost					
1.6	Scoping study (if applicable)					
1.7	Product Customization					
1.8	Data migration					
1.9	Training					
1.10	Hardware cost					
1.11	Any other requirements - Please specify					
	Total one time cost for 5 years					
2.	Variable/Recurrent charges					
2.1	System usage fee (if applicable)					
2.2	Hosting charges					
2.3	Communication charges (if relevant)					
2.4	Any other requirements - Please specify					
	Total Variable/Recurrent cost for 5 yrs.					
3.	Maintenance & Support					

3.1	Maintenance & Support Cost for the 1 st 3 years to meet the service levels stated in the Bid document.					
3.2	Maintenance & Support Cost for the 4 th year					
3.3	Maintenance & Support Cost for the 5 th year					
	Total Maintenance & Support cost for 5 years					
	All-inclusive total project cost for 5 years (Excluding Tax)					
	Total Tax amount (if applicable please specify details)					
	All-inclusive total project cost for 5 years (Including Tax)					

Payment term: Quarterly in arrears with 45 days credit from the date of the receipt of the invoice. **Please review & confirm.**
Advance payment is not acceptable. 45 days credit from the date of the receipt of the invoice.

Performance security : A bank guarantee (unconditional, irrevocable and on first written demand) of 10% of the total order value shall provide to cover both the warranty period and contract period)

Note: Please submit your financial proposal on your Company Letter Head based on the above price format & complete all the required information. Please submit your Best and Final Offer (BAFO) for evaluation.

Bid Validity:.....

Bid Security declaration: Yes/ No (to be attached with Financial bid)

Acceptance on 10% performance security:.....

Implementation lead time:

Available locations for inspection of the proposed solution/service -

Method of payment :

Bank details :

Head Office :

Account Name :

Period of Agreement : ___ years commencing from ___ until ___

Price shall be fixed for the Term of the Agreement

..... [signature of person signing the Bid]

..... [designation of person signing the Bid with frank]

Date : [insert date]

ANNEXURE C: Bid Security Declaration form

THIS IS A COMPULSORY FORM. NON-SUBMISSION OF DULY FILLED/SIGNED FORM SHALL RESULT IN REJECTING THE BID.

[The Bidder shall fill in this form in accordance with the instructions indicated in brackets]

Date: -----[insert date by bidder]

*Name of contract -- [insert name]

*Contract Identification No: -----[insert number]

*Invitation for Bid No.: ----- insert number]

To: SriLankan Airlines Limited.

We, the undersigned, declare that:

1. We understand that, according to instructions to bidders (hereinafter "the ITB"), bids must be supported by a bid-securing declaration;
2. We accept that we shall be suspended from being eligible for contract award in any contract where bids have been invited by any of the Procuring Entity as defined in the Procurement Guidelines published by National Procurement Commission of Sri Lanka, for the period of time of three years starting on the latest date set for closing of bids of this bid, if we:
 - (a) withdraw our Bid during the period of bid validity period specified; or
 - (b) do not accept the correction of errors in accordance with the Instructions to Bidders of the Bidding Documents; or
 - (c) having been notified of the acceptance of our Bid by you, during the period of bid validity, (i) fail or refuse to execute the Contract Form, if required, or (ii) fail or refuse to furnish the performance security, in accordance with the ITB.
3. We understand this bid securing shall expire if we are not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder that the bidder was unsuccessful; or (ii) twenty-eight days after the expiration of our bid.
4. We understand that if we are a JV, the Bid Securing Declaration must be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Securing Declaration shall be in the names of all future partners as named in the letter of intent.

Signed [insert signature(s) of authorized representative] In the Capacity of [insert title]

Name [insert printed or typed name]

Duly authorized to sign the bid for and on behalf of [insert authorizing entity]

Dated on [insert day] day of [insert month], [insert year]

[this form shall be filled in accordance with the instructions indicated in brackets]

-----[insert the issuing agency's name, and address of issuing branch or office]-----

Beneficiary : SriLankan Airlines Limited, Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka

Date : -----[insert (by issuing agency) date]

ANNEXURE D: Performance Security

[The issuing agency, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

-----[Issuing Agency's Name, and Address of Issuing Branch or Office]-----

Beneficiary: SriLankan Airlines Limited, Airline Centre, Bandaranaike International Airport, Katunayake, Sri Lanka

Date: -----

PERFORMANCE GUARANTEE No: -----

We have been informed that -----[name of Bidder](hereinafter called "the Bidder") has entered into Contract No. -----[reference number of the contract] dated ----- with you, for the -----Supply of -----[name of contract and brief description] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Bidder, we -----[name of Agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of -----[amount in figures](----- ---) [amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the --- day of ----,20..[insert date,28 days beyond the scheduled completion date including the warranty period] and any demand for payment under it must be received by us at this office on or before that date.

[signature(s)]

ANNEXURE E: Clientele Information Form

Company Name	Company Representative's Contact Details (Please state name, official email address and telephone number)	System/ solution implemented	Implementation date	Present status
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Note: Please mention the users of the **same service/solution proposed** to SriLankan Airlines. In addition to above information please provide your clientele of **other systems/solutions** implemented.

ANNEXURE F - SAMPLE CONTRACT AGREEMENT

AGREEMENT FOR PROVISION OF SERVICE/SOLUTION

The Agreement for Provision of service/solution (hereinafter referred to as "Agreement") is made and entered into on this ___ day of _____

Between;

SRILANKAN AIRLINES LIMITED a company incorporated in Sri Lanka (Company Registration PB 67) and having its registered office at "Airline Centre", Bandaranaike International Airport, Katunayake, Sri Lanka, (hereinafter called and referred to as "**SriLankan Airlines**" which term or expression shall where the context so requires or admits mean and include the said **SriLankan Airlines Limited**, its successors, assignees and representatives) of the **One Part**;

And

_____ a company incorporated in _____ (Company Registration No. _____) and having its registered office at _____ (hereinafter called and referred to as the "**Contractor**" which term or expression shall where the context so requires or admits mean and include the said _____ its successors, assignees and representatives) of the **Other Part**.

WHEREAS SriLankan Airlines is desirous of procuring _____ (hereinafter referred to as "service/ solution") as per the specifications and estimated quantities provided in Schedules attached herewith to the Agreement.

WHEREAS the Contractor is engaged in supply of _____ and desirous of supplying the Service/solution to SriLankan Airlines on a non-exclusive basis according to the specifications and estimated quantities mentioned herein and communicated by SriLankan Airlines from time to time in the future;

WHEREAS the Contractor has expressed its offer to provide SriLankan Airlines with the service/solution according to the terms and conditions provided herein and which offer has been accepted by SriLankan Airlines;

WHEREAS prior to the said offer and the execution of the Agreement, the Contractor has been apprised of the requirements and specification required by SriLankan Airlines for the supply and delivery of service/solution and to all other matters which might have influenced the Contractor in making its bids and has agreed to supply and deliver the Service/solution to SriLankan Airlines pursuant to the said requirements and specifications set forth in the Invitation for Bids document;

WHEREAS the Contractor has expressed its desire to provide SriLankan Airlines with Service/solution according to the terms and conditions provided herein.

IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:

1. OBLIGATIONS OF THE CONTRACTOR:

1.1 The Contractor shall:

1.1.1 Deliver Service/solution as more fully described in the Schedule in quantities ordered by SriLankan Airlines within the time frame as more fully described in Schedule, to the locations more fully described in Schedule hereto according to the specifications provided in Annex ... (such schedules and annexes to be part and parcel of this Agreement) on non-exclusive basis on the terms and conditions set out herein.

- 1.1.2 Be deemed to have appraised itself fully of the provisions of this Agreement.
- 1.1.3 Ensure that Service/solution provided under this Agreement shall:
 - a) be in accordance with the specifications set out in Annex;
 - b) conform with any sample provided by the Contractor during the selection process or thereafter and approved by SriLankan Airlines;
 - c) be fit for the purposes envisaged under this Agreement and suitable for Airport Ground Operations;
- 1.1.4 Ensure that it has the necessary/required licenses, approvals and authorizations to provide Service/solution to SriLankan Airlines envisaged under this Agreement.
- 1.1.5 Deliver the Service/solution on CFR-CMB basis (defined as per INCOTERMS latest version) to the locations set out in Schedule in quantities mentioned in Annex The Contractor shall be responsible for providing all transportation necessary for the safe movement of Service/solution to the locations as specified in Schedule ... of the Agreement.
- 1.1.6 At its own cost comply with all requirements of any Governmental or local Governmental regulations (particularly with those pertaining to Board of Investment of Sri Lanka, Customs in Sri Lanka or any other country, safety, health, labour, clearing and security) and shall indemnify and hold harmless SriLankan Airlines against any loss, damage or claim that may arise due to the non-compliance with any such regulations.
- 1.1.7 Invoice SriLankan Airlines for the Service/solution at the rates and in the manner specified and described herein (particularly as set out in Clause and Schedule).
- 1.1.8 Not assign, transfer or sublet its rights or obligations under this Agreement without the prior written approval of SriLankan Airlines. Provided that the Contractor shall not be relieved of responsibility under this Agreement for such portion of its obligations as are assigned, transferred or sublet.
- 1.1.9 Not at any time, during or after the term of this Agreement, divulge or allow to be divulged to any person any confidential information relating to the business and operations of SriLankan Airlines unless duly authorized in writing by SriLankan Airlines or required under any law.
- 1.1.10 Pay liquidated damages as stipulated in Schedule if the Contractor fails to deliver the Service/solution on time or SriLankan Airlines rejects the Service/solution pursuant to Clause 2.6 hereof.
- 1.1.11 Subject to the terms and conditions of this Agreement, the Service/solution shall be delivered on CFR-CMB (INCOTERMS latest version) and the rights and obligations of the Parties and the transfer of risk and title shall be governed in terms of CFR-CMB (INCOTERMS latest version).
- 1.1.12 Arrange pre delivery inspection at manufacturing plant once the Service/solution are completely manufactured for minimum 2 personnel of SriLankan Airlines at contractors' cost (except air fare of SriLankan Airlines destinations) at the manufacturing location.
- 1.1.13 Provide all required and relevant testing facilities for pre delivery inspection for SriLankan Airlines personnel.

- 1.1.14 Make available all the required manuals specified under technical/general specifications should be available in English Language at pre delivery inspection.
- 1.2 In the event any of the Service/solution supplied or delivered pursuant to this Agreement are rejected by SriLankan Airlines, the Contractor shall take immediate steps, and not later than 15 working days from the rejected date to either replace the rejected Service/solution or make alternations necessary to meet the specifications, free of any costs to SriLankan Airlines.
- 1.3 In the event of any item of the Service/solution being damaged at any stage prior to the handing over of the Service/solution to nominated freight forwarder at the port of dispatch or if any item of the Service/solution are lost during transit from the Contractor's warehouse to the locations as set forth under Schedule or if any item of the Service/solution are wrongly supplied, the Contractor shall replace the said damaged, lost or wrongfully supplied item of Service/solution with new ones and shall ensure that supply and delivery of same is affected speedily and no later than Four (04) weeks from the date of notification by SriLankan Airlines ("Replacement") at its own cost. SriLankan Airlines shall not be liable for any damage or deterioration caused or occurring to the wrongly supplied items under Clause 1.3 while in the custody of SriLankan Airlines. In the event the Contractor fails to provide any of the item of Service/solution within a reasonable period of time, SriLankan Airlines shall be at liberty to purchase such items of Service/solution from another source and the Contractor shall reimburse SriLankan Airlines' for any cost incurred in respect of same.
- 1.4 The contractor shall arrange commissioning of the Service/solution and training for relevant SriLankan Airlines staff once the Service/solution are received to SriLankan Airlines stores through a qualified representative engineer of the manufacturing company. All applicable expenses of commissioning and training must be borne by the contractor.
- 1.5 The contractor shall provide a comprehensive unconditional warranty of years from the date mentioned in the Commissioning and Acceptance Form in Annex for manufacturing defects of the Service/solution except ware and tare.
- 1.6 The contractor shall guarantee the spare parts availability of the purchased Service/solution for minimum 10 years irrespective of the validity period of this agreement.
- 1.7 The contractor shall handover all items/Service/solution specified in Schedulewithout any cost to SriLankan Airlines.

2. RIGHTS AND OBLIGATIONS OF SRILANKAN AIRLINES:

- 2.1 SriLankan Airlines shall pay the Contractor for Service/solution provided at the rates and in the manner specified and described herein (particularly in Clause and Schedule hereto). For the avoidance of doubt, the adjustment/variation of the quantity of Service/solution provided under this Agreement shall still be provided by the Contractor in accordance to the same rates as specified under Schedule
- 2.2 SriLankan Airlines shall have the right to charge liquidated damages against the Contractor as provided in Schedule where the Contractor fails to deliver the Service/solution as required under this Agreement or any non-compliance or breach by the Contractor of any of its obligations under this Agreement.
- 2.3 Notwithstanding anything contained in this Agreement, SriLankan Airlines may at any time hire, purchase and/ or engage any other person(s)/contractor(s) to purchase Service/solution which are similar to the Service/solution contemplated in this Agreement and/or which SriLankan Airlines may deem in its opinion as specialized in nature.

- 2.4 Have the right to inspect and reject the Service/solution (or any part thereof) provided under this Agreement if in its opinion it decides that such Service/solution (or any part thereof) fail to meet the specifications required by SriLankan Airlines under this Agreement or is not of merchantable quality and unfit for the purposes intended. SriLankan Airlines right to inspect and where necessary, reject the Service/solution (or part thereof) after the Service/solution' arrival or issuance of the Delivery Note shall in no way be limited or waived by reason of the Service/solution having previously been inspected and passed by SriLankan Airlines or its representative prior to the Service/solution delivery.
- 2.5 When the Service/solution are received to SriLankan Airlines stores, SriLankan Airlines shall conduct a quality and quantity inspection of the same and shall accept the Service/solution at the locations once commissioning and training is completed, and other required items/Service/solution specified in Schedule are handed over by the contractor. If there is a discrepancy in quantity received and quantity indicated in invoice, UL will inform same to Bidder/s within 5 working days of receipt of shipment to stores.
- 2.6 Upon the acceptance of the Service/solution by SriLankan Airlines, the Service/solution shall become and remain the property of SriLankan Airlines. Notwithstanding that title in whole or in part of the Service/solution may have passed to SriLankan Airlines pursuant to Clause 2.7, the Contractor shall remain and be responsible to SriLankan Airlines to make good any loss or damage to such Service/solution due to any act or negligence on the part of the Contractor or Contractor's Representatives; or arising from any incident whatsoever from the commencement of this Agreement until the Service/solution are handed over to SriLankan Airlines at the port of destination, Colombo and accepted by SriLankan Airlines.
- 2.7 Nothing in this Agreement shall prevent SriLankan Airlines from sourcing similar Service/solution or any other Service/solution or services from any third party on whatsoever basis during the period of the Agreement.
- 2.8 In the event SriLankan Airlines in its opinion decide that the Service/solution are not in accordance to the requirements and specifications set forth under this Agreement, SriLankan Airlines shall have the right to reject the Service/solution and:
- (i) refrain from making any payments pursuant to such Order made in respect of such Service/solution; and
 - (ii) either replace the rejected Service/solution with Service/solution meeting the specifications required under this Agreement free of any costs to SriLankan Airlines; or
 - (iii) obtain substitute Service/solution for the rejected Service/solution and the Contractor shall reimburse to SriLankan Airlines all costs incurred by SriLankan Airlines in respect of same.

3. INVOICING & PAYMENT:

- 3.1 The Contractor shall provide the Service/solution at the rates assigned to each category as described in Schedule ... hereto.
- 3.2 The Contractor shall not increase the rates, charges or any other prices set out in this Agreement during the period of this Agreement.

- 3.3 Subject to Clause 3.5, SriLankan Airlines will settle the invoices submitted by the Contractor for Service/solution under this Agreement within days from the date of Commissioning and Acceptance in Annex The invoice will be raised at the time of departure of the Service/solution from the warehouse of the Contractor. A copy of invoice will be emailed to SriLankan Airlines at the time, the invoice is raised.
- 3.4 SriLankan Airlines shall inform any dispute on any invoice within 5 working days of receipt of the invoice from the Contractor and proceed to settle the undisputed amount within the payment period referred to in Clause 3.3 hereof. The Parties shall endeavor to resolve the dispute on the invoice amicably within 30 days of notification or any other period mutually agreed and where the Parties fail to resolve the dispute amicably, Parties shall resort to the dispute resolution mechanism provided in this Agreement as a mean to resolve the dispute. If the dispute is resolved in the Contractor's favor, the amount payable to the Contractor shall be payable within fourteen (14) days of the resolution of the dispute.
- 3.5 SriLankan Airlines shall be entitled to withhold any payments due to the Contractor under this Agreement and any sums of money required to be withheld by SriLankan Airlines under any law or regulation for the time being in force and/or pursuant to this Agreement.
- 3.6 Payment shall be made in according to the payment details provided in Schedule
- 3.7 Invoices to be addressed to: Senior Manager Financial Services, SriLankan Airlines Ltd, Airlines Centre, BIA, Katunayake, Sri Lanka and/or email to: mahesh.nanayakkara@srilankan.com

4. LIABILITY & INDEMNITY:

- 4.1 The Contractor shall indemnify and hold harmless SriLankan Airlines free and clear from and against any and all losses, costs, expenses, claims, damages and liabilities, to SriLankan Airlines, its officers, agents, employees, representatives or any third parties and/or any property, that may arise pursuant to this Agreement, in particular pursuant to (but not limited to) any:
- a) claim in respect of any workers of the Contractor under the Workman's Compensation laws or any other law;
 - b) accident, injury or death caused to any person by negligence or willful misconduct of the Contractor, its servants, agents, employees or representatives;
 - c) acts of theft, pilferage, damage of property caused by the Contractor or its servants, agents, employees or representatives;
 - d) any losses, damages, injuries, illness or death incurred due to manufacturing defects, nonperformance and or malfunction of the Service/solution procured under this agreement by SriLankan Airlines;
 - d) if the Service/solution provided to SriLankan Airlines are not suitable for the use intended and/or does not meet the specifications set out in this Agreement including alleged illness, injury, death or damage as a result of the use of any the Service/solution produced, packaged, stored or shipped by Contractor;
 - d) violation of any laws, regulations or intellectual property rights of any party;

- e) breach of any obligations, representations, warranties or covenants in the Agreement by the Contractor;
- 4.2 SriLankan Airlines shall indemnify and hold harmless the Contractor free and clear from and against any and all losses, costs, expenses, claims, damages and liabilities that may arise pursuant to the death or injury of a worker of the Contractor or damage to the Contractor's (or its workers) property caused by SriLankan Airlines' negligence or willful misconduct.

5. INSURANCE:

- 5.1 The Contractor shall, without prejudice to its obligations under Clause 5.1 and as a condition precedent to this Agreement, at its own cost secure policies of insurance as described below, acceptable to SriLankan Airlines which shall be kept current throughout the term of this Agreement. These insurances will include but not limited to;
- a) Workmen's Compensation Insurance or employer's liability insurance for all employees of the contractor or their representatives involved with performance of this contract. The policy shall include extensions for riot and terrorism.
- 5.2 Such insurances as aforementioned incorporate the following provisions in respect of liability assumed by the Contractor under this Agreement (unless otherwise specified by SriLankan Airlines):
- a) Name SriLankan Airlines, its successors and assigns, directors, officers, servants, employees, agents and contractors as additional assureds.
 - b) A severability of interest clause, where the insurances (except with regard to the limits of liability) will operate in all respects as if there were a separate policy covering each assured.
 - c) Confirm that such insurances shall be primary without right of contribution from any other insurance carried by SriLankan Airlines.
 - d) Provide that the cover afforded to SriLankan Airlines shall not be invalidated by act or omission by the Contractor or by any other person and shall remain valid regardless of any breach or violation by the Contractor or any other person of any warranty, declaration or condition contained in such insurances.
 - e) The Insurer (of the insurances) will provide 15 days prior written notice to SriLankan Airlines of any material change of the insurances affected pursuant to this Clause.
- 5.3 The Contractor shall also within 15 days of the execution of this Agreement and at each consequent renewal (or renewal of insurances whichever shall occur first) produce an Insurance Policy/Certificate/Endorsement evidencing coverage as per the requirements of Clause 5.1.
- 5.4 In the event the Contractor defaults and/or fails to comply with any of its obligations under this Clause, SriLankan Airlines may (without prejudice to any other remedy available under this Agreement) pay any premiums that may remain due and unpaid provided that SriLankan Airlines shall be entitled to deduct or charge the Contractor any such amounts expended by it to pay such aforementioned unpaid premiums.
- 5.5 The insurance coverage required by Clause 5.1 and 5.2 shall at all times be valid and adequate to meet all the obligations set out above and any other obligations required by law. Failure to maintain insurance coverage to the required level will be considered by SriLankan Airlines as a fundamental breach of this Agreement.

6. NON-COMPLIANCE:

6.1 In the event of the non-compliance or breach by the Contractor of any of its obligations contained in this Agreement, SriLankan Airlines may at its discretion, without prejudice to any of its rights under this Agreement:

- a) Terminate this Agreement as per Clause 7 below:
- b) Charge the Contractor liquidated damages at the rate specified in Schedule of the estimated amount of the monies payable for the relevant Service/solution for the relevant period of non-compliance or breach; and/or
- c) Obtain the Service/solution from another contractor provided however, that in the event any money is expended by SriLankan Airlines on account of the Contractor's non-compliance or breach of its duties, such said expenditure shall be re-charged to the Contractor.

The Contractor shall in the aforementioned instances make good the irregularity, breach and/or lapse as soon as possible to the satisfaction of SriLankan Airlines and shall reimburse SriLankan Airlines any expenses incurred by it in such said instances.

7. TERM & TERMINATION:

7.1 This Agreement shall be valid for a period of ___ years commencing from _____ until _____ unless terminated earlier and shall automatically stand terminated upon the expiry of the Agreement. Notwithstanding the above, the Parties may extend the Term of this Agreement upon the expiry of the Term for a further period of 1 year by written mutual agreement on the same terms and conditions of this Agreement; provided however that such extension shall be subject to the Contractor's satisfactory performance of the Agreement decided at the sole discretion of SriLankan Airlines.

7.2 Notwithstanding Clause 7.1, SriLankan Airlines may terminate this Agreement at any time, without assigning any reasons whatsoever, by giving the Contractor 90 days' written notice of termination without any liability to pay compensation and such termination shall take effect on the expiry of the said 90 days' notice period.

7.3 SriLankan Airlines may terminate this Agreement forthwith in writing in the event the Contractor does not:

- a) provide the Service/solution at the time, manner and/or to the specifications/ quality required by SriLankan Airlines pursuant to this Agreement;
- b) comply with the requirements and/or notices of SriLankan Airlines; and/or
- c) perform, fails or is failing in the performance of any of its obligations under this Agreement.

7.4 Subject to Clause 7.3 hereof, either party shall have the right to terminate this Agreement forthwith at any time by giving written notice to the other upon the happening of any of the following events:

- a) if the other party is in breach of any of the terms or conditions of this Agreement and fails to rectify same within 30 days of the written notice of the breach to the defaulting party or immediately if the breach is incapable of remedy;

- b) if the other party enters into liquidation whether compulsory or voluntary (otherwise than for the purpose of amalgamation or reconstruction) or compounds with or enters into a scheme of arrangement for the benefit of its creditors or has a receiver appointed of all or any part of its assets or takes or suffers any similar action in consequence of debt; and/or
 - d) if the other party shall cease substantially to carry on trade or shall threaten to cease substantially to carry on trade.
 - e) disruption to the performance of the Agreement for a period of more than 60 days due to force majeure event.
- 7.5 Expiration or termination of this Agreement pursuant to the provisions of this Clause shall be without prejudice to the accrued rights and liabilities of either party.
- 7.6 On termination of this Agreement the Contractor shall only be entitled to receive the payment of monies (less any monies as SriLankan Airlines is entitled to deduct/set-off under this Agreement) for Service/solution duly provided in accordance with the terms of this Agreement. The Contractor shall not be entitled to any further costs, remuneration consequential or special damages, loss of profits or revenue claimed to have been suffered by the Contractor (including its agents, employees and representatives) as a result of this Agreement.
- 7.7 In the event SriLankan Airlines terminates this Agreement in whole or in part, pursuant to 7.3 a), b) or c) of the Agreement, SriLankan Airlines may procure upon such terms and in such manner as it deems appropriate, Service/solution , as the case may be, similar to those undelivered under the Agreement, and the Contractor shall be liable to SriLankan Airlines for any excess costs for such similar Service/solution procured by SriLankan Airlines. However, the Contractor shall continue performance of the Agreement to the extent not terminated herein.

8. BANK GUARANTEE:

- 8.1 Upon the execution of this Agreement, the Contractor shall furnish SriLankan Airlines a bank guarantee for the sum as set forth under Clause of Schedule as an irrevocable and unconditional bank guarantee drawable on demand in Sri Lanka from a bank acceptable to SriLankan Airlines, in a form and substance satisfactory to SriLankan Airlines as security for the due and proper performance by the Contractor of its obligations under this Agreement. All applicable bank charges (including any charges at the time of encashment) on such bank guarantee shall be borne by the Contractor). The said bank guarantee shall remain in force for the duration of this Agreement and 90 days thereafter.
- 8.2 The proceeds of the Bank Guarantee shall be payable to SriLankan Airlines as compensation for any loss resulting from the Contractor's failure to complete its obligations under the Agreement.
- 8.3 The Bank Guarantee will be discharged by SriLankan Airlines and returned to the Contractor within 90 days of the expiry of this Agreement or within 90 days following the date of completion of Contractor's obligations under the Agreement, whichever is later, less monies due to SriLankan Airlines and/or as SriLankan Airlines is entitled to deduct/set-off under this Agreement.
- 8.4 In the event, that the Contractor fails to pay any monies due to SriLankan Airlines (or any part thereof) as and when the same become payable under this Agreement, SriLankan Airlines shall be entitled to adjust or deduct any monies due to SriLankan Airlines from the Bank Guarantee accordingly. In the event of an adjustment or deduction of the Bank Guarantee by SriLankan Airlines against any sums due from the Contractor, the Contractor shall immediately submit to SriLankan Airlines the amount adjusted or deducted by SriLankan Airlines and restore the Bank Guarantee to its original amount.

8.5 SriLankan Airlines shall not make any payments under this Agreement to the Contractor until SriLankan Airlines has received the Bank Guarantee as stipulated under Clause 8 hereof.

8.6 SriLankan Airlines' rights with respect to the Bank Guarantee shall be in addition to any other rights or remedies available to SriLankan Airlines.

9. GOVERNING LAW:

9.1 This Agreement shall be governed by the laws of Sri Lanka and subject to the jurisdiction of the courts in Sri Lanka.

10. FORCE MAJEURE:

10.1 In the event that either party shall be wholly or partly unable to carry out its obligations under this Agreement by reasons or causes beyond its control, including by way of illustration Acts of God or the public enemy, fire, floods, explosions, epidemics, insurrection, riots or other civil commotion, war, Government order or by any other cause (excluding, however, strikes, lockouts or other labour troubles), which it could not be reasonably be expected to foresee or avoid, then the performance of its obligations in so far as they are affected by such cause shall be excused during the continuance of any inability so caused. Such cause(s) shall however as far as possible be remedied by the affected party with all reasonable dispatch.

10.2 Notwithstanding the above each party shall give the other as soon as possible notice of the occurrence or imminent occurrence of an event as indicated above and where such notice is given verbally it shall be followed immediately in writing.

10.3 In the event the force majeure event relates to delivery of Service/solution by the Contractor, unless otherwise directed by SriLankan Airlines in writing, the Contractor shall continue to perform its obligations under the Agreement as far as is reasonable and practical. And shall seek all reasonable alternative means for performance not prevented by the force majeure event. In case of delays in the completion of delivery in accordance to the time schedule as specified in the respective Purchase Order(s) due to any of the force majeure event mentioned above, the time schedule for the delivery of Service/solution shall be extended accordingly.

11. GENERAL:

11.1 This Agreement shall constitute the entire agreement and understanding of the parties and shall supersede all prior agreements, whether written or oral between the parties hereto concerning the subject matter hereof.

11.2 In the event of a conflict between this Agreement and its Schedules, the Schedules shall take precedence over this Agreement in respect of the subject matter thereof. In the event of a discrepancy between Purchase Order and the Agreement, the Purchase Order will take precedence over this Agreement in respect of the subject matter thereof.

11.3 In the event that either party shall be rendered wholly or partly unable to carry out its obligations under this Agreement as a result of strikes, lockouts and labour troubles, then such party so incapacitated shall compensate such other for damage and/or loss suffered by such other as a result of such strike, lockout or labour trouble.

- 11.4 At all times the Contractor (together with its workers) will be deemed to be an independent contractor and shall not under any circumstances be considered an employee, representative or agent of SriLankan Airlines.
- 11.5 The right and remedies of SriLankan Airlines against the Contractor for the breach of any condition and for obligations undertaken by the Contractor under this Agreement shall not be prejudiced or deemed to be waived by reason of any indulgence or forbearance of SriLankan Airlines.
- 11.6 Nothing in this Agreement shall prevent SriLankan Airlines from availing itself of any remedies provided under the general law in addition to the remedies stipulated in this Agreement.
- 11.7 Except to the extent as amended under the Purchase Order(s), this Agreement shall not be varied or modified otherwise than by an instrument in writing of even date herewith or subsequent hereto executed by or on behalf of SriLankan Airlines and the Contractor by its duly authorized representatives.
- 11.8 If any provision of this Agreement should become or be adjudged invalid or unenforceable for any reason whatsoever, such invalidity or unenforceability shall not affect any other part of this Agreement and all other provisions shall remain valid and in full force and effect.
- 11.9 The titles to the clauses in the Agreement are for convenience of reference only and do not form part of this Agreement and shall not in any way affect the interpretation thereof.
- 11.10 SriLankan Airlines does not grant the Contractor any right, title or interest in any of its designs, labels, know-how, trade names, trademarks, service marks, logos and other distinctive brand features or business identifiers, logo, copyright or any other intellectual property rights of SriLankan Airlines ("Intellectual Property Rights") except as expressly authorized in writing by SriLankan Airlines and the Contractor shall not have any right, title or interest in the said Intellectual Property Rights of SriLankan Airlines other than the right to use it for purposes of this Agreement for the Term hereof only with the express written consent of the SriLankan Airlines.
- 11.11 The Contractor shall not issue any press release or other public announcement related to this Agreement, written or oral, without the prior written consent of SriLankan Airlines, except as required by law or a court order. For avoidance of any doubt, the Contractor shall not make, give or issue any press release or other press activity involving or referring to SriLankan Airlines or any of its affiliates or their services or operations, without SriLankan Airlines prior written approval.
- 11.12 The Contractor expressly assures and warrants that it has all the necessary approvals, authorizations and licenses to enter into this Agreement and to provide the Service/solution envisaged under this Agreement.
- 11.13 Any notice or other communication required or authorized by this Agreement to be served or given by either party to the other shall be deemed to have been duly served or given if in writing and
- (a) left at or sent by prepaid registered post to the last known place of business of that; or
 - (b) sent by fax or e-mail to such place of business and confirmed by prepaid registered post, similarly addressed, within 24 hours of the dispatch of such fax or e-mail.

In the case of SriLankan Airlines to –

SriLankan Airlines Limited
.....
Bandaranaike International Airport,
Katunayake
Sri Lanka
Fax :
E-mail:
Attention:

In the case of the Contractor to -

IN WITNESS WHEREOF the parties hereto have caused their authorized signatories to place their hands hereunto and to one other of the same tenor on the date first referred to above in:

For and on behalf of
SRILANKAN AIRLINES LIMITED

For and on behalf of

Name:
Designation:

Name:
Designation:

Witness:

Name:
Designation:

Witness:

Name:
Designation:

ANNEXURE G: Bid Acknowledgement Form

IMPORTANT

All bidders shall confirm your intention to submit a bid by forwarding the duly filled Bid Acknowledgement Form, 14 days prior to bid closing date.

Invitation for submission of bids for Provisioning of an automated Crew Scheduling and Resource Management System for SriLankan Airlines, reference no: CPIT/ICB 08/2020 is hereby acknowledged

You may expect to receive our proposal on or before

.....

We do not intend to submit a proposal because

.....
.....
.....

Signed :

Title :

Company :

Date :

10. Registered Name and address of the agent (if any)

Section B - *Details of Directors, Shareholders and related parties*

1. Name(s) of Directors	
2. Name(s) of Shareholders	

3. If the Shareholders are incorporated entities, please state the shareholders of such entities	
4. If the Shareholders are equity funds, please state the owners of such funds	
5. Name (s) of Directors of Parent/Subsidiary who are also Directors of SriLankan Airlines	
6. Name(s) of Directors of Parent/Subsidiary who are also Employees of SriLankan Airlines	
7. Names of Close Family Members who are either Directors/Employees of SriLankan Airlines	

*Please note that the copies of passports and proof of residence of the above mentioned Shareholders / Directors / Owners of funds shall be submitted by the vendor upon the request of SriLankan Airlines.

As the authorized representative of [name of the Vendor], I hereby confirm on behalf of[name of the Vendor] that the information provided above are true and accurate and acknowledge that the bid of[name of the Vendor] submitted herewith shall be rejected in the event all or any of the information submitted above is found to be incorrect.

Details of vendor's authorized signatory:

Name:

Designation:

Date:

Signature & Company Rubber Stamp:

Section C -Business verification : Duly signed and stamped copy of above document to be supported by the following documents	
✓ Tick the appropriate boxes	
<input type="checkbox"/> A copy of the Certificate of Incorporation certified by the	<input type="checkbox"/> A copy of Form 15 (Sri Lankan Companies) certified by the Company Secretary or a

<p>Company Secretary of the vendor Company</p> <ul style="list-style-type: none"> □ A copy of Form 20 (Sri Lankan Companies) certified by the Company Secretary or a letter from the Company Secretary confirming the directors □ For partnerships and sole proprietorships, certificate of business registration 	<p>letter from the Company Secretary confirming the shareholding.</p> <ul style="list-style-type: none"> □ For Partnerships, list of partners confirmed by one of the partners, preferably by the most senior partner. □ Audited financial statements of the vendor Company for the last three years □ Others (specify)
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ANNEXTURE III - Information Security Compliance Checklist

<h2>Extended Information Security Schedule</h2> <p>for service providers ,contractors and other interested 3rd parties</p>							
#	Policy statements/ Compliance requirements for Third Party Organizations	Depl oyed techn ical contr ols	Deplo yed proce dural contr ols	Overal I compli ance (Yes/N o/ Not Applic able)	Reason s for Not Applic ability	Compen sating controls	Rem arks
1	General						

1.1	<p>Access control (access to buildings/areas) Technical and/or organizational procedures shall be in place for access control and, in particular, for the identification of authorized persons</p>						
1.2	<p>Access controls Procedures shall be available with regard to user identification and authentication, both technical (password/password security) and organizational (master user data)</p>						
1.3	<p>Access privilege controls (the prevention of prohibited activities that exceed the granted user rights within an IT system). Authorization model and access rights to meet requirements shall be available; with monitoring and logging of the same</p>						
1.4	<p>Transfer controls (for all aspects of the transfer of personally-identifiable data: electronic transmission, data transport, conveyance checks) shall be available</p>						
1.5	<p>Input controls (audit trail, documentation on data administration and maintenance) Procedures that support a historical audit of when data was entered, modified or removed (deleted), and by whom shall be available.</p>						
1.6	<p>Contract controls (assurance of policy-compliant processing of contractual data) Procedures (technical/organizational) shall be available defining the responsibilities of contractor and client.</p>						
1.7	<p>Availability controls (data shall be protected against accidental deletion or loss) Procedures for data archiving (physical/logical) shall be available</p>						
1.8	<p>Controls for separation of duties (datasets that are created for different purposes shall also be processed separately). Procedures shall be available to support the separate processing (storage, modification, deletion, transmission) of</p>						

	datasets that serve different contractual purposes.						
2	Privacy Policies						
2.1	The Third Party Organization shall comply with the obligations under the EU General Data Protection Regulation (GDPR) in relation to any Personal Data of customers, employees, and Board of Directors of SriLankan Airlines (hereafter referred to as "Personal Data").						
2.2	The Third Party Organization shall process any Personal Data solely for the purposes identified by the relevant Agreement.						
2.3	<p>The Third Party Organization shall have in place appropriate technical and organizational measures to ensure a level of security commensurate with the risks associated with the Processing of Personal Data, such measures shall be appropriate in particular to protect against accidental or unlawful destruction, loss, alteration or unauthorized disclosure of or access to Personal Data.</p> <p>These measures shall take into account and be appropriate to the state of the art, nature, scope, context and purposes of Processing of personal data and prevent unauthorized or unlawful Processing or accidental loss, destruction or damage to Personal Data.</p> <p>For the avoidance of doubt in the event of a dispute between the Third Party Organization and SriLankan, SriLankan shall decide whether the Third Party Organization has put in place appropriate technical and organizational measures in accordance with this Clause 11.</p>						-

2.4	The Third Party Organization shall will notify SriLankan promptly and without undue delay and in any event within 24 hours of becoming aware of any breach of security leading to the accidental or unlawful destruction, loss, alteration, unauthorized disclosure of, or access to Personal Data ("Personal Data Breach") of the existence, nature and scale of the Personal Data Breach and shall comply with its obligations under the EU GDPR in respect of the Personal Data Breach; and co-operate with SriLankan to make any reasonable changes to its processes or procedures to prevent a reoccurrence of the Personal Data Breach.						
2.5	The Third Party Organization shall not engage any third parties or non-employees to process Personal Data unless SriLankan has expressly consented in writing in advance to the use of such third parties. The Third Party Organization shall ensure that any person acting under its authority in relation to the Personal Data, including a Data Processor, is obligated to Process the Personal Data only on the instructions of SriLankan and have in place appropriate technical and organizational measures to ensure a level of security commensurate with the risks associated with the Processing.						
2.6	The Third Party Organization shall use reasonable endeavors to provide such assistance as SriLankan reasonably requires in relation to satisfying any legitimate requests received from Data Subjects in relation to the Personal Data.						
2.7	The Third Party Organization shall keep a record of any Processing of Personal Data it carries out, including: 9.7.1 the purposes of the processing; 9.7.2 a description of the categories of data subjects and of the categories of Personal Data; 9.7.3 the categories of recipients to whom the Personal Data have been or will be disclosed; and						

	9.7.4 each transfer of Personal Data and, where relevant, the documentation of suitable safeguard.						
2.8	The Third Party Organization shall take steps to ensure that, from and including 25 May 2018, their Processing of any Personal Data is compliant with the GDPR.						
3	Security Governance						
3.1	Third Party Organization shall designate named individual or a team with overall accountability for Information Security, to review compliance and enforce information security requirements in the agreement with SriLankan Airlines and liaise with SriLankan Information Security team as required.						
3.2	Third Party Organization shall have management-approved Information Security policies and procedures aligned with applicable external standards, regulations and SriLankan requirements, which shall be reviewed and updated periodically.						
3.3	The Solution and the Third Party Organization is compliant for ISO/IEC 27001:2013 Information Security Management System (ISMS) standard and the certification is up-to-date. (if proposed solution is compliant to other standards, legislative and regulatory requirements, please provide details in 'Remarks').						
3.4	Third Party Organization shall continually improve the suitability, adequacy and effectiveness of Information Security in accordance with applicable external standards, regulations and SriLankan requirements.						
4	Security Risk and Compliance						

4.1	Third Party Organization shall perform Information Security risk assessments on periodic basis and maintain a register of security risks related to the provision of its services to SriLankan and to processing of SriLankan information and/or information systems.						
4.1 .a.	The risk register shall be maintained to show the nature, extent of and progress made in mitigating the identified risks.						
4.2	Third Party Organization shall conduct periodic compliance reviews against management-approved Information Security policies.						
4.3	Third Party Organization shall notify SriLankan where sub-contractor is engaged to provide services and shall ensure that sub- contractor also abides by this policy.						
4.4	Third Party Organization shall abide by the contractual agreements put in place with respect to SriLankan requirements which includes but not limited to code ownership and intellectual property rights.						
4.5	Third Party Organization shall facilitate and participate in periodic Information Security reviews which will be carried out by SriLankan or on behalf of SriLankan. Information Security reviews may also be conducted under the following conditions:						
4.5 .a	Security incident/breach						
4.5 .b	Major change in information systems used to provide services to SriLankan						
4.6	Third Party Organization shall provide periodic reports on risk and compliance management as applicable to services provided to SriLankan.						
4.7	Third Party Users shall comply with all applicable SriLankan corporate and Information Security policies, standards and procedures.						
5	Personnel and Physical Security						
5.1	Third Party Organization shall conduct adequate back-ground verification						

	checks of their staff involved in SriLankan Airlines engagement						
5.2	Third Party Organization shall proactively inform SriLankan Airlines if screening has not been completed or if the results give cause for doubt or concern						
5.2	All employees in the Third Party Organization shall sign a Non-Disclosure Agreement.						
5.3	Third Party Organization shall ensure that all employees complete mandatory Information Security awareness course periodically covering topics like password and user account security, information protection and handling, issues of confidentiality and company security standards.						
5.4	Third Party Users shall sign a Non-Disclosure Agreement before gaining access to SriLankan information and information systems.						
5.5	Third Party Organization shall maintain a formal employee separation process which includes but not limited to revocation of access, return of assets, exit interview.						
5.6	Third Party Organization shall implement all applicable physical and environmental security controls to provide adequate protection to SriLankan information & information systems.						
6	Security in Applications, Systems and Networks						
6.1	Third Party Organization shall design, implement and operate a Layered Security model to provide adequate and effective protection for SriLankan information and information systems. This shall be a combination of preventative, detective and reactive controls and must apply to development, test, pre-production and production environments.						
6.2	Third Party Organization shall ensure that SriLankan information and/or information systems are physically or						

	logically segregated from other customers.						
6.3	Third Party Organization shall design, implement and operate suitable controls to ensure continuity of services in accordance with system uptime and performance requirements, Recovery Time Objective and Recover Point Objective.						
6.4	Third Party Organization shall maintain an established process to provision, review access rights of, de-provision user and service accounts. Periodic access review reports shall be submitted to SriLankan.						
6.5	Third Party Organization shall implement and operate robust network, system and application access controls to authenticate, authorize and log all access attempts pertaining to SriLankan information and information systems. This applies to access attempts made by users, services and devices.						
6.6	Third Party Organization shall not process or store SriLankan information on end user systems like laptops, desktops, mobile devices, etc. Where this is a legitimate requirement, adequate security controls including but not limited to encryption, access control, Mobile Device Management shall be implemented and operated.						
6.7	Third Party Organization should periodically deliver an independent report on the effectiveness of information security controls and agreement on timely correction of relevant issues raised in the report to SriLankan Airlines, on request						
6.8	Third Party Organization shall conduct annual vulnerability assessments and/or penetration tests on applications, systems and networks that transmit, process or store SriLankan information. Reports shall be shared with relevant stakeholders in SriLankan. Third Party Organization shall apply security patches						

	in mutually agreed timeline without any cost escalation.						
6.9	SriLankan Airlines may perform Vulnerability Scans at least annually and findings will be notified to Third Party Organization. If any vulnerability is found, Third Party Organization shall agree to apply security patches in mutually agreed timeline without any cost escalation.						
6.10	Third Party Organization should provide to SriLankan Airlines on request, the status of the closure of high vulnerabilities						
6.11	During the year , Third Party Organization shall conduct information security reviews of its sub-contractors and its own suppliers engaged in services/products delivered to SriLankan during the year						
6.12	Third Party Organization shall conduct BCP testing on SriLankan Related systems/services during the year						
7	Security in System Delivery Lifecycle						
7.1	Third Party Organization shall have an established Software/Systems delivery Lifecycle process embedding adequate security at all stages, including but not limited to secure by design, secure by default and security in deployment in accordance with the applicable external standards, regulations and SriLankan requirements.						
7.2	Third Party Organization shall conduct security code reviews for all versions of the application prior to release. Reports shall be shared with relevant stakeholders in SriLankan.						
7.3	Third Party shall ensure that access to program source code is restricted and strictly controlled.						
8	Data Security						

8.1	Third Party Organization shall design, implement and operate adequate security controls to protect confidentiality, integrity and availability of SriLankan data and/or information in accordance with the classification levels.						
8.1	Security controls for adequate protection shall include but not limited to access control, cryptography, data backups, Data Loss Prevention, Digital Rights Management, and Anti-Malware.						
8.2	Third Party Organization shall only transmit, process or store SriLankan data and/or information in accordance with the contract requirements.						
8.3	Third Party Organization shall retain SriLankan data and/or information based on SriLankan data retention policy which is 12 years as per Right To Information Act.						
8.4	Third Party Organization shall have an established data and media disposal processes incorporating suitable security requirements aligned with relevant industry accepted standards or regulations. SriLankan data shall be suitably disposed of under the following conditions:						
8.4	Contract expiry						
8.4	Equipment / media retirement or maintenance						
8.5	Third Party Users shall not process or store SriLankan data and/or information on non SriLankan devices. Where there is a legitimate business requirement to do so, approvals must be taken from SriLankan Information Security team.						
9	Authentication & Password Compliance						
9.1	Role Based Access & Workflow Approvals (Segregation of Duties)						
9.2	Active Directory (AD) Integrated (If Yes , please proceed to A-7)						
9.3	Password age – 60 Days						
9.4	Minimum password length – 8 Characters						

9.5	Password change at initial login						
9.6	Password Complexity						
9.6 .1	At least one 'UPPERCASE' character						
9.6 .2	At least one 'lowercase' character						
9.6 .3	Mixture of numbers and/or symbols						
9.6 .4	Account Lockout						
9.6 .5	Lockout after 5 unsuccessful attempts						
9.6 .6	30 minutes lockout duration						
9.6 .7	Password History – 8 Passwords						
9.6 .8	Availability of multiple-factor authentication						
9.6 .9	Transfers authentication information through secure protocols						
9.6 .10	Ability to display the time and date of last successful login, and any failed login attempts to user						
9.7	Third Party Organization shall support integration of solution with Microsoft Identity Manager for Identity & Access Management						
10	Backups						
10. 1	Scheduled configuration backups						
10. 2	Scheduled data backups						
10. 3	Backup retention period - 12 years for all SriLankan/service related data						
11	Audit & Event Logs (for all user activities, including administrative and privileged user activities, and system configuration changes)						
11. 1	Application Audit Logs (including transaction logs)						
11. 2	Database Level Audit Logs						
11. 3	OS Level Audit Logs						
11. 4	Event Logs (including successful/unsuccessful login attempts)						

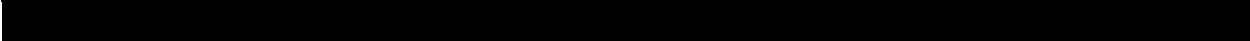
11.5	Integration with McAfee Enterprise Security Manager for log correlation and management (recommended log format: syslog)						
12	Encryption						
12.1	256 bit key encryption for data at rest and in transit.						
12.2	Application services support enabling a public-key infrastructure (public key cryptography and digital signatures)						
13	Data Validation						
13.1	Input & Output Data Validation						
14	Connectivity and Access Control						
14.1	Web applications enabled with current TLS version certificates						
14.2	Remote diagnostic and configuration port should be protected.						
14.3	Ability to configure inactive Sessions timeout (for Application, Database, OS, Console)						
14.4	Ability to configure a Log-on banner						
15	Dependent Systems and Services (if yes, please provide information on systems/services/ports in remarks)						
15.1	Solution necessitates dependent systems & services or ports to be permitted on both clients and Internet access controls						
16	Incident Management						
16.1	Third Party Organisation shall inform SriLankan Airlines about any incidents related to information security as soon as an incident occurs						
16.2	Third Party Organization shall inform about the workarounds and rectifications taken to address the incidents						
16.3	Third Party Organization shall provide audit trails and records of information security events, operational problems, failures, tracing of faults and disruptions related to the service delivered						
17	Service Continuity						
17.1	Availability - 99.95%						

17.2	Recovery Time Objective - 1 hour						
17.3	Recovery Point Objective - 1 hour						
17.4	Third Party Organization agrees to setup a local office or a competent local service provider to assist SriLankan Airlines in support queries or incidents.						
18	Right to Audit & Monitor						
18.1	Third Party Organization agrees that performance of the Services will be subject to monitoring by SriLankan Airlines.						
18.2	Third Party Organization agrees to keep accurate and complete records and accounts pertaining to the performance of the Services. Upon no less than seven (7) days' written notice, and no more than once per calendar year, SriLankan Airlines may audit, or nominate a reputable firm to audit, records relating to performance of Third Party Organization/service provider under the Service Level Agreement, during the agreement period and for a period of three (03) months thereafter.						
18.3	If Third Party Organization obtains third party services by means of outsourcing or sub-contract, Third Party Organization is required to ensure such activities maintain applicable records to reflect the services agreement with SriLankan Airlines and will be subject to audit/monitor as set forth in 18.1 to 18.3 above.						
19	Licensing Requirements						
19.1	Does the solution necessitate additional licenses for third party components/services? (If Yes, please provide information in remarks)						
19.2	If solution necessitates additional licenses for third party components/services, please state if such licenses are included in the proposed solution? (If No, please provide details of						

	additional licenses required from SriLankan Airlines)						
20	Legislative, Standards & Regulatory Compliance						
20.1	Third Party Organization agrees to sign a Reciprocal Non-Disclosure Agreement with SriLankan Airlines						
20.2	Information shared or services obtained as part of SriLankan Airlines engagement with Third Party Organization will be governed by requirements set forth in ISO/IEC 27001:2013 Information Security Management System (ISMS) and subjected to signing this policy which will become an integral part of the Service Agreement(s).						
20.3	Third Party Organization shall agree to adhere to SriLankan Airlines Information Security Policy						
21	Service Level Agreement						
21.1	Signed Service Level Agreement including, and not limited to,						
21.1.1	Reflect Service Continuity objectives set forth above 17.1 to 17.3						
21.1.2	Defined Response Times and Resolution Times based on defined priorities						
21.1.3	Periodic service review meetings between SriLankan Airlines and the Third Party Organization						
21.1.4	Escalation Criteria for Incident Management to ensure performance of services under the Service Level Agreement						
21.1.5	Information about the licensing arrangements (for dependents systems/services), code ownership and intellectual property rights related to the Third Party Organization's products/services						
21.1.6	Service Credits for failing to meet performance of services under the Service Level Agreement						
21.1.7	Third Party Organization should submit service reports at a defined frequency						

Cloud Computing Security Standard							
22	Evaluation of Third Party Organization/ Cloud Service Provider (CSP)						
22.1	SriLankan may perform periodic assessment of the Cloud Security Provider's security posture where necessary.						
22.2	Third Party Organization/ Cloud Security Provider (CSP) hosting SriLankan data shall maintain a certification in good standing against an approved Information Assurance Framework. The certification by an independent and recognized third-party may be required to get a reasonable assurance that security controls are planned and properly implemented.						
23	Protection of SriLankan Data in Cloud Environment						
23.1	Third Party Organization/CSP must operate a Layered Security model at the perimeter, core network, systems, application and data layers to adequately protect SriLankan data.						
23.2	SriLankan data and application environment must be segregated from other entities' environments.						
23.3	SriLankan data must be adequately protected in accordance with the classification levels of the data sets as per Annexure A.						
24	Compliance and Audit in Cloud Environment						
24.1	Third Party Organization/CSP must demonstrate compliance against SriLankan Extended Information Security policy, relevant contractual requirements and applicable external standards and regulations.						
24.2	SriLankan shall conduct security reviews where necessary on the cloud environment on an ongoing basis to verify compliance.						
US DOT Compliance							

25	Customer facing web interfaces shall designed/deployed according to US DOT Compliance requirements						
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_____Third Party Organization Name_____

By:
Name:
Title:
Date:

By:
Name:
Title:
Date: