Book 4

Scope of Work

Provision of Facilities Management Services – JAZAN Airport

Appendix E

Performance Management

TENDER NO. WP25007

TENDER NO. WP25007

1 Introduction

1.1 Overview and Key Objectives

1.1.1 The Contracting Authority recognizes modern business practices, including operation for profit, and seeks to ensure that both the Contracting Authority and the Service Providers have a mutually beneficial relationship. One of the features of this Contract is the use of an incentivized performance mechanism to optimize the performance and the operation of the airport.

1.1.2 These KPI/SLAs/Penalties are intended to be pragmatic, allowing the Service Provider to operate, whilst acknowledging that performance in certain operational facilities is sufficiently important to warrant fees being withheld, where no evidence can be provided that obligations have been met.

1.1.3 It is vital that the Contracting Authority and their nominated Service Providers are aligned in the delivery of world class services. It is therefore expected that the Service Provider will excel in all its endeavours.

1.1.4 To ensure the key objectives of the Service Provider are being achieved, performance will be measured through the following three key components:

1.1.4.1 Service Level Agreements (SLAs)

1.1.4.2 Key Performance Indicators (KPIs)

1.1.4.3 Penalties

1.2 Service Level Agreements (SLAs)

1.2.1 These are the fundamentals that the Service Provider will deliver to demonstrate efficient execution of the contract and the manner in which the services are delivered.

1.2.2 The Service Provider shall provide a 24-hour reactive service for the Project facility in response to unforeseen circumstances. This is to include making safe, diagnosis and rectification within the allowed maximum response times.

1.2.3 SLAs apply to, but not limited to planned, predictive, corrective, reactive maintenance, scheduled services, inspections, and audits. Detailed Reactive and remedial SLAs for each airport are provided in Appendix A, Section 8.

1.2.4 The description of how the performance system analyses the different type of reactive and remedial works is shown in Section 6. Where a failure to meet the response and resolution time has the potential to cause an operational impact a failure event is generated which will be used in the KPI calculation.

1.3 Key Performance Indicators (KPIs)

1.3.1 KPIs are the performance and outputs of the service providers endeavors. These are generally hard measures, reflecting performance & availability, workflow management and utilize leading and lagging indicators.

1.3.2 As the FM Services are largely output based, the SLAs and KPIs associated with this Services Contract shall form an integral part of the Services Agreement. The primary objective of the Performance Management System (PMS) is to develop a performance driven relationship, and drive and embed a culture of continuous improvement. The

process shall be underpinned by robust, transparent, and equitable monitoring and audit programs that will objectively track service performance against agreed SLAs and KPIs.

1.3.3 The KPIs will be calculated and evaluated monthly and will drive the monthly payment of the Services Fee to the Service Provider.

1.4 Penalties

1.4.1 Penalties are an additional performance measure, which will be applied separately monthly, if any, in the event of non-compliance or breach of the contract as mentioned in the penalties table.

1.4.2 The Service Contract is performance-based, meaning that the calculated monthly Fee payment shall be subject to adjustments based on reaching specified performance targets. Poor performance will lead to a deduction from the monthly payment of the service provider, as mentioned in the payment table. The Contracting Authority will utilize leading and lagging indicators to ensure continued performance and avoid any reduction in performance.

1.5 Performance Monitoring System

1.5.1 The Performance Monitoring System will consist of a Non-Conformance Process and monitoring of works via the CAFM/CMMS system and reports.

1.5.2 The mechanism for measuring performance will be via Quality Failures, based around KPIs and their targets, and failure events, based around explicit events reported via the CAFM.

1.5.3 It is expected all of the elements within the KPIs and SLAs will be fully met and that the daily, weekly, monthly, quarterly and annual deliverables making up the KPIs will be measured on a monthly basis.

1.5.4 Performance will firstly be **self-reported** by the Service Provider and then reviewed and verified by the Contracting Authority to check the adherence to the required performance.

1.5.5 The Contracting Authority will undertake a review of the Services delivery reports as submitted and will undertake their own quantitative and qualitative assessment including, but not limited to:

1.5.5.1 Desktop study of periodic reports, maintenance reports, CAFM data (SLA performance), data on complaints received.

1.5.5.2 Field study to assess service standards, levels of customer satisfaction.

1.5.5.3 Continuous audits against the Service Provider assessments and their work.

1.5.6 Both assessments should recognize KPI Breach Reports (KBRs*) which exist and remain ‘live’ at the time of the assessment. The assessment will discount KBRs which relate to KPIs with a potential relief mechanism which were identified and resolved through the course of the agreed rectification period, prior to the cut-off date and start of the assessment process.

*The KBR initiation and closure process is defined in Section 2.

1.5.7 Where KPI infractions are evident an KBR will be raised by the Contracting Authority or their representatives which will describe the issue and a timely rectification plan to be agreed with the Contracting Authority. Additionally, a weighted penalty points system will be applied and the total monthly score will be dealt with as follows:

1.5.7.1 1-10 Points Relief

1.5.7.2 11-20 points SAR 500 per point above 10

1.5.7.3 21-30 points SAR 1,000 per point above 20 and below 31

1.5.7.4 31-40 points SAR 2,000 per point above 30 and below 41

1.5.7.5 41-50 points SAR 4,000 per point above 40 and below 51

1.5.7.6 51+ points SAR 8,000 per point above 50

1.5.7.7 It is noted here that quantum and points deductions per item are to be agreed prior to application of points system.

1.5.7.8 Any deviation from the Contractual obligations and SLA's or KPI's shall incur a KBR and attract 1 point for any Contractual clause.

A sample calculation table is provided below for reference:

Points	Penalties per point (SAR)	Minimum (SAR)	Maximum (SAR)
1-10	0	-	-
11-20	500	500	5,000
21-30	1,000	6,000	15,000
31-40	2,000	17,000	35,000
41-50	4,000	39,000	75,000
51 and over	8,000	83,000	

1.5.8 The above is designed to incentivize the Service Provider to perform, maintaining a focus on the SLAs and KPIs that inform the SDP. As and when problems are encountered, firstly the appropriate communications/escalations shall take place in an open and transparent manner, the root cause of the issue shall be determined and a rectification plan will be developed, agreed with the Contracting Authority and implemented. If non-delivery of the rectification plan is evident and resulting KBRs are not rectified, then the above and appropriate penalty points will be rolled over into the next period. Additional points will then be added in accordance with the criteria set out above such that the Service Provider is incentivized to close out KBRs as soon as reasonably possible.

1.5.9 Representatives of the two parties will meet to discuss and finalize the Performance score for the target month, presenting supporting documentation, data and evidence as required. In the event of dispute or disagreement, the opinion and decision of the Contracting Authority or their representatives is final. The cut-off period for this provision is 30 days, and evidence shall be provided as part of the monthly invoice. Where the timing of the invoice or the dispute do not allow for sufficient dispute resolution time, the Service Provider will deduct the disputed amounts from their invoice. If the resolution process subsequently terminates in favour of the Service Provider, they will be entitled to recover the deducted amounts in the first invoice following the resolution.

1.5.10 Based upon the final score determined, where appropriate, The Contracting Authority shall calculate the appropriate deductions in line with the Performance Management System. To facilitate timely payments to the Service Provider deductions attributable to the previous month's performance will be made to the following monthly invoice. Where a financial deduction has been imposed, within 3 working days, the Service Provider will undertake a root cause analysis and produce a Service Improvement Plan (SIP)

demonstrating what actions will be taken to achieve a score of 'Good performance' in future periods. As a minimum the Service Provider must detail the additional resources and/or training and or increased levels of supervision which will be introduced to ensure that service levels will improve, thus mitigating the risk of further service failings.

1.5.11 Both the Service Provider and the Contracting Authority may suggest modification to the performance regime to improve the clarity of application. The Performance regime shall be deemed to be final for the first Contract year. For subsequent years, modifications to the Performance regime can be proposed by the Service Provider and the Contracting Authority as part of an annual Operating and Performance review process. Submissions for amendments shall be 1 month prior to the anniversary date of the Contract.

1.5.12 Regular contract performance review meetings will be held monthly at a local level and Quarterly at an executive level, or additionally as required.

2 The Contracting Authority KBN/KBR methodology

The process outlined here focuses on the requirements of the Performance Management System and is not intended to replace Non-Conformance Processes as required or highly recommended by ISO55001, ISO45001, ISO9001 and ISO41001.

2.1 What is a KAN

A KPI Alert Notification (KAN) is a notification to the Service Provider of a potential deviation of the work from the requirements set out in Section 2.2.1 and 2.2.2. This will alert the Service Provider of potential issues which will allow him to investigate and gather information about the potential breach. The KAN is seen as an alerting process to provide warning to the Service Provider of potential issues. The KAN allows for documented correspondence without having to initiate the formal KPI process.

2.2 What is a KBR?

2.2.1 A KPI Breach Report (KBR) is any deviation of the work from the requirements of the:

2.2.1.1 Contract

2.2.1.2 Specifications

2.2.1.3 Standards, codes, guidelines, and local authority requirements.

2.2.1.4 Specific provisions of the Performance Management System

2.2.1.5 Written instruction made by the Contracting Authority and/or Contracting Authority representatives to the Service Provider

2.2.1.6 Relevant provisions of the quality and HSE standards set out in Claster2 Quality management and HSE management systems.

2.2.2 A KBR can also be raised for the following:

2.2.2.1 Work fails to meet specified tolerances as established in the Specifications.

2.2.2.2 Work is being performed using non-approved methods or standards.

2.2.2.3 Failure to follow the approved testing and inspection plan.

2.2.2.4 Testing results demonstrate that the product does not meet established and approved standards.

2.2.2.5 Material used that has not been approved as a substitute (equal or similar).

2.2.2.6 Design is not accurate and does not represent actual field conditions.

2.2.2.7 Approved procedure was not followed, and quality defects have been identified by the project team.

2.3 Who raises KBRs and KANs?

2.3.1 KBRs and KANs can be raised by the Contracting Authority and their representatives.

2.3.2 KBRs can be self-raised directly by the FM Service Provider.

2.4 How is a KAN raised?

A KAN template should be prepared which covers all the requirements. KAN is raised by the Contracting Authority via the KAN document to the service provider through the formal communication channel.

2.5 What should a KAN include?

2.5.1 When raising an KAN:

2.5.1.1 Description of the potential breach

1 What is potentially non-compliant and/or what went wrong.

2 Why the work may not meet the Specifications/Contract etc. and a specific reference to the clause and document on which the work does not comply.

2.6 How is an KBR raised?

A KBR template should be prepared which covers all the requirements. A KBR is raised by the Contracting Authority via the KBR document to the service provider through the formal communication channel. A KBR may or may not refer to a KAN. If the KBR is raised against a KAN then the KAN is referenced on the KBR.

2.7 What should an KBR include?

2.7.1 When raising an KBR:

2.7.1.1 Description of the KBR

1 What is non-compliant and/or what went wrong?

2 Why the work doesn't meet the Specifications/Contract etc. and a specific reference to the clause and document on which the work does not comply.

2.7.1.2 When responding to an KBR:

1 Proposed Corrective Action

2 Explanation of corrective action which has or will be taken to resolve the non-conformance

3 Root cause analysis for the non-conformance

4 Proposed preventative action(s)

2.8 How are KBRs resolved?

A KBR is considered resolved when:

1. Proposed root cause, corrective action and preventative are accepted by the contracting authority, and
2. Corrective action is implemented by the Service Provider, and
3. Preventative action is implemented by the Service Provider (where required)

OR

1. The Service Provider has demonstrated that the KBR is not applicable.

2.9 How are KBRs closed?

Once a KBR is resolved, the Contracting Authority or their representatives submits written confirmation that the KBR is closed – check-boxed on the KBR document ticked for resolution and then closure. And no further action is required for the KBR.

2.10 KAN and KBR Register

2.10.1 A KAN register shall be developed and maintained by the Contracting Authority and their representatives. The register shall be reviewed weekly and submitted with the monthly report.

2.10.2 A KBR register shall be developed and maintained by the Contracting Authority and their representatives. The register shall be reviewed weekly and submitted with the monthly report.

2.11 What are the implications of a KBR for the Service Provider?

2.11.1 KBRs are tied to the Performance Management System, and KPI's have been appropriately set and weighted according to the severity of the non-conformance. KBRs shall be closely tied to the performance of the Service Provider, and thus the implications of too many KBRs shall be defined in the Performance Management System (PMS).

2.11.2 The Service Provider will also have the right to refute the KBR and provide justification as to why it believes the event was not a non-conformance. Where accepted by the Contracting Authority the KBR will be revoked.

2.12 KBR Process – Steps

The following are the general steps taken in the KBR Process.

Step 1 – An KBR is raised

Step 2 – Service Provider responds with Root Cause, Corrective and Preventative Action(s) to be taken and due dates for these actions.

Step 3 – Contracting Authority and their representatives responds to accept or reject the response of the Service Provider

If accepted*:*

Step 3a – Contracting Authority and their representatives returns KBR as assessment accepted, and KBR remains open until all corrective and preventative actions are implemented. This is known as the remedy period(s) where the Service Provider is given time to address the KPI Breach. At the discretion of the Contracting Authority, a penalty may be applied directly without a remedy period, however this does not remove the requirement of the Service Provider to complete the corrective and preventative actions and their related "due dates"

If rejected*:*

Step 3b – Contracting Authority and their representatives provides commentary on why proposed actions aren't accepted, and what can be done to revise the response in order for Contracting Authority and their representatives to accept.

Step 3c – Service Provider updates and returns KBR response, addressing Contracting Authority and their representatives' comments.

If Corrective or Preventative Actions are not completed on time.

Step 4a Service Provider receives a penalty notification with the penalty in accordance with points system.

Step 4b – Service Provider updates Corrective and Preventative Action Plan (revised completion dates)

All Corrective and preventative actions are complete.

Step 5 Service Provider returns KBR with proof/confirmation of the same.

If Contracting Authority does not accept proof.

Step 5a - Contracting Authority and their representatives provides commentary on why proof isn't accepted.

Step 5b – Service Provider updates and returns KBR response, addressing Contracting Authority and their representatives' comments

If Contracting Authority accepts proof.

Step 5c - KBR is closed by Contracting Authority and their representatives.

Note: The Service Provider may ask for an extension of time for the completion of the corrective and preventative actions, and the Contracting Authority can accept these alterations at its discretion.

2.13 KBR Process – The Contracting Authority Specific Instructions

2.13.1 The Contracting Authority will provide a Single Point of Contact (SPOC) for KBRs for the contract. The SPOC is typically the contract manager or functional head. All KBR queries, disputes and related activities including rectification should be communicated to the SPOC or to the SPOC's designated representative.

2.13.2 It is important that the Service Provider maintains accurate records of all KAN and KBR correspondence and share this with their contract SPOC at regular intervals.

3 Performance Management Criteria (KPIs, SLAs and Penalties)

3.1 Performance Management Criteria

3.1.1 The purpose of this section is to describe the performance management criteria, KPI's, SLA's and penalties for non-compliance in the delivery of the Service Provider's Contract with the Contracting Authority.

3.1.2 The Service Provider's compliance with the requirements is a pre-requisite to compliance with the overall contract. If the Service Provider is non-compliant with the KPIs/SLA, the Service Provider will be deemed in breach of contract. Severe penalties shall be applied in conjunction with the actions related to breaches of contract.

3.1.3 The KPIs will measure and evaluate the monthly performance of delivering the required services and therefore will be linked to the monthly payment of the service provider. Delivering Poor performance, leads to a deduction from the monthly payment based on the payment table.

3.1.4 Penalties are an additional measure, that will be used and applied whenever a breach of the certain conditions occur, as per the penalties table.

3.1.5 KPIs/SLAs may be reviewed, amended or removed at least annually, based on the Service Provider's performance or at the discretion of the Contracting Authority.

3.1.6 In the event that circumstances arise that are not specifically stated in this section then the Contracting Authority will select the nearest equivalent item and apply those performance standards and/or/penalties/deductions. The decision of the Contracting Authority will be final.

3.1.7 The Service Provider will be audited either at regular intervals, any time or a combination of both. The Service Provider may be issued with KBRs or KANs during these audits and will be allowed sufficient time to respond and rectify findings at the discretion of the Contracting Authority, which may affect payment or reflect on contract performance.

3.2 General Notes

3.2.1 The Service Provider shall provide management information with credible compliance statements and objective metric data in order to prove that the KPIs/SLAs have been met on a monthly basis (unless otherwise stated).

3.2.2 KPI's are highlighted and will be measured, scored and used as a basis for the Service Provider's performance assessment within the scorecard. KPI's should be continually assessed for relevance and importance. This flexibility allows the Contract to be measured accurately against revised objectives and changing business priorities.

3.2.3 Asset availability measures will generally exclude non-system impacting faults (e.g. an elevator door making noise on open and close that is not impeding system function). These faults will be captured by other KPIs.

3.2.4 Other scheduled and unscheduled activities completed by third parties not related to the service provider (e.g., an elevator out of service due to structural works carried out under a capital works program) are excluded from the asset availability measures.

3.2.5 For assets that are deemed to be nearing its end of operational life, such assets may require increased maintenance focus in order to maximize their availability. The asset

condition will be taken into consideration when reviewing the KPI targets in such circumstances.

3.2.6 For assets that are deemed to be obsolete, such assets require a replacement. The asset condition will be taken into consideration when reviewing the KPI targets in such circumstances.

3.2.7 For identified and agreed operational misuse the relevant Remedial Maintenance will be removed from the point of measure. This operational misuse refers to third parties (for – example, handling agents, airline staff and the general public) misusing assets/systems or facilities.

4 Key Performance Indicators

4.1 KPI Information Definitions

4.1.1 Ref No

The Ref No is the id number referred to when identifying the KPI in the KBR.

4.1.2 Name

This is the short form name of the KPI.

4.1.3 Description

Description outlines what behaviours the KPI is attempting to manage.

4.1.4 Application

Application indicates the grouping that is used to apply the KPI.

4.1.5 Measure

Measure describes what the KPI is measuring or indicating should be achieved.

4.1.6 Remedy/Relief

4.1.6.1 Remedy indicates that the KPI needs to be remedied and further breaches associated with the same event will be awarded if the issue is not remedied.

4.1.6.2 Relief indicates that the Contracting Authority can provide relief on the "first instance of the KPI Breach for a specific event.

4.1.7 Points

Points indicates the amount of points that are awarded for this KPI breach

4.1.8 Input Sources

Input sources describes potential means that the potential KPI breach was identified. The list is indicative and is not exhaustive.

4.1.9 Frequency

Frequency describes how often the KPI is applied. Monthly Indicates that it is applied to the "invoice month". Event indicates that it is applied to every instance that the KPI is breached occurs.

4.2 SLA KPIs

Ref. No	Name	KPI Description	Application	Measure	Remedy/Relief	Points			Input sources	Freq.
SL.01	Critical Planned Tasks (Tasks if not performed will have a major impact on the operation of the airport)	The Preventative activities / Tasks approach for each class of assets is agreed with the Contracting Authority and periodically reviewed. Activity / task schedules are generated and reflect the agreed approach and business priorities.	Per Occurrence	All Critical Planned Tasks completed on time. See Section 7	Relief as agreed with Contracting Authority	10			CAFM Reports	Event
SL.02	Important Planned Tasks (Tasks that if not performed can have an impact on operations)	The Preventative activities / Tasks approach for each class of assets is agreed with the Contracting Authority and periodically reviewed. Activity / task schedules are generated and reflect the agreed approach and business priorities		% of Important Planned Tasks completed on time See Section 7	Relief as agreed with Contracting Authority	a b c	85%<%Completed<90% 80%<%Completed <85% %Completed <80	2 4 6	CAFM Reports	Monthly
SL.03	Other Planned Tasks	The Preventative activities / Tasks approach for each class of assets is agreed with the Contracting Authority and periodically reviewed. Activity / task schedules are generated and reflect the agreed approach and business priorities		% of other Planned Tasks completed on time See Section 7	Relief as agreed with Contracting Authority	a b c	85%<%Completed<90% 80%<%Completed <85% %Completed <80	1 2 3	CAFM Reports	Monthly
SL.04	Unplanned Tasks (P1/P2)	All emergency and Urgent works are attended and rectified (made safe for emergency safety works) in the required time.	Per Occurrence	All P1/P2 tasks responded and completed on time See Section 7	Relief as agreed with Contracting Authority	20			CAFM Reports	Event
SL.05	Unplanned Tasks (P3)	All P3 works are attended and rectified in the required time		% P3 tasks responded and completed on time See Section 7	Relief as agreed with Contracting Authority	a b c	85%<%Completed<90% 80%<%Completed <85% %Completed <80	2 4 6	CAFM Reports	Monthly
SL.06	Unplanned Tasks (R1-R4)	All remedial works are attended and rectified in the required time		% R1 to R4 tasks completed on time See Section 7	Relief as agreed with Contracting Authority	a b c	85%<%Completed<90% 80%<%Completed <85% %Completed <80	1 2 3	CAFM Reports	Monthly
Sl.07	Rectification of Tasks	Every task is completed in a timely manner	Per Occurrence	A task should not generate more than 3 Rectification Failure Events. KPI breach occurs for each Rectification Failure above 3 per task. This is in addition to other SLA KPIs. See Section 7	Relief as agreed with Contracting Authority	a b	Unplanned Task Planned Tasks	30 20	CAFM Reports	Event

4.3 Availability KPIs

Ref. No	KRA	KPI Description	Application	Measure	Remedy / Relief	Points			Input sources	Freq
AV.01	Availability of [“FOH/VIP Critical”] Washrooms (>2 Vesitbules)	The Service Provider must maintain a designated availability of critical washrooms within the airport		Availability (see Section 8)	No	a	95%≤%Completed<98%	5	Audits, CAFM Reports, Incidents	Monthly
						b	90%≤%Completed <95%	10		
						c	%Completed <90	15		
AV.02	Availability of [“Other”] Washrooms	The Service Provider must maintain a designated availability of Important washrooms		Availability (see Section 8)	No	a	85%≤%Completed<90%	5	Audits, CAFM Reports, Incidents	Monthly
						b	80%≤%Completed <85%	10		
						c	%Completed <80	15		
AV.03	Availability of Critical Areas	The Service Provider is to ensure the availability of Critical areas.	per Critical areas	Critical Items Availability (see Section 8)	No	a	(Target-Delta) <Availability< Target	5	Audits, CAFM Reports, Incidents	Monthly
						b	(Target-(3×Delta)) <Availability<= (Target-Delta)	10		
						c	Availability< (Target-(3×Delta))	15		
AV.04	Availability of Critical Systems	The Service Provider is to ensure the availability of Critical systems	per Critical system based on function and area served[1]	Critical Items Availability (see Section 8)	No	a	(Target-Delta)<Avail<Target	5	Audits, CAFM Reports, Incidents	Monthly
						b	(Target-(3xDelta)) <Avail <= (Target-delta)	10		
						c	Availability< (Target-(3xDelta))	15		
AV.05	Availability of Category A systems and Assets	The Service Provider is to ensure the availability of Category A systems and Assets	Per Asset group, denoted by Asset Name, identified in Book 4.07 Asset Categorization[2]	Critical Items Availability by (see Section 8)	No	a	(Target-Delta) ≤Avail<Target	5	Audits, CAFM Reports, Incidents	Monthly
						b	(Target-(3xDelta)) <Avail <= (Target-delta)	10		
						c	(Target-(3xDelta))>Avail	15		

4.4 Report and Document KPIs

Ref. No	KRA	KPI Description	Application	Measure	Remedy/Relief	Points	Input sources	Freq
RD.01	Reporting Errors	All information provided to the Contracting Authority is factual and not misleading.	Per occurrence	Occurrence of erroneous or misleading information being reported to the Contracting Authority	Remedy/Relief Period as agreed with Contracting Authority.	30	Audits CAFM Reports Incidents KAN	Event

[1] Example: Elevators are grouped by the area and function they serve. ATC Elevator is considered by itself when calculating the availability. Multiple escalators serving a specific area would be considered as a group and availability is calculated based on the escalators serving that area. The availability calculation for elevators will NOT consider ALL elevators in a single calculation.

[2] Asset Grouping is performed based on System Category/sub-category and criticality as per Book 4.07 Asset Categorization

Ref. No	KRA	KPI Description	Application	Measure	Remedy/Relief	Points	Input sources	Freq
RD.02	Document Deliverables	Documents are provided as per the Document Schedule	Per occurrence	Failure to deliver Document as per Document Deliverable Schedule and subsequent remedy	Remedy Period as agreed with Contracting Authority.	10	KAN CAFM Reports	Event
RD.03	Failure to Report	All requirements to report information correctly to the Contract Authority are fulfilled in a timely manner	Per occurrence	Occurrence of information not being reported to Contracting Authority	Remedy Period as agreed with Contracting Authority.	20	Audits CAFM Reports Incidents KAN	Event

4.1 FM KPIs

Ref. No	KRA	KPI Description	Application	Measure	Remedy / Relief	Points	Input sources	Freq
FM.01	Critical Spare Parts and Consumables Management	The Service Provider must comply with the spare parts and consumables management processes, and Stock holding is not below agreed levels, as per operation and maintenance manual, manufacturer recommendation, and Contracting Authority's timeframe, standards, and procedure.	Per occurrence	Failure to maintain critical stock above minimum levels.	Remedy Period as agreed with Contracting Authority.	10	Audits CAFM Reports Incidents KPI Notification	Event
FM.02	Non-Critical Spare Parts and Consumables Management	Maintain spares at agreed levels	Per occurrence	Failure to maintain Noncritical stock above minimum levels.	Remedy Period as agreed with Contracting Authority.	2	Audits CAFM Reports Incidents KPI Notification	Event
FM.03	Repeated Failures	Recurring instances of breakdowns involving the same asset, with the same breakdown issues and root causes, within a three month period.	Contract	Occurrence of the same failure occurring to the same asset over a three-month period	Relief as agreed with Contracting Authority	5	CAFM Reports Incidents KAN	Event
FM.04	Procedural Compliance	Compliance to procedures related to ISO certification or contractual requirements	Per occurrence	Occurrence of failure to adhere to ISO or contract procedures/processes	Remedy/Relief as agreed with Contracting Authority	2	KAN, CAFM, Reports	Event
FM.05	Communications	The Service Provider must promptly respond to communications from the Contracting Authority based on their severity. Additionally, the on-site management team is required to attend all planned and unplanned/urgent meetings upon request by the Contracting Authority. (KBR) will be issued for each instance of absence or delayed issuance of minutes, or late response to 'urgent' requests.	Per occurrence	Occurrence of failure to respond to requests in appropriate time. Failure to attend meetings Failure to provide minutes of meeting within 2 working days of meeting.	Remedy Period as agreed with Contracting Authority.	1	KAN Reports	Event
FM.06	Customer Complaints/Customer Satisfaction	Customer Complaints are dealt with according to the approved process.	Per occurrence	All Complaints are dealt with correctly	No	1		Event
FM.07	System Redundancy	Redundancy of important systems operated as required (e.g. Generators, UPS, pumps	Per occurrence	In the event of any outage or disruption of utilities, redundancy has not operated correctly with an effect on operations	No	30	Incident Report Audits CAFM KAN	Event

Ref. No	KRA	KPI Description	Application	Measure	Remedy / Relief	Points			Input sources	Freq
FM.08	Washroom Cleanliness	Critical Washrooms are maintained to a high level of cleanliness		Audit score above 95% based on an agreed checklist and scoring system (in line with SQS/ASQ requirements) Scores will include Contracting Authority inspections	No	a b c	90%<%Completed<95% 80%<%Completed <90% %Completed <80	5 10 15	CAFM Audits	Monthly
FM.09	Washroom Cleanliness Inspections	Critical Washrooms are inspected for cleanliness		Each washroom is inspected by supervisor per shift and auditor daily with audit checklist completed and submitted per inspection.	No	a b c	90%<%Completed<95% 80%<%Completed <90% %Completed <80	1 2 3	CAFM Audits	Monthly
FM.10	Public / Front-of-House/VIP (FOH) Cleanliness	Public / Front-of-House (FOH)/VIP areas are maintained to a high level of cleanliness		Audit score above 95% based on an agreed checklist and scoring system (in line with SQS/ASQ requirements. Scores will include Contracting Authority inspections	No	a b c	90%<%Completed<95% 80%<%Completed <90% %Completed <80	5 10 15	CAFM Audits	Monthly
FM.11	Public / Front-of-House (FOH)/VIP Cleanliness Inspections	Public / Front-of-House (FOH)/VIP Areas are inspected for cleanliness		All Terminal areas are inspected by a supervisor per shift and auditor daily with audit checklist completed and submitted per inspection	No	a b c	90%<%Completed<95% 80%<%Completed <90% %Completed <80	1 2 3	CAFM Audits	Monthly
FM.12	Non-public/Back of House (BOH) Areas Cleanliness	Non-public/Back-of-House (BOH) Areas are presented and maintained in a clean condition		Audit score above 90% based on an agreed checklist and scoring system (in line with SQS/ASQ requirements. Scores will include Contracting Authority inspections	No	a b c	90%<%Completed<95% 80%<%Completed <90% %Completed <80	2 3 4		
FM.13	FOH/public areas Waste Collection	No bins shall be overflowing	Contract	Occurrence of a bin overflowing either in public area or on the aerodrome.	No	2			CAFM Audits Incident Report	Event
FM.14	Airside Waste Collection	No bins shall be overflowing	Contract	Occurrence of a bin overflowing on the aerodrome.	No	4			CAFM Audits Incident Report	Event
FM.15	Wildlife Management	Overall trending of wildlife Incidents should be declining or steady (based on plans and mitigations)		The number of incidents over a 3 month period should be declining or steady.	Relief as agreed with Contracting Authority	5			CAFM Audits Incident Report	Monthly
FM.16	Repeated KPIs	Service provider is resolving issues/performance associated with KPIs	Contract	Persistent failure to meet Key Performance Indicators (KPIs) three times or more	Relief as agreed with Contracting Authority	10			CAFM Audits Monthly Report	Event

5 Contract Penalties

ID	Penalty Description	Definition	Application (Failure)	Deduction [SAR]
CPN.01	System Service Availability - Water	Failure in maintaining continues utility provision with zero interruption, including redundancy &equipment's	After SLA temporary fix, applicable every 10mins until restoration	2,000
CPN.02	Unauthorized subletting or subcontracting of part of the contract	Any instance where the Service Provider has engaged vendors or contractors without the written authorization of the Contracting Authority.	Per instance of engagement	10,000
CPN.03	Manpower (level A & B)	Failure to maintain minimum manpower as per the technical proposal on the project period with all required work permits (iqama), licenses, security passes and training.	Per resource per day that resource is unavailable on site	1,000
CPN.04	Manpower (Other)	Failure to maintain minimum manpower as per the technical proposal on the project period with all work permits (iqama), licenses, security passes and training.	Per resource per day that resource is unavailable on site	300
CPN.05	Vehicles and Equipment-Heavy	Failure to have available heavy equipment as per the technical proposal for the project with all required security passes fit for purpose.	Per resource per day that resource is unavailable for the project	3,000
CPN.06	Vehicles Other	Failure to have available other vehicles as per the technical proposal (not defined in CPN.05) on the project with all required security passes and fit for purpose.	Per resource per day that resource is unavailable for the project	1,500
CPN.07	Equipment (other)	Failure to have available equipment as per the technical proposal (not defined in CPN.05 or CPN.06on the project with all required security passes and fit for purpose.	Per resource per day that resource is unavailable for the project	500
CPN.08	Adherence to dress code, PPEs	Staff not wearing the agreed uniform and to present a professional, friendly and dignified appearance to airport users and passengers and instil confidence.	Per employee per day where they are found not to be wearing the approved dress code and PPE.	500
CPN.09	Hand tools	Any technicians do not have a toolbox as per the agreed requirement and fit for purpose.	Per inspection per employee where toolbox is found not to meet the agreed requirement	500
CPN.10	Inadequate or erroneous information	Reporting is inadequate and not covered by KPI 3.1	Per individual event where inadequate information is demonstrated to be provided by the Service Provider to the client	5,000
CPN.11	Breach Laws, Decree, Regulation and Approvals required	Failure to follow, submit, update any of the required Laws, Decree, Regulation, license Equivalent to one event. That include the following, but not limited Trade license valid, Tax compliance, Labour Law / Saudization, Demonstrating continual compliance to KSA Laws, decrees, statutory, regulatory requirements and obligations, Any other professional certifications and decrees as arise post-award. Service execution is strictly compliant with all relevant Laws, Decrees & Regulations issued by KSA Government departments, Statutory Bodies and entities including Cluster2.	Per Case per week	5,000
CPN.12	Health & Safety	Failure to Demonstrate and submit and follow any of the following: HS policy statement, which confirms compliance with ISO 45001 and OSHAS 18001 as well as a comprehensive health and safety plan. Provide proper BCP and shall be implemented effectively when required. Service Provider shall comply with all Safety, Health and Welfare Legislation, whether statutory or deriving from Cluster2 or other bodies having power in relation to safety legislation.	Daily per case until compliance	1,500
CPN.13	Airport Security Compliance	Security incidents or breaches. It is paramount that the Service Provider complies with all airport security systems, procedures and policies, including access control, cards and permits whilst carrying out their duties	Per Case of non-compliance	1,500
CPN.14	QHSE, Energy, Facility Management, and Asset Management Standards Compliance	Failure of the Service Provider's to consistently provide services, Reports, and evidence that meet all relevant quality requirements for the following standards of: Safety Management Systems (ISO 45001) Quality Management Systems (ISO 9001) Environmental management Systems (ISO 14001) Energy Management (ISO 50001) Facilities Management Systems (ISO 41001) Asset Management (ISO 55001)	Weekly per case until comply	1,500

ID	Penalty Description	Definition	Application (Failure)	Deduction [SAR]
CPN.15	Staff training competency & development	Failure to train Staff being appropriately all aspects of the provision of the Services and use of equipment required for the Services, in line with legislation, industry standards, national and international regulations and where applicable. Ensure that the Services Providers are suitably qualified and trained staff.	Applicable when failure to submit training reports, Training completion per person per month.	1,000
CPN.16	ICAO, IATA, and all other aviation regulation	Breach to any of the mandatory regulation, standard, or requirement of ICAO, IATA, GACAR, and all other aviation regulation.	Per Case	5,000
CPN.17	Non-Compliance of Contract Obligations	Failure to comply to any of the contract deliverables and obligation, not mentioned in the KPIs and Penalties table	Daily per case until compliance	2,000
CPN.18	Asset register	Failure to comply and follow Cluster2's requirements to any of the related deliverables for the Asset Register	Per week until compliance	2,000
CPN.19	Assets movements	Moving Assets to another place within the airport area without the permission of Contracting Authority	Per Case	5,000
CPN.20	Regulatory Certifications and Testing	Failure to provide regulatory certifications, licensing and testing as required by Royal Decrees, Government (local and national) regulations, and regulatory bodies.	Per week until requirement completed	5,000
CPN.21	Availability of fuel	Failure to provide the required and necessary quantities of Fuel.	applicable every day until available	5,000
CPN.22	Availability of irrigation water	Failure to provide the required and necessary quantities of irrigation water.	applicable every day until available	2,000
CPN.23	Unauthorized Cannibalization	Cannibalization conducted without Contracting Authority official approval	Per Case	5,000
CPN.24	Power outages	Per occurrence for any unscheduled electrical power outages in Critical areas/building causing disruption to airport operation or flights delays.	applicable every 30 min until restoration	5,000
CPN.25	Air side safety Incidents	Safety incidents involving Service Provider vehicle/ personnel / equipment and tools & parts.	Per Case	2,000

6 Service Level Agreements

6.1 Definition

6.1.1 SLAs are defined as the times required to respond and complete the different types of work expected by the Service Provider. Failure to meet the response and rectification times will result in failure events being generated.

6.1.2 Reactive works have a response and rectification time whereas Planned Maintenance, Scheduled Services, Inspections, and Audits will only have a rectification time.

6.1.3 All works except for routine works are tracked individually by work orders in the CAFM System.

6.2 Reactive, Remedial and Corrective Priority Codes and Response/Resolution Times

6.2.1 Aerodrome Pavements and AGL are considered Category A areas. Please refer to Appendix F for categorization of buildings and Asset Categories/Work Types.

6.2.2 **All services and categories (Emergency and Critical Works)**

Priority	Scenario	Response	Resolution
P1	Tasks with Actual or potential threat to life and safety and/or /total interruption of Airport operations, and/or major damage to facilities	5 minutes	30 minutes
P2	Tasks with Actual or potential inconvenience/ partial interruption to Airport operations and or to the Employer or Occupiers, or minor damage to facilities	15 minutes	2 hours

6.2.3 **All Services (Deferred Works)**

Priority	Scenario	Response	Resolution
R4	Deferred Works	2 hours	14 days

6.2.4 **Hard Services**

6.2.4.1 Category A Buildings, Systems, and Assets

Priority	Scenario	Response	Resolution
$P3_A$	Tasks with Actual or potential minor inconvenience/delays to Airport operations and or to the Employer or Occupiers	30 minutes	6 hours

6.2.4.2 Category B Buildings, Systems, or Assets

Priority		Scenario	Response	Resolution
$P3_B$		Tasks/situations with Actual or potential minor inconvenience/delays to Airport operations and or to the Employer or Occupiers	30 minutes	12 hours

6.2.4.3 Category C Buildings, Systems or Assets

Priority		Scenario	Response	Resolution
$P3_C$		Tasks/situations with Actual or potential minor inconvenience/delays to Airport operations and/or to the Employer or Occupiers.	1 hours	24 hours

6.2.4.4 Remedial and Corrective Works

Priority		Scenario	Response	Resolution
$R1_h$		Major tasks as part of maintenance with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	24 hours
$R2_h$		Medium tasks as part of maintenance with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	2 days
$R3_h$		Minor tasks as part of maintenance with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	7 days

6.2.5 External Areas (including Network Infrastructure)

6.2.5.1 All areas

Priority		Scenario	Response	Resolution
$P3_E$		Tasks/situations with actual or potential minor inconvenience/delays to Airport operations and or to the Employer or Occupiers	30 minutes	12 hours

6.2.5.2 Remedial and Corrective Works

Priority		Scenario	Response	Resolution
$R1_E$		Major routine tasks as part of maintenance with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	24 hours
$R2_E$		Medium routine tasks as part of maintenance with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	2 days
$R3_E$		Minor routine tasks as part of maintenance with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	7 days

6.2.6 Soft Services excluding Landscape and Nursery

6.2.6.1 FOH/VIP Areas

Priority		Scenario	Response	Resolution
$P3_F$		Tasks/situations with actual or potential minor inconvenience/delays to Airport operations and or to the Employer or Occupiers	30 minutes	4 hours

6.2.6.2 Other

Priority		Scenario	Response	Resolution
P3S		Tasks/situations with actual or potential minor inconvenience/delays to Airport operations and or to the Employer or Occupiers	30 minutes	12 hours

6.2.6.3 Remedial and Corrective Tasks

Priority		Scenario	Response	Resolution
R1S		Major routine tasks as part of cleaning with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	24 hours
R2S		Medium routine tasks as part of cleaning with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	36 hours
R3S		Minor routine tasks as part of cleaning with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	2 days

6.2.7 Landscape and Nursery

Priority		Scenario	Response	Resolution
R1L		Major routine tasks as part of landscape services with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	2 days
R2L		Medium routine tasks as part of landscape services with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	4 days
R3L		Minor routine tasks as part of landscape services with no impact on Airport operations and or to the Employer Staff or Occupiers	2 hours	7 days

6.3 Planned Maintenance, Scheduled Service, Inspections and Audits

6.3.1 Planned Maintenance, Scheduled Service, Inspections, and audits will be categorised as critical, important or other. This does not affect the resolution time however it affects which KPIs are relevant to it.

6.3.2 The rectification times for time-based maintenance or activity:

Designation[3]	Frequency	Resolution
PM1W	Weekly	1 day
PM1M	Monthly	7 days
PM3M	3 Monthly	14 days
PM6M	Six Monthly	14 days
PM12M	Yearly and more than yearly	21 days

[3] Designations may change

6.3.3 Where additional designations are required, they will be given resolution times based on the criteria used for parameter based planned maintenance.

6.3.4 Resolution time is based on the “anticipated” frequency between planned maintenance and is in line with the time-based maintenance. Depending on actual approximate frequencies, the priority for the planned maintenance can be adjusted as part of the review and improvement process.

Designation[1]	Anticipated Frequency	Resolution
PP1	Less than or equal to 2 weeks	1 day
PP2	Greater than 2 weeks and less than or equal to 6 weeks	7 days
PP3	Greater than 6 weeks and less than or equal to 9 Months	14 days

7 SLA Application

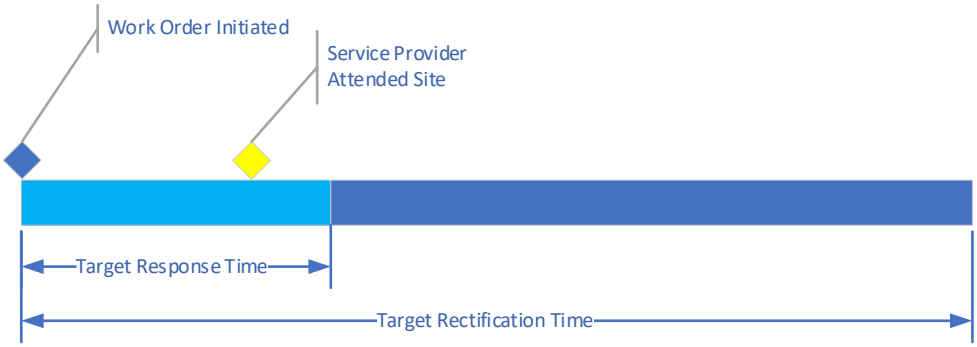
7.1 Work Order Overview

7.1.1 There are fundamentally two general types of works directly related to maintenance. There are planned works and unplanned works. SLAs will be applied Planned Works relate to, but are not limited to, planned maintenance, scheduled services, predictive maintenance, inspections, and planned audits, any works that are repeated based on a set parameter (e.g. time). Unplanned Work relate to generally raised issues (reactive works), issues raised via planned maintenance (corrective works), additional works, and unplanned activities where the work is a one off based on an external initiation (e.g. request through helpdesk). These works will be managed and monitored via the CMMS work order system.

7.1.2 SLAs time periods are based on a 24/7 clock and are not affected by “Airport” operating hours.

7.1.3 Where work orders are related (parent/children work orders), the parent work order only shall be used for calculating SLA failure events, noting that the parent work order cannot be completed until all children work orders are completed.

7.1.4 Work orders will generally have an initiation point, a time to respond, and a time to rectify. The figure below shows the general timeline of a compliant work order, from initiation to completion.



7.2 Response SLA

Response SLA only applies to Unplanned Works

7.2.1 Required Response

7.2.1.1 The required response time for a work order is defined based on the categorization and the prioritization of the work. It is measured from the receipt of the issue to the helpdesk or Service Provider agent (whichever is the earliest).

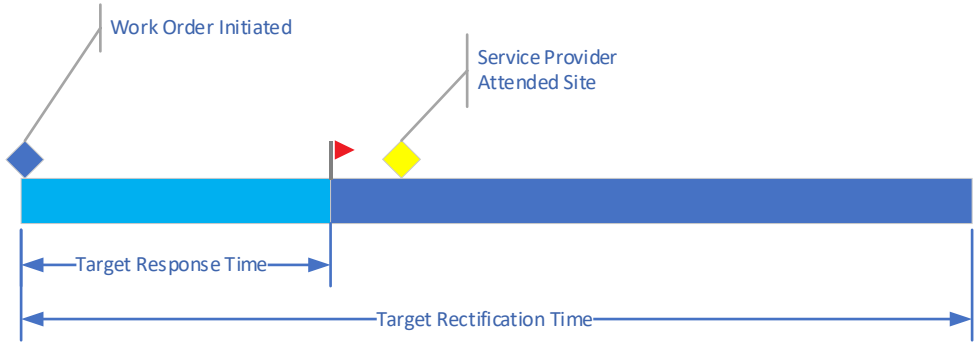
7.2.1.2 Adjustment of the required response is possible where a delay is caused in notifying the Service Provider, or in the Service Provider gaining access.

7.2.2 Response Time Failure Event

7.2.2.1 A response time failure event is generated when the responded time exceeds the required response time for the work order.

7.2.2.2 Only one response time failure event can be generated per work order.

7.2.2.3 A Failure Event will be applied to the relevant KPI for the period/month in which it occurs.



7.2.2.4 The Contracting Authority reserves the right to provide relief on this failure event if the Service Provider can demonstrate that the failure was caused by external factors.

7.3 Rectification SLA

7.3.1 Required Rectification

The required rectification time for a work order is defined based on the categorization and the prioritization of the work. It is measured from the receipt of the issue to the helpdesk or Service Provider agent (whichever is the earliest).

7.3.2 Amendment of Rectification Time

7.3.2.1 Adjustment of the required rectification time is possible where a delay is caused by factors outside the control of the Service Provider.

7.3.2.2 An Extension of Time process will be used to request the extension of time.

7.3.3 Rectification Time Failure Event

7.3.3.1 A Rectification Time Failure Event is generated when the Service Provider fails to complete the work order within the current Target Rectification Time. Once the failure event has been created, a new Target Rectification Time is applied based on priority from the time of the failure.

7.3.3.2 A single work order can generate multiple Failure Events.

1 A Failure Event will be applied to the relevant KPI for the period/month in which it occurs.

7.4 KPI Calculation

7.4.1 Priority P1 and P2 Work Orders

7.4.1.1 KPI is based on Response and Rectification Failure Events

7.4.1.2 KPI is based on each Failure event (response or rectification) that occurs in the reporting period.

7.4.2 Priority P3 Work Orders

7.4.2.1 KPI is based on Response and Rectification Failure Events

7.4.2.2 1-(Number of Important Planned Maintenance Work Orders Failure Events/Number of Important Planned Work Orders with a required completion date within the Reporting Period)

KPI is calculated on a per Airport basis. Points applied are based on the % bracket that this calculation falls under

Completion Calculation	Points
85%< Completion <=90%	5
80%< Completion <=85%	10
Completion <80%	15

7.4.3 Priority R1-R4 Work Orders

7.4.3.1 KPI is based on Response and Rectification Failure Events

7.4.3.2 1-(Number of Important Planned Maintenance Work Orders Failure Events/Number of Important Planned Work Orders with a required completion date within the Reporting Period)

7.4.3.3 KPI is calculated on a per Airport basis. Points applied are based on the % bracket that this calculation falls under

Completion Calculation	Points
85%< Completion <=90%	2
80%< Completion <=85%	4
Completion <80%	8

7.4.4 Critical Planned Maintenance Work Orders

7.4.4.1 KPI is based on Rectification Failure Events

7.4.4.2 KPI is based on each Failure event that occurs in the reporting period.

7.4.5 Important Planned Maintenance Work Orders

7.4.5.1 KPI is based on Rectification Failure Events

7.4.5.2 1-(Number of Important Planned Maintenance Work Orders Failure Events/Number of Important Planned Work Orders with a required completion date within the Reporting Period)

7.4.5.3 KPI is calculated on a per Airport /Asset Category basis. Points applied are based on the % bracket that this calculation falls under

Completion Calculation	Points
85%< Completion <=90%	4
80%< Completion <=85%	6
Completion <80%	8

7.4.6 Other Planned Work Orders

7.4.6.1 KPI is based on Rectification Failure Events

7.4.6.2 1-(Number of Important Planned Maintenance Work Orders Failure Events/Number of Important Planned Work Orders with a required completion date within the Reporting Period)

7.4.6.3 KPI is calculated on a per Airport basis/Asset Category basis. Points applied are based on the % bracket that this calculation falls under

Calculation	Points
85%<Completion<=90%	2
80%< Completion <=85%	3
Completion<80%	4

7.4.7 Failure to Rectify in a timely Manner

If a task, planned or unplanned generates more than 3 rectification failure events then for each failure event above the 3 will result in a breach of KPI SLA.07 and a penalty can be applied.

8 Availability

Availability is a calculated percentage that an area/asset/system/facility is available to be utilized for its operatinal purpose or requirement. Availability does not consider planned maintenance related events or events deemed excluded by the Contracting Authority.

8.1 General

This availability calculation is for major systems where the system is performing as required or not performing as required.

$$\boldsymbol{Availability} = 1 - \left(\frac{\sum a}{(b - \sum c)}\right)$$

where

- a *is the event times (event is a contiguous time where system/asset/functional area/facility is unavailable)*
- b *is the total amount of time the system is required to be available.*
- c *is time for planned maintenance work order that has affected operational availability*

8.2 Washroom Availability (AV.01 and AV.02)

Washroom availability is affected by several factors: vestibule availability (door, lock, toilet and accessories), handwashing facilities availability (basin), and drying facilities (paper towels dispensers and/or air dryers).

$$\boldsymbol{Availability} = 1 - \left(\frac{\sum_x (a_x \times min(max(h_x, d_x, v_x, \{u_x \times 0.75\}), 1) \times w_x)}{\sum_x (b_x \times w_x)}\right)$$

Where

x is the washroom.

a_x *is the unavailable "event" time for element(s) of the washroom* x*. (event is a contiguous time where elements are unavailable within the Washroom. Unavailable "event" does not include planned maintenance.*

h_x *is the proportion of hand washing elements not working in washroom* x*.*

v_x *is the proportion of vestibule elements not working in washroom* x*.*

d_x*is the proportion of hand drying elements not working in washroom* x*.*

u_x *is the proportion of urinals and vestibule elements not working in washroom* x*.*

b_x *is the total amount of time washroom* x *is required to be available.*

w_x *is the weighting (criticality) for washroom* x *(this is to be defined for each washroom in the category being assessed).*

8.3 Critical Area Availability (AV.03)

8.3.1.1 Area Availability relates to critical functional areas within the terminal and their availability. Examples of this are: gates, security screening areas, check ins, baggage reclaims.

$$\boldsymbol{Availability} = 1 - \left(\frac{\sum(a \times i)}{(b \times t)}\right)$$

where

a *is the unavailable "event" time (event is a contiguous time where areas are unavailable*

i *is the area/number of system components associated with the unavailability event.*

b *is the total amount of area/system components required to be available.*

t *is the total amount of time the area is to be available for the reporting period*

8.3.1.2 Target Availability is 99.9%

8.3.1.3 Delta is 0.5%

8.3.1.4 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4	15

8.3.2 Check-in Area

Check in Area is defined by the number of check-in counters. Unavailable events occur when any check-in counter are not available for use.

8.3.3 Gates Area

Gates area is defined as the number of gates available for specific use (International or domestic). Unavailable events occur when a gate is not available for use.

8.3.4 Screening Area

Screening Area is defined as the number of processing lines in the screening area. Unavaliable events occur when a processing line cannot be used.

8.3.5 Passport Control Area

Passport Control Area is defined as the number of passport processing lines. Unavaliable events occur when a processing line cannot be used.

8.3.6 Stands Area

The Stands Area is defined as the number of stands at the airport. Unavaliable events occur when a stand cannot be used.

Runway

Unavailable events occur when the runway is not available for use.

Taxiway

Unavailable events occur when the Taxiway is not available for use

Apron

Unavailable events occur when any Apron is not available for use.

8.4 Critical Systems and Category A Asset Groups Availability

8.4.1 Definition of Availability

Critical Systems Availability relates to the availability critical systems and their availability.

$$\boldsymbol{Availability} = 1 - \left(\frac{\sum(a \times i)}{(b \times t)}\right)$$

where

a *is the unavailable "event" time (event is a contiguous time where areas are unavailable in the reporting period.*

i *is the area affected or the number of components associated with the unavailability event.*

b *is the total amount of area/number of system components required to be available for the reporting period..*

t *is the total amount of time the area number of system components are to be available for the reporting period.*

8.4.2 Definition of Ranges and Points for availabilty

The ranges of acceptable availability and subsequent KPI ranges are defined by

$\theta - Minimum\ Target\ Availability$ [%]

$\delta - Availability\ decrement$ [%]

Availability above θ results in acceptable availability

The range of availability and the application of points is divided into 3: a, b, c.

$Range\ a: \theta > availability \geq (\theta - \delta)$ [5 points]

$Range\ b: (\theta - \delta) > availability \geq (\theta - (3 \times \delta))$ [10 points]

$Range\ c: \big(\theta - (3 \times \delta)\big) > availability$ [15 points]

8.4.3 Public Area Terminal Air Conditioning (HVAC) (AV.04)

8.4.3.1 Measurement of availability is based on area affected.

8.4.3.2 Parameters - θ: 99.5%, δ: 1%,

8.4.3.3 Unavailability events occur when area conditions fall outside the system design requirements.

8.4.3.4 Associated Points.

	Availability Range	Points
a	98.5%<Availability<=99.5%	5
b	96.5%<Availability<=98.5%	10
c	Availability<96.5%	15

8.4.4 Flight Information Display System (FIDS) (AV.04)

8.4.4.1 Measurement of availability is based on the number of components affected.

8.4.4.2 Parameters - θ: 99%, δ: 2%,

8.4.4.3 Unavailability events occurs when a FID is not working or is not updating.

8.4.4.4 Associated Points.

	Availability Range	Points
a	97%<Availability<=99%	5
b	93%<Availability<=97%	10
c	Availability<93%	15

8.4.5 Close Circuit Television System (CCTV) (AV.04)

8.4.5.1 Measurement of availability is based on the number of components affected.

8.4.5.2 Parameters - θ: 98%, δ: 2%,

8.4.5.3 Unavailability events occurs when a camera image cannot be viewed and or recorded.

8.4.5.4 Associated Points.

	Availability Range	Points
a	96%<Availability<=98%	5
b	92%<Availability<=96%	10
c	Availability<92%	15

8.4.6 Baggage Conveyor Systems (AV.04)

8.4.6.1 Measurement of availability is based on the number of components affected (directly and indirectly).

8.4.6.2 Parameters - θ: 99.9%, δ: 0.5%,

8.4.6.3 Target Availability is 99.9%, Delta is 0.5%

8.4.6.4 Unavailability events occurs when any part of a system becomes unavailable.

8.4.6.5 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4	15

8.4.7 Visual Aids, Airfield Lighting System (including High Mast Lights) (AV.04)

8.4.7.1 Measurement of availability is based on components affected (directly and indirectly).

8.4.7.2 Parameters - θ: 99.9%, δ: 0.5%,

8.4.7.3 Unavailability events occurs when any part of a system becomes unavailable/non-compliant (not performing as per requirement). All elements affected by the non-compliance must be accounted for in the calculation (direct and indirect). If unavailability leads to portions of

8.4.7.4 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4	15

8.4.8 Runway Approach Lighting system (AV.04)

8.4.8.1 Measurement of availability is based on the number of components affected (directly and indirectly).

8.4.8.2 Parameters - θ: 99.9%, δ: 0.5%,

8.4.8.3 Unavailability events occurs when any part of a system becomes unavailable (not performing as per requirement).

8.4.8.4 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4%	15

8.4.9 Radios & Communications Equipment and Voice Recording System (AV.04)

8.4.9.1 Measurement of availability is based on the number of components affected (directly and indirectly).

8.4.9.2 Parameters - θ: 99%, δ:2%,

8.4.9.3 Unavailability event occurs when any part of a system becomes unavailable (not performing as per requirement).

8.4.9.4 Associated Points.

	Availability Range	Points
a	97%<Availability<=99%	5
b	93%<Availability<=97%	10
c	Availability<93	15

8.4.10 Terminal Fire Alarm/Protection System (AV.04)

8.4.10.1 Measurement of availability is based on the area affected.

8.4.10.2 Parameters - θ: 99.9%, δ: 0.5%,

8.4.10.3 Unavailability event occurs when an area is no longer covered by the fire alarm or protection system.

8.4.10.4 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4%	15

8.4.11 Escalators (AV.04)

8.4.11.1 Measurement of availability is based on the number of escalators in a group serving a functional area.

8.4.11.2 Parameters - θ: 99%, δ:2%,

8.4.11.3 Unavailability event occurs when an escalator is not working.

8.4.11.4 Associated Points.

	Availability Range	Points
a	97%<Availability<=99%	5
b	93%<Availability<=97%	10
c	Availability<93%	15

8.4.12 Terminal and ATC Elevators (AV.04)

8.4.12.1 Measurement of availability is based on the number of elevators serving a functional area.

8.4.12.2 Parameters - θ: 99.9%, δ: 0.5%,

8.4.12.3 Unavailability event occurs when an elevator is not working or available

8.4.12.4 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4%	15

8.4.1 Fire Hydrant system (AV.04)

8.4.1.1 Measurement of availability is based on the number of hydrants available affected.

8.4.1.2 Parameters - θ: 99.9%, δ: 0.5%,

8.4.1.3 Unavailability event occurs when an area is no longer covered by the Fire Hydrant system.

8.4.1.4 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4%	15

8.4.2 Passenger Boarding Bridges

8.4.2.1 Measurement of availability is based on the number of passenger boarding bridges.

8.4.2.2 Parameters - θ: 99.9%, δ: 0.5%.

8.4.2.3 Unavailability event occurs when an elevator is not working or available.

8.4.2.4 Associated Points.

	Availability Range	Points
a	99.4%<Availability<=99.9%	5
b	98.4%<Availability<=99.4%	10
c	Availability<98.4%	15

8.4.3 Category A Assets (AV.05)

8.4.3.1 Measurement of availability is based on the number of assets within the System Category/subcategory as per Book 4.07 Asset Criticality.

8.4.3.2 Parameters - θ: 99%, δ:2%,

8.4.3.3 Unavailability events occurs when assets are not operating to design criteria.

8.4.3.4 Associated Points.

	Availability Range	Points
a	97%<Availability<=99%	5
b	93%<Availability<=97%	10
c	Availability<93	15