AES

AIRPORT ENGINEERING SERVICES

AIRPORT CONSULTING, PLANNING,
DESIGN & ENGINEERING FIRM

2024 COMPANY PROFILE

About Us

Founded over 30 years ago, AES provides Expert Consultancy Services to clients across the globe. As a consultant which provides holistic services including experts in Design, Engineering, Project Management, Program Management, Construction Management, Facilities Management, ORAT and Operational Services, we work to help our clients navigate the challenges that come with new development or with upgrading aging infrastructure, expanding capacity and improving public transport connectivity - all through the lens of sustainability and resilience.

Employing globally recognized experts globally, we offer quality and holistic services including, but not limited to:

AES is dedicated to conducting business with integrity while delivering excellence to our clients around the world through compliance with national and international Standards in Design and Operation.

Global Foot Print

Atlanta, USA
USA HQ

Madrid, Spain
Specialist + Aeronatural Exports Office

Jeddah, KSA
Satellite Office

Amman, Jordan
Projects Controls and Contracts Office

Lebanon
Architechtural + Design Office

Riyadh, KSA
KSA HQ

Tunisia
Africa Branch

Dubai, UAE
Global Hub

OUR SERVICES & EXPERTISE

Engineering & Design

AES brings decades of experience in airport engineering, design, planning and consulting under one roof. AES employs experts in the field of airport engineering and offers a full range of related services covering all phases of planning, design, engineering, construction supervision and maintenance. Our services are wholistic to ensure airside facilities integrate with terminals, aprons and hangars.

AES airport engineering clients include contractors (EPC and Design-Build), Airport operators, city and governmental aviation administrations, airlines, air terminal companies, ground handlers, public works departments and naval stations. Our engineers experience spans the full range from large international to smaller regional and private airports.

AES is your single source for complete, professional and coordinated airfield engineering and design. Our services are tailored to the needs of our clients. Full design services for the construction of new, or the rehabilitation of existing runways, taxiways, aprons, helipads, landside infrastructure and more, including the services shown at right.

Runways, Taxiways and Aprons Engineering and Design Services inclusive of all Structural, Geometric, Special Systems, Signage, Nav-aids, AGL, Electrical, Communication, Drainage and other components

Terminal Buildings, Hangars, Catering Facilities, Administrational Buildings and other Support Facilities Engineering and Design Services inclusive of all Architectural, Structural, MEP, Fire Life Safety, Security, AV/ ELC/ICT, Special Systems including BHS and MHS, Lighting, Acoustics, Façade, Civil, Infrastructure, Landscape, Vertical circulation, Automated people movers, Sustainability, Wayfinding and Interior Design components

Airside and Landside Infrastructure Engineering and Design Services including Terminal curbsides and forecourts, Hydrant fuel mains, Fuel Farms, Apron Services, Airbridges Parking Structures, Roadway Networks, Public transport interchanges Surrounding airport-city

Along with other holistic Architectural and Engineering Design Services Security Planning, Sustainability and Environmental Design, Smart Systems, Cost Estimation, Advanced design services, Flow Simulation and Performance Assessment

Terminal Planning & Design

At AES, our aim is to provide our clients with solutions for optimizing existing terminals along with planning and designing new terminals to meet the current and projected capacity.

Our services range from terminal planning, capacity and functional analysis including evaluation of existing facilities, to developing terminal layouts and operational concepts for efficient use of resources within new and existing terminals. This includes creating simulation models and evaluating potential logistical flow issues including the interface between landside and airside. From check-in counters, security controls, retail areas and baggage claims, our design methods aim to enhance the function of terminal buildings for long-term utilization, steady revenue generation and preventing unnecessary investment costs.

Analyzing and evaluating airport operations is a key element in terminal design and our experts are able to detect unused reserves and develop terminal layouts for a more efficient usage of resources.

AES offers a variety of terminal planning and design services including:

- Terminal Facility Planning
- Capacity Analysis and Studies
- Service Quality Evaluation
- Conceptual Layouts and Evaluation
- Full Architectural Design
- Airport Building Optimization
- Operational Strategy Development
- Flow and Passenger Movement Simulations
- Design of Special Systems For Full Integration Into The Terminal

Cargo Facilities, Hangars, Logistic Centers, Fuel Farms and Other Key Airport Facilities

As part of the Holistic Services we provide our respected clients, we have in-house team of specialized Engineers, Architects, Planners, Interior Designers, Environmental Experts, LEED and Sustainability Experts and other Specialists which has enabled us to complete full and complete complex Designs Solutions under one roof.

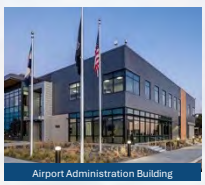
Our services are extended to Key Airport Facilities, including, but not limited to:

- Aircraft Hangars including MRO Hangars
- Cargo Facilities
- Logistics Centers and Facilities
- Fuel Farms and underground Fuel Chambers
- Airfield Substations
- Security Facilities
- Crisis Management Centers
- Data Centers
- Load Centers
- Operations and Control Rooms
- Administrative Buildings

Throughout the years, we have grown our reputation through decades of experience and a long and successful track-record of completed projects locally within the US and globally.

Our approach to each project is through the lens of sustainability, holistic solutions and services and most efficient and fast-paced approach.

Within Key Facilities, we offer complete Planning, Business Case Analysis, Strategic Advisory, Master planning, Environmental, Smart Solutions, LEED and Sustainability Consultancy Services in addition to complete Engineering and Design packages inclusive of all disciplines; Architectural, Structural, MEP, Fire Life Safety, Security, AV/ELC/ICT, Special Systems including BHS and MHS, Lighting, Acoustics, Façade, Civil, Infrastructure, Landscape, Vertical circulation, Automated people movers, Sustainability, Wayfinding and Interior Design components


Airport Administration Building


Logistics Center

Airport Master Planning

While the Aviation industry is booming, airports across the globe are competing for a share in this highly profitable industry. Demand for larger, passenger friendly airports with shorter queues is rapidly increasing. Airlines are slowly moving away from larger capacity aircraft into smaller capacity which is proving to be more profitable and accepted by the public. Although gate occupancy times decrease with smaller fleets, the demand for an efficient airfield, reduced runway occupancy times and shorter queues in processors are on the rise. That means airports must be ready to deal with this surge in demand.

Our airport master planning expertise can help airports understand these future requirements along with understanding their own needs and on this basis, develop a vision for the future crafted into a master plan.

AES Master Planning Services Include:

- Terminal Process
- Terminal Capacity Analysis and Sizing
- Airport Property Development
- Runway Safety Area Studies
- Traffic Analyses and Forecasts
- Runway Optimization Studies
- Financial Planning
- Feasibility Studies
- Airport Layout Plans
- Land Use Planning and Analysis

Airport Special Systems

At AES, we welcome the challenges airports face in constant changes and demands for new or upgraded ICT systems, including systems for resources management, flow management, process and control facilities for passengers, baggage handling systems and more. Our experts help design and supervise the implementation of new systems with proven technologies.

Our experts have guided many airports through close collaboration and coordination, while understanding their unique operational processes, to install better systems which are reliable, efficient and cost-effective that led to an optimized operation and improved quality of service.

Our Airport Special Systems services include representing the client in coordination, procurement and commissioning for special systems as well as project development, design / engineering, feasibility and gap analysis, cost and budget studies and asset management for special systems which include:

- Electronic Passenger Guidance System
- Car Park Guidance System
- Security and Access Control Systems (SACS)
- Security Access Detection
- Fire Alarm System (FAS)
- Integrated Intelligent Building Solution (12BS)
- BHS Security and Customs Screening Equipment
- Explosive Detection System Standard 1
- Explosive Detection System Standard 3
- Conventional X-Ray
- RFID suspect baggage tracking system
- Video Surveillance System (VSS)
- Asset Tracking System
- Gate Allocation System (GAS)
- Baggage Reconciliation System
- Computing and Storage System (workstations)
- Counter Information Display System (CIDS)
- Audio Visual Systems (AVS)
- IPTV System
- Distributed Antenna System (TETRA)
- Passport Control Display System (PCDS)
- Computerized Facility Maintenance Management System (CFMMS)
- Parking Revenue Control System
- Trolley Management System
- Visual Paging System (VPS)
- Ramp Information Display System (RIDS)
- Master Clock System (MCS)
- Resource Management System
- Common Use Self-Service (CUSS) - part of Common Use Systems
- Communication Backbone Cabling
- Communication Horizontal Cabling
- Voice Communication (VOIP)
- Public Addres Mass Notification System (PAS)
- Data Netvvork System (DNS)
- Distributed Antenna System (GSM)
- Wireless Local Area Network (WLAN)
- Airport Operation Database (AODB)
- Information Broker (1B)
- Baggage Belt Allocation System (BAS)
- Check-in Allocation System (CAS)
- Departure Control System (LDCS)
- Local Boarding Application (LBA) Local
- Information Kiosks
- Common Use Passenger Processing System (CUPPS)

Aerodrome Certification

Based on ICAO standards and other leading international references, AES helps its clients develop the systems and procedures required to meet all international and national norms and regulations for aerodrome certification. In addition to identifying the areas that require particular attention, given its vast experience in this domain, AES also offers support for the ongoing implementation of operating procedures to respect the conditions of the certification documents.

AES produces approval-ready documents acceptable to the standards of local and international civil aviation authorities. With deep knowledge and expertise in this highly specialized area, AES is committed to developing for its clients comprehensive and complete sets of regulatory documents in a timely and cost- appropriate fashion.

Comprehensive Certification Services

ADM
Aerodrome Manual

SMS
Safety Management System

ERP
Emergency Response Plan

SOP
All Related Standards Operating Procedures

Project Management Services
(PMC and PM/CM)

As a holistic Airport Services Provider and Consultant, AES specializes in Project Management and Construction Management Services.

Our expertise in this field include, but are not limited to the following areas:

Project Administration and Management

Health And Safety

Design Management
- Stakeholder Management
- Project Schedule Control
- Tender management

Construction Supervision
Quality Management and Quality Systems

Payment, Budget Control And Change Management
- Document Control
- Logistics Planning
- Testing and Commissioning
- ORAT
- Project Closeout

AES is your single source for complete, professional and coordinated PM/CM or PMC Services. Through Growth, Innovation and Trust, we provide high quality services which best suits the needs of our client, progressively raising the bar of achievements and continuously expanding our footprint within the industry

Our Project Management and Construction Management Services cover all 3 stages of a project / program:

01 Planning and Pre-contract Award Stage

- Developing an overall Project Management Plan, Execution Plan and Program Master Schedule
- Completing the Pre-qualification of the vendors and contractors considered for each package
- Shortlisting the vendors and contractors for each package based on the pre- qualification results and as approved by the client
- Issuing, in coordination with our Client's procurement department, the Tender Documents to each respective Vendor / Contractor
- Answering Bidder questions and organizing site visits
- Reviewing Contractor Bids
- Conducting Contractor bid review workshops and negotiation.
- Providing a review report for each package which includes a recommendation for which contractor / vendor to award
- Supporting our Client with the Appointment of Contractor(s)

02 Post Award Stage

- with Contractor(s) on mobilization, schedule and all post award required documentation which they must prepare and provide for each project
- Establishing and chairing all Project related meetings including Progress, Construction, Project Controls (Schedule and cost), Engineering and Safety
- Review of Contractor Designs
- Site supervision of Contractor works
- Material submittal review
- Day to day correspondences including contractual issues
- Change Order management
- Submitting Weekly and Monthly progress reports
- Testing and commissioning management services
- Project Close Out, Asset certification and handover of completed works to operators (inclusive of required procedures, plans and management)

03 Project Closeout

- Preparing & addressing the schedule of defects / punch lists along with follow-up with contractor(s) on their execution of each
- Collection and integration of various O&M manuals, commissioning & test certificates
- Completion of ORAT Services (if required)
- Collect, review and compile As-built drawings and various other documents for each project
- Reconciliation and Certification of Final bills of contractors, suppliers, vendors and consultants
- Preparation of project close-out report
- Preliminary / Final Handover

Project Management Office (PMO) Services

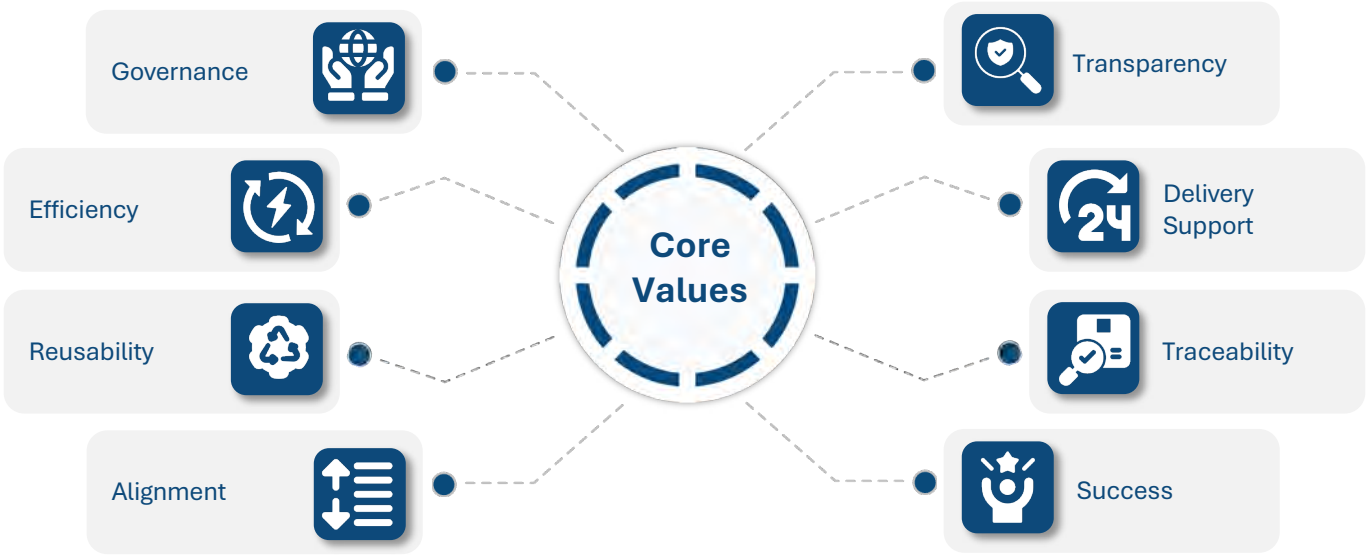
- Added Value
- Consistent
- Efficient
- Aligned PMO

Whether supportive, controlling, or directive, AES PMO services provide the backbone of successful project management across your organization. Equipped with decades of experience, a successful track record, and a vast team of experts in different practices, AES PMO services cover the different stages of the program, from initiation, planning, execution, and continuous improvement. AES PMO can significantly enhance the efficiency and success of any organization including ensuring, under proper governance, that there are proper standards, documentation processes and procedures, communication internally and externally with stakeholders, careful planning, execution, and closeout of projects while ensuring compliance with safety and regulatory standards.

AES PMO acts as a link between the organization's operational and projects department, the organization leadership, the existing Project Management Consultant Team, and when required, the existing National or global holding PMO team.

AES PMO services form a centralized approach to projects that helps ensure clarity, consistency, accurate results, decreased costs, resource optimization, objectives alignment, information management, and training. AES's track record of PMO showed that projects were delivered on time with the required quality, budget, and up to the desired high standards.

Within its PMO projects, AES has successfully managed to set, maintain, and enforce the practices, policies, and standards for structuring and executing projects within an organization.



Functions

- Strategic Planning & Studies
- Contracts Management
- Drawings Management System
- Projects Performance Reports
- Control & Monitoring
- Governance Structure
- HSE Management
- Developing Governance
- ORAT
- Engineering / Technical Advisory
- Dashboards and Templates
- Workflows & Approval Structures
- Documents Management
- Resource Planning
- Financial Management
- Correspondences
- Procedures & Policies
- Communication Plans
- Risk Management
- Tools & Technology Management
- KPIs Identification and Monitoring
- Compliance Management
- Project Estimation
- Project Planning
- Project Reporting
- Procurement Management
- Testing and Commissioning
- Claims Management
- Stakeholder Analysis & Management
- Construction Management
- Portfolio Management
- Cost Management
- Quality Management
- Change Management
- Training & Development
- Continuous Improvement

Project Management Office (PMO) Services

- Practices Creation
- Knowledge Transfer

AES PMO is essential for enterprises seeking to centralize and coordinate the management of projects throughout their life cycles. AES PMO services include a structured holistic approach to achieving its functions. AES Establishes primarily within the organization several departments working in harmony to achieve the PMO objectives. These departments include Strategic Planning and Studies, Engineering Management, Project Contracts Management, Project Controls, Excellence Department, Document Management, and Construction Management Department.

AES PMO team acts as a strategic enabler to ensure that projects are carried out efficiently, effectively, and in alignment with your organization's goals and industry standards. AES PMO team's main objectives include Strategic Alignment, Administrative Support, Resource Optimization, Best Practices, Common Corporate Culture, Risk Mitigation and Management, compliance (regulatory, safety, and security), Stakeholder Management, Cost Control, Budget Adherence, and continuous improvement.

AES PMO ensures that project teams are equipped with the necessary parameters for successful outcomes. It facilitates communication between project teams and business leaders, ensuring alignment and collaboration. As part of the PMO services, AES creates customized and tailored manuals aligned with the organization's objectives and governance. These manuals cover the different sides of the program from contract administration to the operations and maintenance manual. AES furthermore provides training and guidance for the PMO staff and organization's members to allow them to carry the PMO function forward for years to come.

AES Set of Customized Manuals for PMO

- Program Execution
- Learning and Development
- Program Management
- Digital Transformation Management
- Quality Management
- Commercial Management
- Risk Management
- Procurement Management
- Document & Information Management
- Contract Administration
- HSE Management
- Controls and Reporting
- Change Management
- Technical Design and Interface
- Stakeholder Management
- Construction Management
- Security & Emergency Preparedness
- Testing, Commissioning, & ORAT
- Sustainability Management
- Operations & Maintenance

Sustainability and Resilience

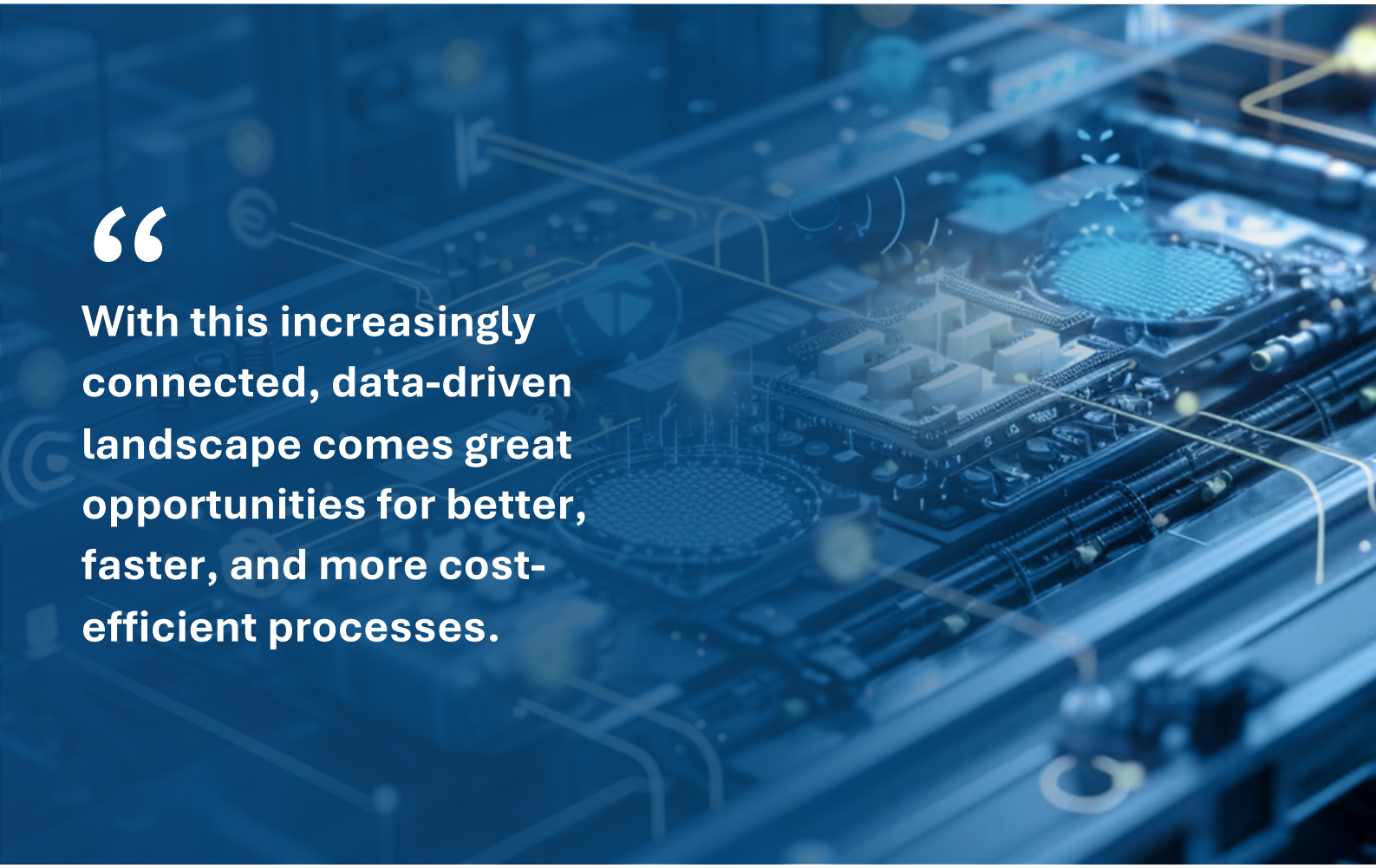
In alignment with 2030 goals, the aviation industry is increasingly incorporating sustainability and resilience planning as an operational imperative. This includes operating critical infrastructure and adapting to energy, water, and climate change constraints. In 2018, Airports Council International called for airports to act to prepare their infrastructure and operations for the physical impacts of climate change.

As an established aviation and sustainability consulting and implementation firm, AES experts assist with every aspect of sustainability and resilience, offering advisory and implementation services to help airports establish and enhance their sustainability programs.

Environmental Services

AES background helps solve the most complex environmental challenges, from asset development to operations optimization, focusing on restoration and reuse. Furthermore, AES recognizes and endorses the pressures to reduce waste and maintain compliance with environmental regulations while implementing advanced practices to reduce environmental impact. AES has been developing innovative environmental solutions tailored to the individual needs of each project.

Process and Automation



> **With this increasingly connected, data-driven landscape comes great opportunities for better, faster, and more cost-efficient processes.**

In response, AES has developed the process-led design offer — to help the clients navigate the future and understand how to integrate process and infrastructure (physical and digital) to create efficiencies and stay competitive.

The process of implementation is designed to be flexible and adaptable in time. From defining stage to developing long-term asset maintenance plans, AES provides process-led, technology-neutral advice across the project and asset lifecycle.

Drawing on our global design and construction experience, AES closely collaborates to understand the products and processes and create manufacturing facilities to be perfectly matched to their function.

Industrial Architecture

Engineering

Construction

Lean

Feasibility and Automated Vehicles

We Support Our Aviation Clients by Providing Feasibility Studies, Preliminary Design, and Business Case Development Services to Help Get Projects off the Ground.

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Other Assessment and Advisory Services

Organizational, executive and stakeholder engagement

TCFD climate change scenario analysis

Greenhouse gas (GHG) emission inventory / carbon accounting

Sustainability program development and advisory

Airport carbon accreditation

Sustainability reporting and communications

Climate change risk assessment and advisory

Integrated airport master plans

Sustainability management plans

Climate adaptation and resilience planning

Green procurement and tenant programs

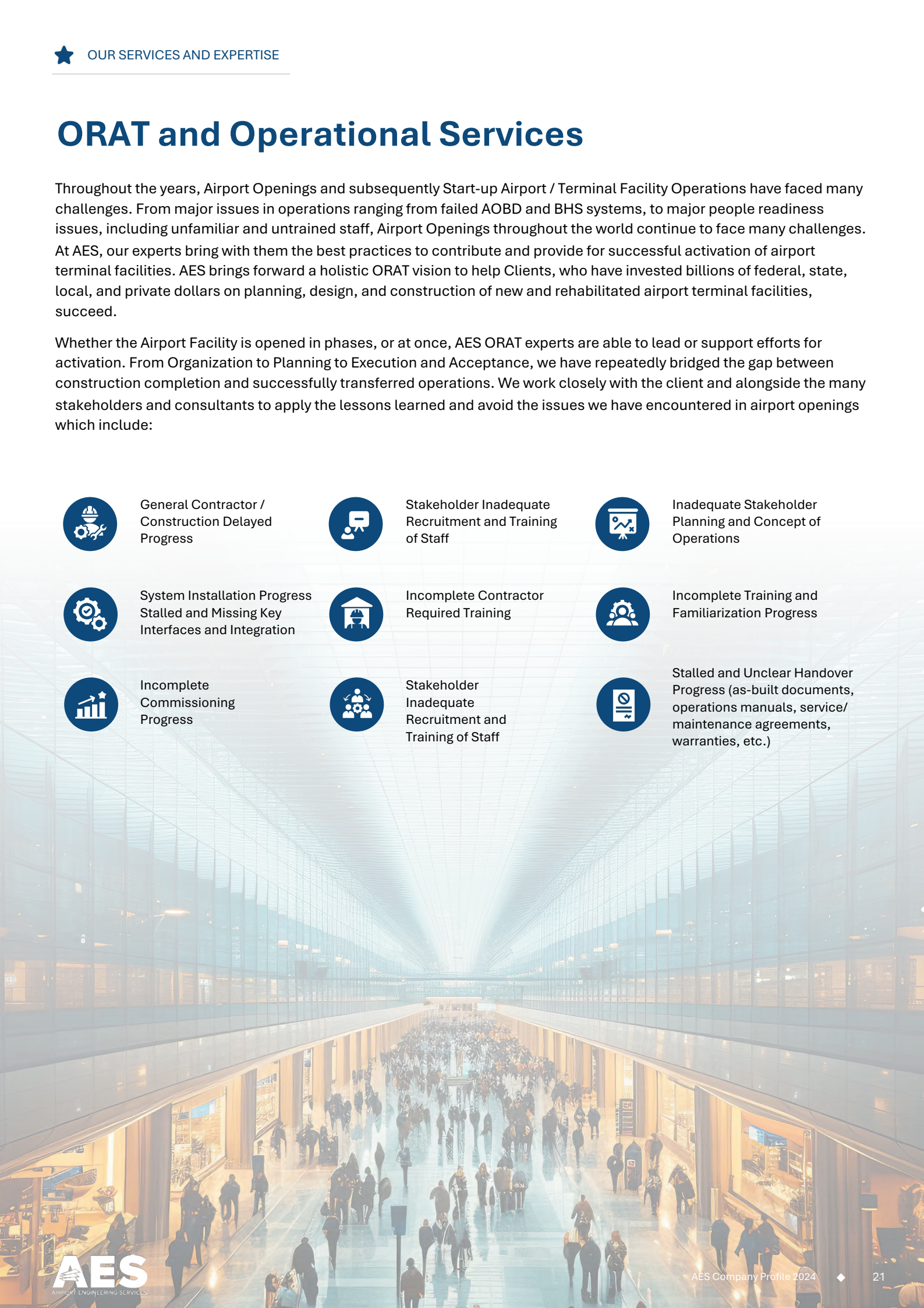
Vulnerability analysis and studies for future climate scenarios

ORAT and Operational Services

Throughout the years, Airport Openings and subsequently Start-up Airport / Terminal Facility Operations have faced many challenges. From major issues in operations ranging from failed AOBD and BHS systems, to major people readiness issues, including unfamiliar and untrained staff, Airport Openings throughout the world continue to face many challenges. At AES, our experts bring with them the best practices to contribute and provide for successful activation of airport terminal facilities. AES brings forward a holistic ORAT vision to help Clients, who have invested billions of federal, state, local, and private dollars on planning, design, and construction of new and rehabilitated airport terminal facilities, succeed.

Whether the Airport Facility is opened in phases, or at once, AES ORAT experts are able to lead or support efforts for activation. From Organization to Planning to Execution and Acceptance, we have repeatedly bridged the gap between construction completion and successfully transferred operations. We work closely with the client and alongside the many stakeholders and consultants to apply the lessons learned and avoid the issues we have encountered in airport openings which include:

- General Contractor / Construction Delayed Progress
- Stakeholder Inadequate Recruitment and Training of Staff
- Inadequate Stakeholder Planning and Concept of Operations
- System Installation Progress Stalled and Missing Key Interfaces and Integration
- Incomplete Contractor Required Training
- Incomplete Training and Familiarization Progress
- Incomplete Commissioning Progress
- Stakeholder Inadequate Recruitment and Training of Staff
- Stalled and Unclear Handover Progress (as-built documents, operations manuals, service/ maintenance agreements, warranties, etc.)



OUR SERVICES AND EXPERTISE

In addition, AES provides experts in various operational areas to supplement Airport Operators during and after the opening. Areas of Expertise include:

- Airside Operations
- Terminal Operations
- Command and Control Centers
- Commercial and Financial Strategic Planning and Management Operational Training
- Airside Operational Planning and Procedures
- Terminal Operational Planning and Procedures
- Air Traffic Control
- and More...

Airline Strategic Planning and Operational Support Services

Strategic Planning Consultancy

With expectations of exponential air traffic growth following the recovery from the Covid-19 pandemic, driven by new governance structures and large aircraft orders, AES is well-placed to help airlines execute their missions and deliver ever higher levels of operational excellence and reliability.

Drawing on AES' technical operational expertise, and complementing its engineering expertise, the following outlines a delivery approach to providing strategic consulting advisory to airlines:

AES can assist airlines with a definition of their operational model and plan, coordinate and assist in utilizing that plan to define their future operational requirements.

AES can implement a PMO+ program management office working closely with any existing in-house PMO to effectively provide project management, governance, and execution for the entire airline growth program. This will free up existing scarce in-house resources to concentrate on day-to-day operations, and not become overwhelmed with the significant increase in workload demands and help implement any new operational model and strategic roadmap.

Discovery A Design Element

- Gathering Requirements
- Understanding and Analysing Key Operational Principles and Considerations and Challenges

Visioning A Plan For Action

- Aligning Strategy with Corporate Goals and Aspirations
- Conceptual Planning and Development
- Explore Alternatives

Activation an Actionable Implementation

- Systematic Approach with Strong Project Governance, Execution and Delivery Model
- Engaging the Organization
- Monitoring and Evaluation

This includes coordinating between departments to achieve an aligned and defined operational model and a plan that optimizes airline resources.

Analyze, refine, augment, and organize the requirements into a roadmap based on priorities with a clear action plan and practical milestones.

Review current and planned organization against the requirements and growth plans.

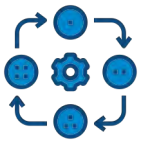
Identify, manage, and support in mitigating risks.

Optimizing operations to increase efficiency, punctuality, and level of service.

Operational planning including crew planning and resource management.

Operational procedures and manuals.

Integrated Operations Control Center (IOCC) and decision support.



The delivery approach would be a phased and structured process to understand and reflect appropriately on the clients' strategic objectives and operational needs. Stakeholder engagement and regular collaboration is applied throughout the consultancy, including the facilitation of workshops, focus groups, and conducting market research where needed. AES staff will be onsite at the client HQ effectively working as part of the internal team.

As the delivery process is phased, each step is iterative where regular reviews are conducted and adapted to tailor to the clients' needs.

Overall, the strategic planning consultancy is designed to be comprehensive, collaborative, and adaptable, to ensure the delivery of sustainable and meaningful results.

Operational Support Services

AES has a wealth of in-house airline expertise with multiple team members coming from a range of airline backgrounds including Network Airline, Low-Cost Carrier and VVIP/Private. AES has an Aviation Operations Support Practice which assists airlines in a wide range of operational disciplines focused on enhancing a client's operational performance (regularity, punctuality, and consistency). Improving efficiency through Lean process definition and IT system optimization, ensuring that the client has the right resources in the right place at the right time. AES specializes in Safety management including SMS and FRMS and quality auditing. The following outlines in more detail AES' airline operations capabilities:

Crew Resource Planning & Crew Management

Supporting airlines to optimize operational use of human resources, including establishment of pilot and cabin crew planning, pairings, roster optimization and crew preferences. Pilot and cabin crew attraction, retention planning and career pathing would be some of the key characteristics in AES' role for crew resource planning, as well in supporting the line management of crews including performance, pay, policy and process, promotions, disciplinaries, industrial relations etc.

The key outcomes would be to enhance operational performance, efficiency, effectiveness and improve safety from a human factors perspective, leveraging on the systematic management of crew resources.

Pilot Cadet & Targeted Special Programs

- Supporting airlines to manage pilot training and cadet programs, similar to those in conjunction with existing Flight Training Organizations, CTC L3 and OAA Oxford CPL-IR and MPL programs including the preselection of trainee pilots prior to the training commencement.
- AES can support in crafting further education programs for pilots such as curriculum collaborating planning with Middlesex and Cranfield Universities towards bespoke Bachelors and Masters in Aviation Management Degrees.
- Developing specialized programs targeting niche groups of hires, for example, those aimed at increasing the number of female airline pilots and increasing diversity, such as the 'Amy Johnson Women in Aviation' initiative.

Aviation Safety & Quality Certifications

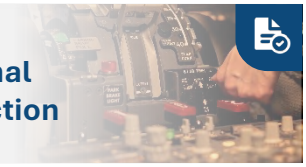
Safety & Quality Certifications are important standards to ensure overall reliability of aviation operations. These certifications are important as they give regulators, customers and other stakeholders confidence in the safety and reliability of airline operations. These certifications also help to continuously improve safety and quality management practices, reducing the risk of incidents and helping to reduce insurance risk.

AES can support airlines to attain ICAO- and IATA-type certifications, specifically IOSA, which is a comprehensive audit of operational management and control systems. Other typical certifications include ISO 9001 for Quality Management and the ISO 14001 for Environmental Management.

IOCC Implementation

AES is well-placed to establish or redefine IOCCs or similar control centers. The IOCC represents the nerve center for an airline, a centralized facility that manages and coordinates the various complex aspects of operations requiring real-time monitoring, analysis, decision-making and emergency management. The IOCC, equipped with advanced technology and software, serves as the central nervous system, housing a team of trained experts responsible for flight operations and tracking, weather monitoring, crew scheduling, fleet maintenance, communications, coordinated disruption management, and other critical functions.

RFI/RFP For Operational Systems & Fleet Selection



AES specializes in the management and oversight of the Request for Information (RFI) and Request for Proposal (RFP) processes including tendering, evaluation, selection, and implementation processes of Operational Systems such as AIMS, Sabre, LH Systems, etc. applicable for use as stand-alone systems or as part of the IOCC. Such RFI/RFP processes typically include the planning and pre-contracts stages, the award stages as well as the post-award operational support stages. Our experts in AES are also keen to support in Fleet selection, having relevant experiences in completing these tasks FlyNas and ANA Peach.

Manuals and Documentation

Manuals and documentation are important in aviation as they demonstrate a standardized and systematic approach to conducting tasks, ensuring consistency and accuracy. They also serve as a reference for employees, providing guidance and instructions for performing tasks, troubleshooting problems, and complying with regulations.

AES can support drafting and/or reviewing and amending operations manuals outlining procedures for managing flight operations and ground handling, including Operations Manuals Parts A-D in compliance with GACAR regulations.

Airline Communications

As part of a complete ecosystem, AES can develop and support airline communications including technical and non-technical notices, newsletters, articles, running focus groups and employee surveys and enhancing the information flow between management and the front line, to encourage collaboration, transparency, and engagement. This includes defining and executing process flows, information streams, communication channels, deployment of IT-based mediums including e-bulletins and Apps for a more timely and accurate dissemination of information, as well as interactive platforms to encourage participation in training and incentivize collaborative engagements.

Ground Operations

AES has worked extensively with GHA's in KSA, especially with SGS and Swissport and is well-placed to enhance existing airline/GHA models by implementing new ground handing processes (such as dual step boarding) and select new ground handling agents for new operators. AES can support with KPI definition for ground handling contracts, establishment of minimum connection times etc.

Operational Support

Strategic Through to Front Line Delivery

Long Term

STRATEGIC

Long Term Plan > 12 months

Medium Term Plan 12 months – 7 days

Short Term

TACTICAL

Short Term Plan 7 Days – 1 Day

1 **Planning** | Integrated Planning & Performance

Execution Day of Operation

2 **Monitoring** | Manage on the day regular / irregular ops

3 **Emergencies** | Manage emergency situations as they arise

POST OPERATION

Improvement
Post Day of Operation

4 **Planning** | Integrated Planning & Performance

AES Operational Support Services Encompasses the Following:

Real Time Flight Following

Operational Processes, Fleet Tracking, Weather Monitoring

Fleet Scheduling

Planning and Monitoring of Fleet for Operations and Maintenance

Rostering & Manpower Planning

Planning and Monitoring of Pilots and Cabin Crew for Operations

Primary Authority for Regular Operations

Real Time owner of the Operations and Single Decision-Making Point

Identification of Risks & Threats

Search for and monitor items that might affect operations

Disruption Management

Function as coordinated decision point for irregular operations

Single Source of Truth

Provide single source of all information within operational ecosystem

Vendor Management and SLAs

Monitor and Manage Vendors in IOCC via compliance to SLAs

Real Time Decisions

Make decisions that are required to support operations

Fixed Resource Allocation

Dynamic allocate and manage resources

Communication

Communicate to all Community

Key Principles

1

Common System

Implement a common platform, allowing for the integration of all planning and monitoring systems.

2

Data Driven Decision Making

Reliable, consistent, and predictable data for immediate decision making and predictive data to enable re-planning as things change.

3

Single Source of Truth

Providing an immediate real-time single version of the state of all current fleet, crew, and facilities within operations.

4

Continuous Improvement & Review

Review and improve post day of operation to ensure plan-do-review.

5

Resource Allocation

Effective management of fixed and flexible resources increasing during peaks and reducing during off peaks.

6

Governance

Clear identification of decision- making processing and escalation of operational issues.

7

Planning

Integrating all aspects of fleet and crew operational planning activities.

8

Reporting

Accurate and reliable performance reporting to track vendor SLA compliance.

Customs Borders and Security Management Consultancy Services

In addition to providing expert Airport Customs and Security systems, design, construction supervision and operational support and management, we at AES have extended these expert services to Country borders and ports (both land and sea).

AES has extensive expertise in International and US Federal law standards and requirements along with an in-depth understanding of border dynamics with decades of field and national-level command experience. Our expertise was instrumental in some of the most complex security and customs challenges along the U.S - Mexico and U.S - Canada border applying an intelligence-driven, multi-layered, risk-based approach to secure 6,000 miles of land border and 2,000 miles of shoreline. Our experts have managed border controls, designed and implemented border IT systems, delivered enforcement operations, managed asylum systems and have casework experience in all forms of immigration applications.

Integrated Safety & Security Approach

Implementation
(Implement & Plan)

Sustainability
(Review & Refine)

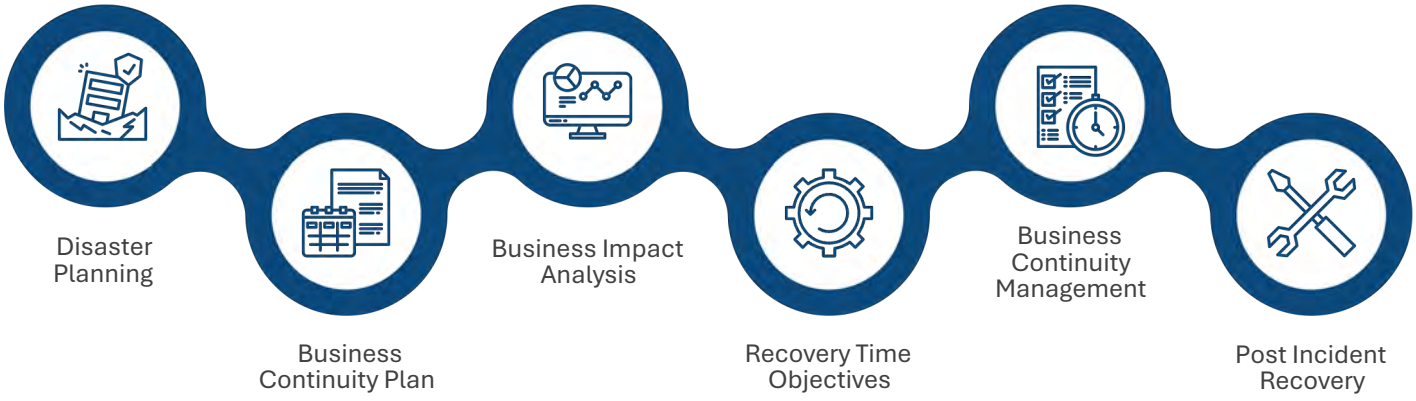
Assessment
(Engage & Assess)

Design
(Design & Analyse)

AES
AIRPORT ENGINEERING SERVICES

Our services, include, but are not limited to:

- Complete border / port planning and design services including latest technologies, smart systems and people, vehicles, trucks and containers integrated scanning systems
- Providing onsite Gap and risk analysis along with coaching & mentoring
- Providing border security subject matter expertise to support a high-level Roles and operational services
- Preparing appropriate border security concepts and standard operational procedures including Customs and Border Protections policies
- Port Operations Assessments
- Coordinating Cross-Border Processes with Customs & other Government Agencies
- Construction supervision services to ensure the desired and designed product is delivered on-time and on schedule
- Complete integrated Safety and Security approach consultancy
- Disaster planning, recovery and business continuity management



Recent Projects

AES, and its team of experts, have completed a wide range of airport projects worldwide and employs a large number of specialists in a variety of disciplines within the fields of airport planning, design, special systems, ORAT, operations and certification services fulfilling all the needs of our valued clients since 1984.

AES has delivered services to clients in both the public and private sector including local authorities, airlines, airports, airport operators, contractors and investors. The services for airfield infrastructure projects include all phases from initial planning and feasibility studies through to design, construction, commissioning and certification as well as post-construction maintenance management and rehabilitation.

AES has been known to accompany our clients through operational, technological, regulatory and organizational evolutions and in doing so, we work to optimize safety and performance in aviation. Building on our 30+ years of experience, we have a unique profile that includes:

LAX Tom Bradley International Terminal Expansion

Los Angeles International Airport

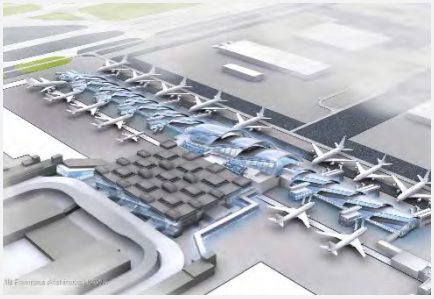
California, USA

AES Role

Design and Project Management Consultancy

Project Specification

$5 billion program to upgrade airside and terminal facilities to accommodate Group 6 aircraft



Project Highlights

$5 billion program to upgrade airside and terminal facilities to accommodate Group 6 aircraft. Roles included:

- Led prime engineering consultant team comprised of 40 staff and eight engineering consultants for design of taxiways, aprons, underground utilities; tunnels for APMs, utilities, and baggage; central utility plant, terminal additions, demolition, and roadways.
- Many early projects were “fast tracked” in order to assure operational gates for A-380 aircraft within two years of project initiation.
- The majority of design work with a construction value of $900 million was completed during that period.

CATRION CATERING HOLDING COMPANY (CATRION) – Red Sea Facility

CATRION Red Sea Facility

Red Sea Area, Kingdom of Saudi Arabia

Client
CATRION

AES Role
Design, Tender, and PMC Services

Project Highlights

CATRION Red Sea Facility Project includes the development of a Catering Central Processing Unit and a Central Laundry located in the Central Logistics Hub for the Red Sea Development Project in the Kingdom of Saudi Arabia. The Red Sea Project is underpinned by a commitment to sustainability and aligned with the internationally recognized UN Sustainable Development Goals (SDGs). The Catering and Laundry unit includes a combined total area of 49,000m2 with the latest equipment technology in both facilities.

This project forms one of AES's undertakings to cover the different aviation industry's supporting facilities. AES's scope of work included the complete design, coordination, tendering, and further PMC services. The design of these facilities involved major coordination challenges where AES team coordinated with many assigned suppliers in the field, for the equipment requirements. The design also met the demanding functionality as well as the sustainability requirements. AES initiated new strategies for the project including value engineering for both facilities. AES used the latest state-of-the-art BIM design approach ensuring that the design is adequate, comprehensive, and well-coordinated. Following the design and coordination, the different tender packages were prepared by AES followed by several workshops with the contractors. AES leadership and approach for this project was furthermore followed by PMC services for this project, ensuring that the project is implemented on time, as designed, and within the budget.

Sky Harbor International Airport Development Program Revalidation

Sky Harbor International Airport

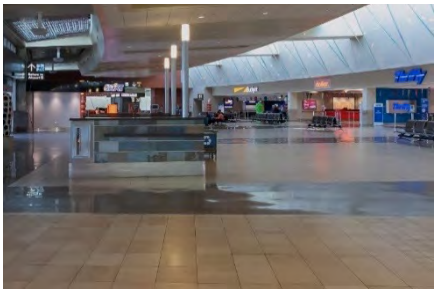
Arizona, USA

AES Role

Project manager, supervision of consultants, preparation of gate common use feasibility study, administrative and planning efforts

Project Specification

Revalidation of the airport's $5 billion development program and reduction to $3.3 billion



Project Highlights

- Supervised consultants to redefine the program and reduce budget to $3.3 billion. Major facilities were a 33-gate terminal, terminal and access roadway system, and enabling projects including utilities, in-ground fueling system, long-term parking, taxiway bridges, terminal apron, and vehicle garages. This effort required coordination with all airport divisions.
- Prepared a gate common use feasibility study for Terminal 3 and assisted the airport's Deputy Director in various administrative and planning efforts as assigned including representation to the GIS airport-wide implementation effort.

Dammam Airport Runway Upgrade Project Design Contract

King Fahd International Airport

Dammam, Saudi Arabia

Client
Mabani

AES Role
Design Consultant

Project Specification
Completion Date: Ongoing

Services Provided
Project design

Project Highlights

AES was commissioned to provide a Detailed Design package for the Airfield Civil and Electrical elements included within the Employer Requirement for the West Runway and Taxiway B Development Project at King Fahad International Airport (DMM) per the project required Codes, standards, and recommendations. The assignment includes the upgrade works' Design and the certification compliance development according to GACAR 139 regulations.

The project elements are composed of:

- Detailed Civil Design package inclusive of the pavement rehabilitation design (carriage and shoulders), including but not limited to all associated geometric Design of the:
  - West runway (16R/34L).
  - Taxiways A (parallel to the runway).
  - From the runway centerline up to 261m in taxiways B, B1, B2, B3, B4, and B5.
  - From the runway centerline, up to 200m in Taxiway B connected to the Apron 11.
  - Jet blast area before the runway threshold (120m x 75m).
- Grading of the runway strip and the two RESAs of the west runway.
- Marking as indicated in the work scope description and the provided drawings and limit of work.
- Design of new Airfield Ground Lighting (AGL) Cat III and signage, including the corresponding civil works (As required based on the assessment made to the existing conditions during the survey) according to the limit of pieces as per the supporting documents provided with this RFP.
- Detailed Design Package for the AGL system to conform to CAT III requirements for all areas within the project scope to match the CAT III ILS NAVAIDS with the works anticipated to include the following:
  - New Taxiway Centerline, Taxiway Edge, and Intermediate Holding Position lights.
  - New AGL primary circuits using ILCMS technology.
  - All ancillary components include isolation transformers, ILCMS controllers, connectors, and new deep bases.
  - New electrical switchgear and equipment, UPS, Constant Current Regulators.
  - Power cabling and grounding systems.
  - Review compliance of the manufacturer of the lights and CCR with the design parameters according to standards AC-150- 5345-46.
  - Basis of Design / Design Report: AES shall prepare a base design that provides a narrative description of the rationale for the Design, a listing of applicable design criteria and codes, circulation, space program, and systems illustrations.

KSA Cluster2 PMC Program

Cluster 2
Kingdom of Saudi Arabia

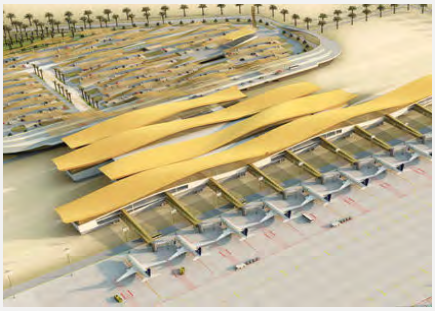
Client
Cluster 2

AES Role
Project Management Consultant

Project Specification
PMC Program to manage the many projects under Cluster2 Airports within KSA

Project Highlights

Management of all Projects across 24 Airports within the Kingdom for up to 4 years. The projects, which vary in size and scope, are aimed to Maintain, Rehabilitate, Certify and Expand Airport Infrastructure in line with each Airport's forecasted growth and the KSA 2030 vision. The PMC program includes Managing each respective project from inception to closeout through an efficient resource allocation and budget management plan along with a comprehensive monitoring method to ensure projects stay on track. The program also includes, but is not limited to, providing complete Technical and Engineering services along with full Development and Improvement services.



LAX South Side High Speed Taxiway Program Construction Supervision

Los Angeles International Airport
Arizona, USA

AES Role
Construction Supervision Consultant

Project Specification
$26 million construction program for three high-speed taxiways

Project Highlights

Project was a highly complex $26 million construction program for three high-speed taxiways between and adjacent to two runways and included installation of in pavement runway lighting for the outboard runway, signage, drainage and grading. The majority of the work occurred between two active runways requiring detailed planning for access and safety. Assumed position half-way through the program and resolved personnel conflicts and construction quality control problems allowing the project to be successfully completed. Negotiated closeout change orders that were reduced from 7% to less than 1% of project cost. aprons, underground utilities; tunnels for APMs, utilities, and baggage; central utility plant, terminal additions, demolition, and roadways.

St. George Airport Relocation Program

ST. George Municipal Airport

Utah, USA

AES Role

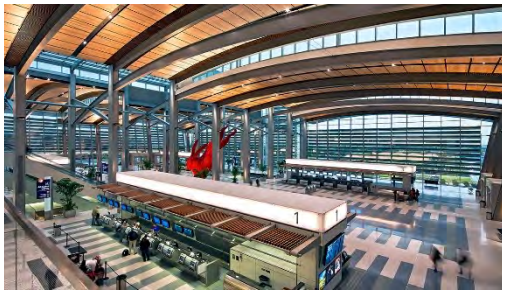
Program management, financial planning, grant administration, land acquisition, design, and construction

Project Specification

Relocation of the St. George, Utah airport, a $100 million green field program

SMF Terminal Modernization Program, Phase III

Sacramento International Airport
California, USA

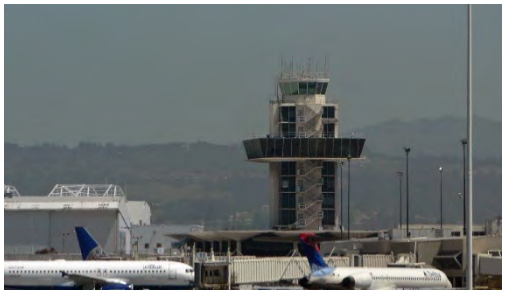


AES Role
Led the design

Project Specification
30% design for landside and airside projects for a new $800 million terminal and airside concourse

Oakland Terminal 2 Apron Expansion and Reconstruction

Oakland International Airport
California, USA



AES Role
Project Management Consultancy and Technical Advisory Services

Project Specification
Civil design for apron expansion and reconstruction with phased construction

Royal Aprons Extension Project at KKIA Design Contract

King Khaled International Airport

Riyadh, Saudi Arabia

Client
Nesma & Partners

AES Role
Main Consultant of the Project Design

Project Specification
Completion Date: 2020

Services Provided
Project design

Project Highlights

The King Khaled International Airport (KKIA) has a Royal Terminal Apron located on the South side of the airport between Taxiway P & T. The main objective of the Apron is to provide service to the Royal Terminal Building. However, due to the additional apron areas required for the G20 event celebrated in November 2021, the airport authority requested the construction of two (2) new apron extensions, one between Taxiways T and Royal 1 and the second between Taxiways P and Royal 2.

The King Khaled International Airport (KKIA) has a Royal Terminal Apron located on the South side of the airport between Taxiway P & T. The main objective of the Apron is to provide service to the Royal Terminal Building. However, due to the additional apron areas required for the G20 event celebrated in November 2021, the airport authority requested the construction of two (2) new apron extensions, one between Taxiways T and Royal 1 and the second between Taxiways P and Royal 2.

- Construction of 2 New Aprons, each with the capacity to accommodate 10 Code E Aircraft or 20 Code C Aircraft per GACAR139.
- Construction of 2 corresponding GSE staging/parking areas (approx. 10,000 square meters each).
- Construction associated Service roads for each Apron which connect to Taxiways P & T.
- Associated Electrical works, including AGL, and their connection to the existing ALCMS.

The design elements of the project were divided into Civil and Electrical works. Outlined within this Final Design Report are the details, analysis, recommendations, and requirements for the following:

- Project Basis of Design, including identifying the project requirements per GACAR 139 and ICAO Annex 14 7th edition. Geometric Layouts.
- Final Traffic Mix analysis and Asphalt/PCC pavement design.
- ATC Sitting Analysis.
- Pavement Marking Design basis.
- AGL, ALCMS & Signage.
- Drawings & Annexes.

PWC Jeddah Airport Consultancy Services

King Abdulaziz International Airport

Jeddah, Saudi Arabia

Client
PwC

AES Role
Facilities Management SME

Project Specification
Completion Date: 2020

Services Provided
Consultancy Services

Project Highlights

As part of the excellency implemented by MATARAT in all the airports of the Kingdom, PWC was tasked with verifying the Operational readiness of the King Abdulaziz International Airport for the Hajj Season of 2022.

The consultancy services analyzed the following areas:

- Airport Operations.
- Facility Management and Engineering.
- Wider Ecosystem Alignment.
- Systems and Data.
- Customer Experience.

AES was tasked to providing Subject Matter Expert input to Workstream leads and guidance for Facilities Management and Engineering. Additionally, AES was requested to support the Leadership & Command Center Governance Leads. This support ensured the implementation of the governance and preventive measures such as activity planning, communication & engagement, risk assessment, mitigating, monitoring, and reporting.

The project elements were composed of:

- Summarizing the Hajj air travel journey.
- Airport processes and flows.
- Challenges faced by JEDCO.
- Action plan for Hajj 2023.

Expansion of Private Aviation Aprons

King Khaled International Airport

Riyadh, Saudi Arabia

Client
PrivateAir Saudi Arabia (PASA)

AES Role
Design Consultant

Project Specification
Completion Date: 2020

Services Provided
Consultancy Services

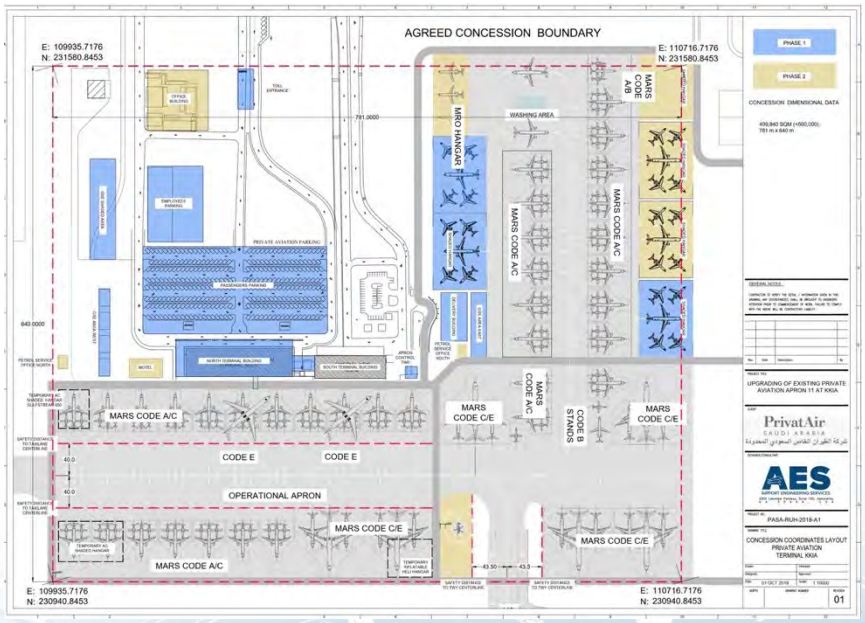
Project Highlights

PrivateAir Saudi Arabia (PASA) awarded AES the project of Consultancy Services for the overall Masterplan and Project Design of the General Aviation Apron at King Khalid International Airport. The Apron is located on the North-Eastern side of Taxiway H, between Taxiway H2 and Taxiway H3, and is crossed by a taxilane that connects Taxiway H2 and Taxiway H3. The taxilane divides the Apron into two zones, i.e., an apron adjacent to the General Aviation Terminal Building and a remote apron.

The Apron is provided with 10 Code C aircraft stands adjacent to the General Aviation Terminal Building, 11 Code C aircraft stands in the remote Apron, and up to 5 Code E aircraft stand is being used as MARS stands. PrivateAir Saudi Arabia (PASA) Development plan consisted of rehabilitating and expanding the existing private aviation apron to provide better service to the clients and accommodate more aircraft within its facilities.

The project elements were composed of:

- Project Basis of Design, including identifying the project requirements from mandatory GACAR 139 and compliance with ICAO Annex 14 7th.
- Geometric Layouts.
- Final Traffic Mix analysis and Asphalt/PCC pavement design.
- Grading and drainage considerations.
- Pavement Marking.
- AGL / Electrical Design.



Rehabilitation of Taxiway E

King Khaled International Airport

Riyadh, Saudi Arabia

Client
Almabani

AES Role
Design Consultant

Project Specification
Completion Date: 2019

Services Provided
Project Design

Project Highlights

AES completed the project of rehabilitating and upgrading Taxiway (E) at King Khaled International Airport (KKIA) to accommodate Code F aircraft operations following ICAO Annex 14 – 7th Edition standards / GACAR Part 139 standards and, designing the upgrade works, and the development of the certification compliance according to GACAR 139 regulations. Constructed in 1983, Taxiway (E) is adjacent to the existing Passenger Terminals 1 through 4. According to the geotechnical investigation dated April 24-2019, the

pavement structure of the taxiway varies between 240mm and 280mm of asphalt layers on 200mm granular base on top of 200mm selected fill.

The taxiway has a high utilization factor with aircrafts regularly holding at the midpoint of the taxiway, often coming to a complete halt and waiting for the allocated stand on the passenger terminals, waiting for an aircraft to clear an area, or after push-back of an aircraft. Due to this heavy utilization, Taxiway E consisted of various pavement failures and rutting areas which have accumulated throughout the years since its construction.

The project elements were composed of:

- Outlined within the Design Report are the details, analysis, recommendations, and requirements for the Upgrade Works in terms of the following critical areas of these works:
- Project Basis of Design.
- The project identified requirements from mandatory GACAR 139 version 6.0, along with compliance with ICAO Annex 14 7th.
- Geometric Layouts.
- Preliminary Traffic Mix analysis and Asphalt pavement design.
- Grading and drainage considerations.
- Pavement Marking.
- AGL / Electrical Design.
- Construction Phasing recommendation.

Amaala Airport Development Program (WP1)

Amaala International Airport

Amaala, Saudi Arabia

Client
EGIS

AES Role
Design Consultant for the tender package preparation

Project Specification
Completion Date: 2019

Services Provided
Project Design

Project Highlights

AES was tasked with the development of Project Design and Tender Document preparation for Amaala International Airport WP1. The Airport is intended to operate as a public airport, with its facilities capable of handling up to 240 movements on a peak day from smaller private jets. Nonetheless, the airport was required to handle code C aircraft with full occupancy and occasional code F operations in a VIP layout. Therefore, the airport project was developed in two design phases: Work Package 1 (WP1) and Work Package 2 (WP2).

The project elements were composed of:

Airside

- Runway, taxiway, and aircraft apron stands, including airfield ground lighting (AGL) and PAPI, marking and signage, Apron Flood Lighting (AFL), Visual Docking Guidance System (VDGS).
- ILS: Localizer, Glide paths.
- Weather equipment (AWOS).
- Airside roads, security perimeter road, airside/landside perimeter fence, airside gate, and crash gates.
- Provision of duct banks and reservations under the runway, the taxiways, and the airside roads for future ICT networks.
- The passive and civil infrastructure required to install and supply the Navaids equipment (Duct banks, power supply, foundations, grading, and fencing).

Utilities

- Limited utilities required to operate the airside of the airport, the temporary PTB, and the temporary ARFFS:
- Generator main power supply of WP1 facilities, including airfield lighting, PAPI, ILS, apron floodlighting, VDGS, and temporary PTB and ARFFS.
- The backup power supply of WP1 facilities: Supplied with a second power generator.
- Potable water: Supplied with a tank.
- Firewater for the ARFFS: Supplied with a water tank and pump.
- Drainage network for the airfield, including fuel and oil separator for the aircraft apron and stands.

Landside

- The landside access road from the main airport gate to the airside gate.

Marib Airport Forecasting, Planning, Commercial & Comprehensive Detailed Design Services

Marib Airport

Marib, Yemen

Client

The Saudi Development and Reconstruction Program for Yemen (SDRPY)

AES Role

Masterplanning, Design, Tendering Consultancy Services

Project Highlights

The Marib Airport Development Program (MADP), as part of the Saudi Program for development and Reconstruction of Yemen, includes the construction of a greenfield airport in accordance with the Detailed Design Sets and internationally and locally recognized codes, standards and recommended practices. The enclosed report provides the basis of design and design intent covered within the overall design package for this project / Airport. AES and Lacasa were awarded the project of Consultancy Services for Design of the Marib International Airport based on a comprehensive analysis of the physical features of the site and the requirement to deliver a runway with its associated taxiway, apron and supporting infrastructure that integrate with airport operations and the needs of airlines and aircraft fleets that will use the facilities

The overall project description included the following:

- A small-sized Terminal building for domestic and international flight operations. Terminal inclusive of check-in counters, BHS conveyor belt system for departing and arriving passengers, BHS In-line screening, passenger security screening, departing and arriving immigration / passport control stations, arrivals lounge, departures lounge, VIP lounge, full communication network, AODB and all associated MEP and structural requirements as outlined within the project design drawings and specifications.
- A Runway 03-21 located at 2100 Bearing South bound and 300 Bearing North bound. Runway includes turn pads at each end to allow in-bound and out-bound aircraft to maneuver while landing and take-off respectively.
- Runway navigational aids were provided in 3 options:
  - CAT I with full infrastructure,
  - Simple Approach with full infrastructure,
  - Simple Approach using Solar lights.
- New Taxiway L connecting Runway 03-21 to Apron stands
- New Apron to accommodate 3 aircrafts: 3 Code C or 2 Code C and 1 Code D.
- ATC / Operations building with VSAT connectivity.
- New airside / landside security fence including access gates and a security guard house.
- New terminal landside parking lot with associated and surrounding roadways.
- Storm water Drainage System

Dominica International Airport Masterplan Update

Dominica International
Airport Dominica

Client
CSCEC

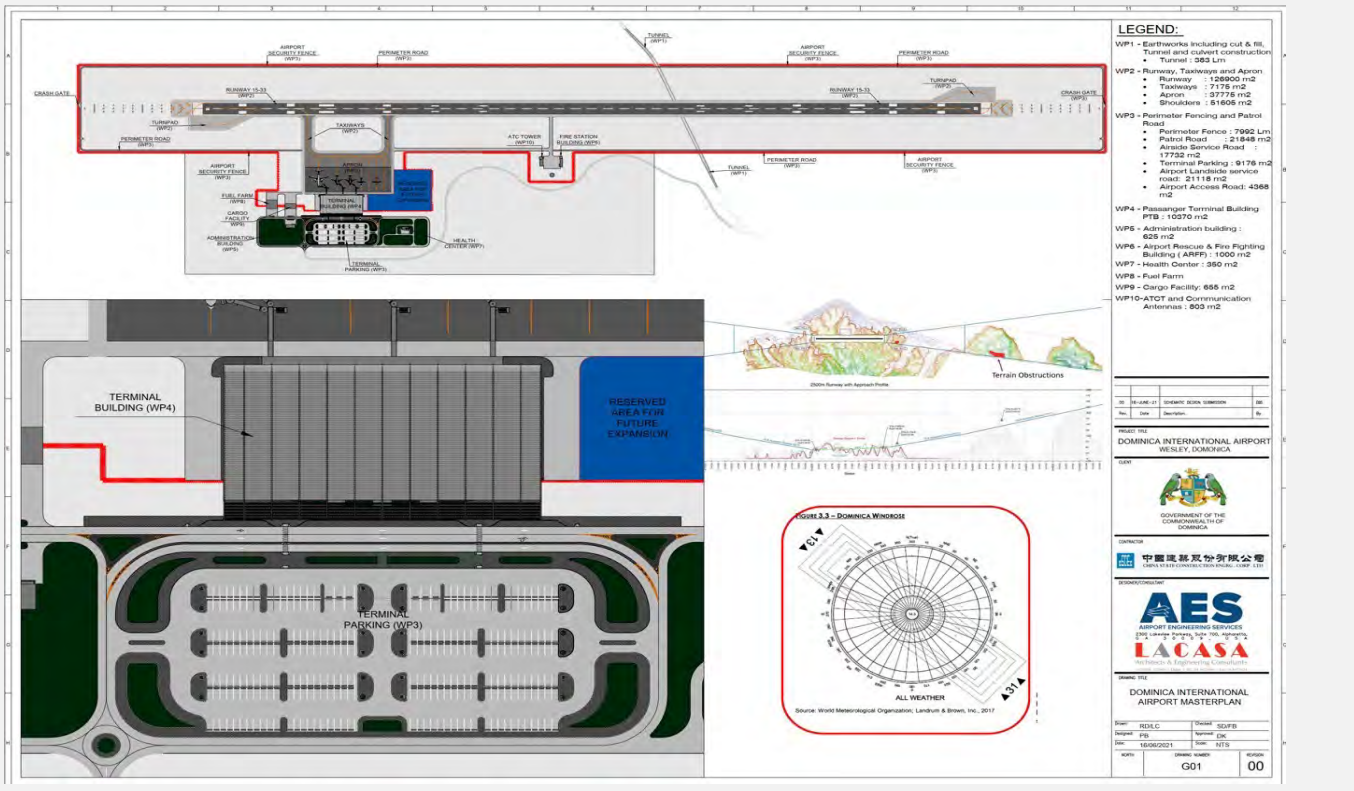
AES Role
Masterplanning, Design and Tender Consultancy Services

Project Highlights

As part of a consortium which sought to completely develop a new Airport in Wesley Dominica, AES and Lacasa were tasked with completing a full Airside, Landside and Terminal masterplan study and development including providing schematic layout options based on a traffic forecast and operational plan which AES and Lacasa developed. These corrective Schematic layouts met and in some cases exceeded international standards as well as the intended passenger services standards.

The Overall project consists of the construction of:

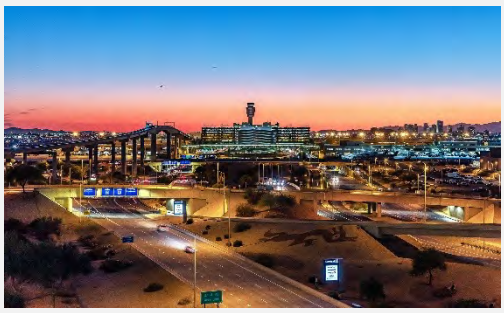
- Runway of 2,850 meters long, and 45 meters width
- Taxiway connection to/from the runway from/to the Apron
- Apron to allow parking 1 MARS (2C or 1E) + 1C + 1C + 1E + 2C (ATR72) + 6B aircrafts
- CAT I AGL system
- Full support infrastructure to serve the 2M Pax Terminal along with the full Terminal and associated landside facilities



Terminal 4 Phoenix Sky Harbor International Airport Facilities Assessment

Phoenix Sky Harbor International Airport

Arizona, USA



AES Role

Conducting the facilities assessment

Project Specification

Facilities assessment for a 1.2 million square foot Terminal 4

Facility Activation Coordination

Washington Dulles International Airport (Iad)

Dulles, VA

AES Role
ORAT and Technical Advisory Services

Project Specification
Completion Date: 2014

Services Provided
Design & Construction

Runway CAT III Upgrade Works

Chicago Executive Airport

Branson West, MO

AES Role
PMC and Design Consultancy Services

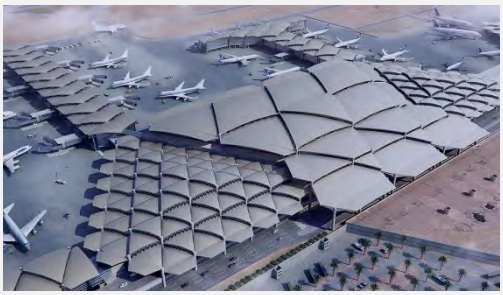
Project Specification
Completion Date: 2015-2016

Services Provided
Design & Construction

Airfield Facilities Upgrade - Airfield GIS

King Khaled International Airport

Riyadh, KSA



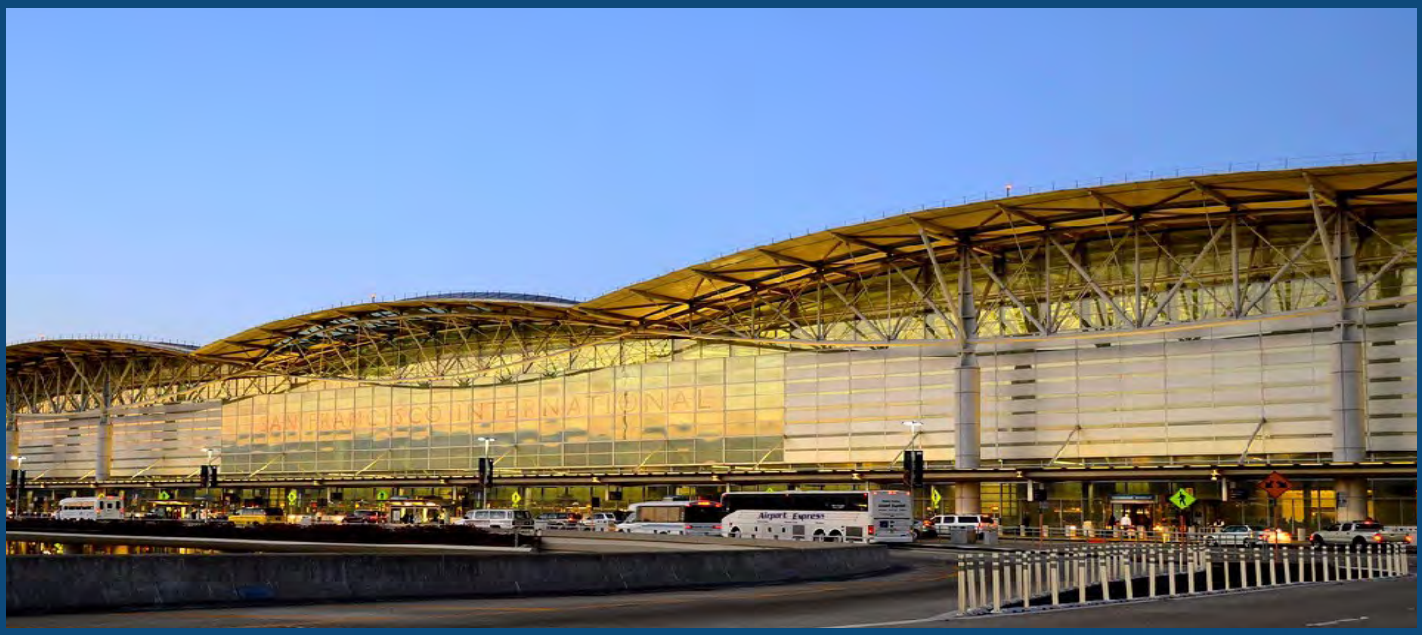
Client
Almabani

AES Role
GIS Consultant

Project Specification
Completion Date: 2017-2018

Services Provided
Consultancy Services

Quality Assurance for SFO Parking Garage



San Francisco International Airport

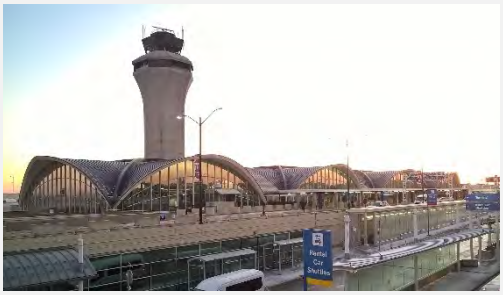
California, USA

AES Role
Quality assurance review

Project Specification
Quality assurance review for a 3,500 car parking garage

Design & Construction Consultancy Services

Lambert International Airport
ST. Louis, MO



AES Role
Design Consultant

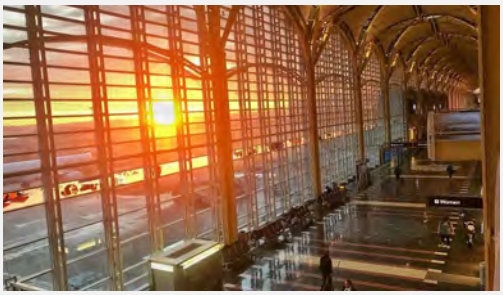
Project Specification
Completion Date: 2013

Services Provided
Design & Construction

Comprehensive Airfield Rehabilitation Program

Ronald Reagan Washington National Airport

Arlington, Virginia, USA



AES Role
Design and PMC Consultancy Services

Services Provided
Design & Construction

Airfield Pavement Management & Rehabilitation Program

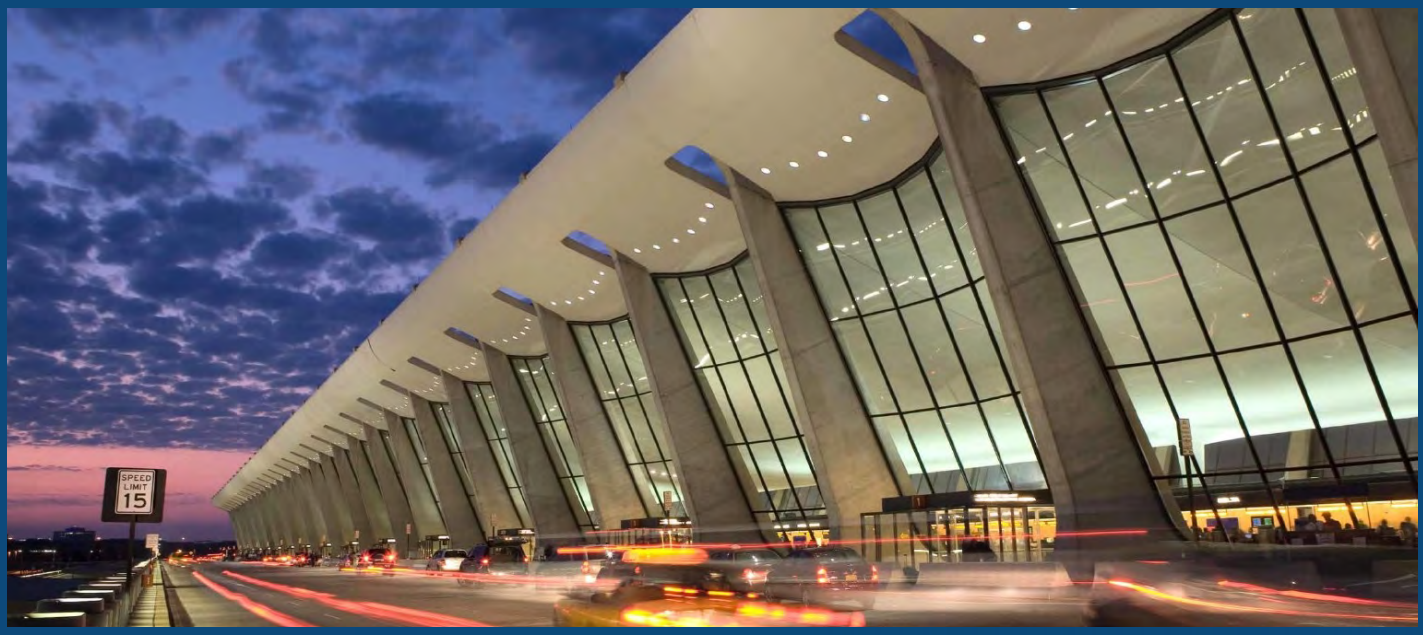
Washington Dulles International Airport

Dulles, VA

AES Role
Design and PMC Consultancy Services

Services Provided
Design & Construction

Facility Coordination



Washington Dulles International Airport

Dulles, VA

AES Role
Design Consultant

Services Provided
Design & Construction

Aeronautical Study and Risk Analysis

Abha Regional Airport

Abha, Saudi Arabia

Client
Almabani

AES Role
Aeronautical Consultant

Services Provided
Aeronautical Consultancy Services

Phoenix Airport Area Revitalization

Phoenix Sky Harbor International Airport

Arizona, USA

AES Role

Assessment and analysis of a dormant airport area and preparation of relevant plans and budgets

Project Specification

Conceptual plan for turbine and jet aircraft operations, operations plan, capital improvement budget for Boeing 737-800

Kukes Airport Expansion Potential Evaluation

Kukes Airport

Kukes, Albania, USA

AES Role

Evaluation of expansion potential, inventory preparation, development plan and budgeting, airspace issues review, site recommendations.

Project Specification

Expansion based on projected passenger and aircraft use, solution of airspace issues, recommendations for commercial airport in Sarande.

Project Highlights

- Prepared inventory of existing facilities and prepared development plan and budget based upon projected passenger and aircraft use.
- Reviewed airspace issues and identified solutions. Government identified need for a commercial passenger airport to accommodate tourist growth at Sarande, Albania.
- Reviewed data for three sites and made recommendations. Based upon projected tourism data, prepared preliminary airport layout plan, facility needs analysis and development budget for airport with design aircraft of Boeing 737-800.

New Orleans International Airport Terminal Replacement Program

Louis Armstrong New Orleans International Airport

Louisiana, USA

AES Role

Overall management of engineering and architectural design; coordination with local, state, and federal agencies; and funding and schedule management.

Project Specification

Planning and preliminary design of a $640 million terminal replacement program.

Project Highlights

- Duties included overall management of engineering and architectural design; coordination with local, state and federal agencies; and funding and schedule management.
- Lead staff for the reconstruction of the Presidential Runway at Joint Base Andrews. Performed inspections, maintained project schedule, and budget. Assisted government in enforcing corrective action with contractor for several substandard elements of construction.

Upgrading of Existing Airfield

King Abdullah Bin Abdulaziz Airport

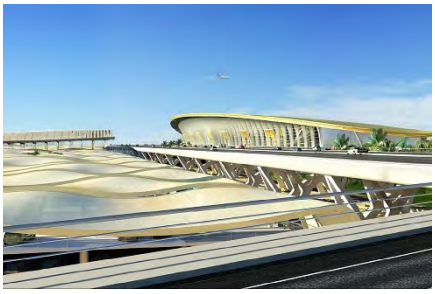
Jazan, Saudi Arabia

Client
Safari

AES Role
Design Consultant

Project Specification
Completion Date: 2019

Services Provided
Project design



Project Highlights

Jazan Regional Airport served the Jazan Province in Saudi Arabia and was later used as a civil and military airport. This additional use has led the Code E runway pavement to witness major asphalt cracks rendering it unsafe for aircraft use. As a result, a temporary runway had to be constructed to maintain ongoing operations while doing rehabilitation works. Safari Co. contractor trusted the expertise of AES to deliver an appropriate project plan design for the temporary new runway by converting the existing parallel taxiway into a new code E runway and designing a new parking apron to accommodate Code E aircrafts.

The project elements are composed of:

- Pavement design.
- Grading and Drainage.
- Geometrical compliance.
- Markings and Signage.
- AGL system.
- Project phasing.
- Risk Assessment.

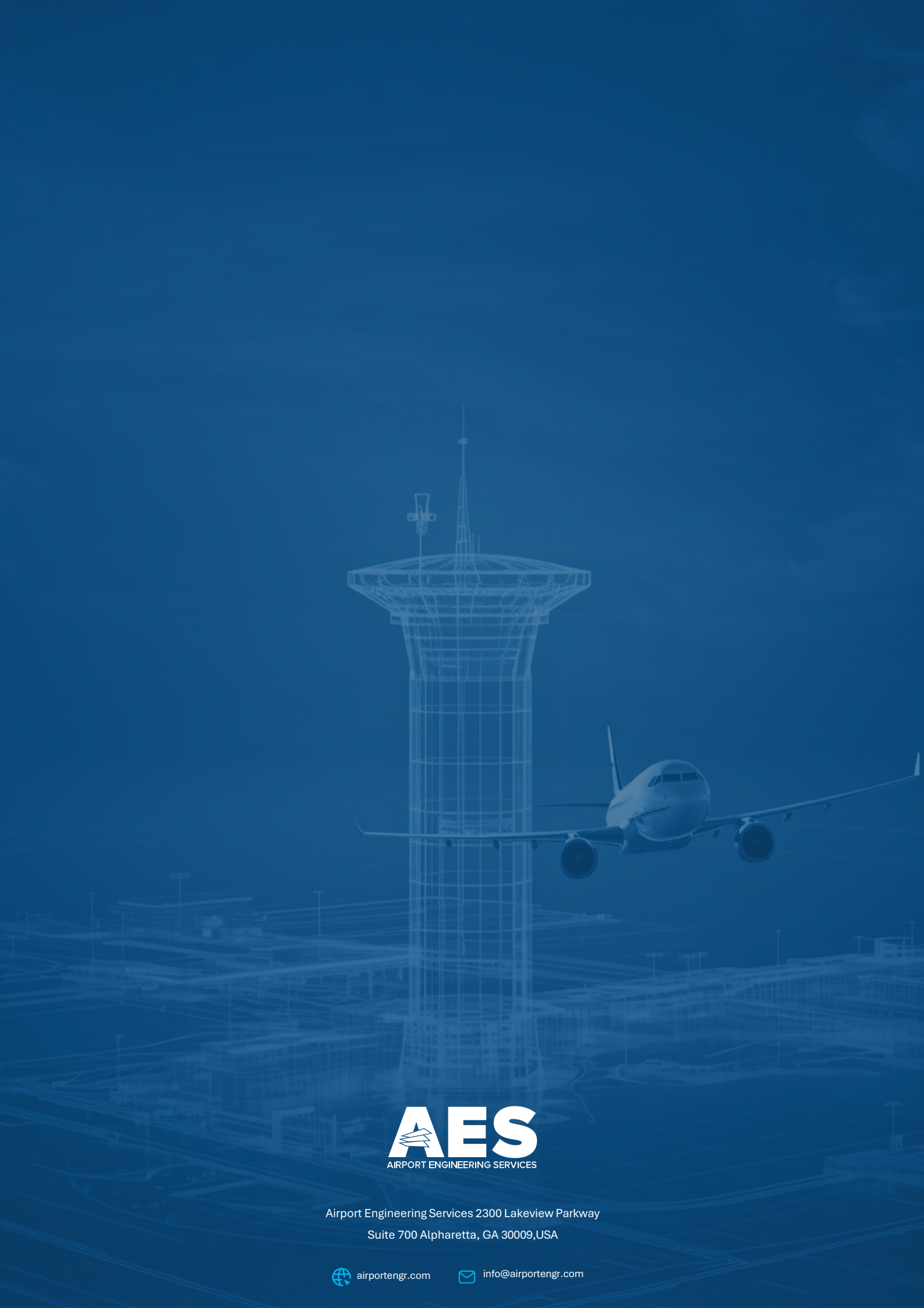
Client Portfolio

Our Vision

To be a globally renowned Consultancy Services Firm providing the highest quality holistic services which best suits our clients.

Our Mission

Provide reliable Consultancy Services in line with latest international standards, technology and industry trends along with the best health & safety practices offering complete solutions with competitive cost and time.



AES
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