Incheon Airport



Terminal Operation

SELF BAG DROP SYSTEM

SMART BTU

ATOM

SMART PASS

AirCUS

SELF CHECK-IN SYSTEM

FIDS

AirBRS

FLEXA

K-AIRPORT'S



AC-GPS

AERODROME CONTROL SYSTEM

BEST SOLUTIONS

SMART DE-ICING SYSTEM

Airside Operation

FOD AUTOMATIC DETECTION SYSTEM

SMART APRON CONTROL PLATFORM SOLUTION



ATM-PGM

A-DMA

A-VDGS

Incheon Airport

K-AIRPORT'S
BEST
SOLUTIONS

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IIAC INTRODUCTION

“BEYOND AN AIRPORT, CHANGING THE WORLD”

Incheon International Airport Corporation(IIAC) was established in 1999 to contribute to developing air transportation and the national economy by efficiently operating and managing Incheon International Airport and building airport infrastructure under the Incheon International Airport Corporation Act. Since opening the port to become a hub airport in Northeast Asia, Incheon International Airport has grown into a global airport specialized company based on its highest level of technology and airport service over the past 25 years

Company Name	Incheon International Airport Corporation (IIAC)
Date of Establishment	February 1, 1999
Inauguration Date	March, 29, 2001
Key Businesses	・Construction, Management, and Operation of ICN and Surrounding Area ・Consulting Business Related to Airport Construction and Operations ・Overseas Business



Key Milestones

’92 11 Groundbreaking ceremony

’96 05 Start of construction of Passenger Terminal 1

’99 02 Establishment of Incheon International Airport Corporation

’01 03 Inauguration of Incheon Airport

’03 09 Inauguration of Asia’s first CAT-III runway

’06 03 Inauguration of the Incheon Airport Free Trade Zone

’08 06 Inauguration of Concourse and Runway 3

’09 02 Won the first overseas project (consult for Erbli Airport in Iraq)

’13 09 Start of construction of Passenger Terminal 2

’15 06 Won management consulting project for the new Istanbul Airport

’17 10 Winner of ACI’s Airport Service Quality (ASQ) Award for 12 consecutive years

’18 01 Inauguration of Terminal 2
05 Won an operations contract for T4 at Kuwait Airport

’19 05 Opened the first duty-free shop in the arrivals hall in Korea
08 Cumulative passengers reach 700 million
11 Groundbreaking ceremony for the Phase 4 construction project

’20 08 Won Asia-Pacific’s first ACI Airport Health Accreditation (AHA)

’21 03 Won investment development bid for Batam Airport in Indonesia
03 20th anniversary of Incheon Airport
04 First in the world to win ACI’s highest-level Customer Experience Accreditation
05 Won the first aircraft maintenance (MRO) contract from IAI, Israel
06 Inaugurated Runway 4
07 Cumulative cargo reaches 50 million tons
10 Uninterrupted operation of air navigation safety facilities reaches 180,000 hours

’22 02 First Asian airport to join Global RE100
07 First in the world to receive ACI’s highest-level customer experience certification

’23 10 800 million cumulative passengers

’24 01 200,000 hours of uninterrupted and accident-free operation of air navigation safety facilities
12 Inauguration of the expanded Passenger Terminal 2

’25 12 Won investment development bid for Urgench Airport in Uzbekistan

“STRENGTHEN GLOBAL COMPETITIVENESS WITH SOLID BUSINESS KNOW-HOW”

Incheon International Airport, which has emerged as one of the world’s top five airports, is strengthening its global network competitiveness by expanding new routes and attracting airlines. In particular, it has preempted the competitive advantage as a hub airport in Northeast Asia through efforts to create demand, such as establishing fresh cargo infrastructure and attracting nonlanding tourism flights. It continued to cooperate with overseas airports such as MOUs and host global aviation conferences to solidify its status as a leading global airport.

Operation Performance

AVIATION NETWORK	53 countries	183 cities	101 airlines
FLIGHT OPERATIONS	374,039 flights		
INTERNATIONAL PASSENGERS	74,071,475 passengers		
INTERNATIONAL CARGO	2,946,898 tons		

based on regular flight as of 2025

Key Awards

Airports Council International: Airport Service Quality No.1

No. 1 Airport Service Quality for 12 consecutive years

Skytrax: Best Transit Airport

5-time winner of the Best Transit Airport Award

Global Traveler: Best Airport in the World

11-time winner of the Best Airport in the World Award

Business Traveler Asia-Pacific: Best Airport Duty-Free in the World

Winner of the Best Airport Duty-Free Shop in the World Award for 13 consecutive years

Air Cargo World: Air Cargo Excellence

8-time winner of an Air Cargo Excellence Award

WHY IIAC?

OPERATIONAL SAFETY

IIAC has received perfect scores in aviation security evaluations conducted by ICAO and TSA. Based on impeccable operations and world-class expertise, Incheon International Airport guarantees safe and secure airport operations.

- Minimum runway visibility of 75 m Category-III
- 200,000 hours of nonstop navigational operations
- The best baggage handling system with 2 luggage-free rates per 1 million pieces

EXCEPTIONAL PASSENGER SERVICE LEVEL

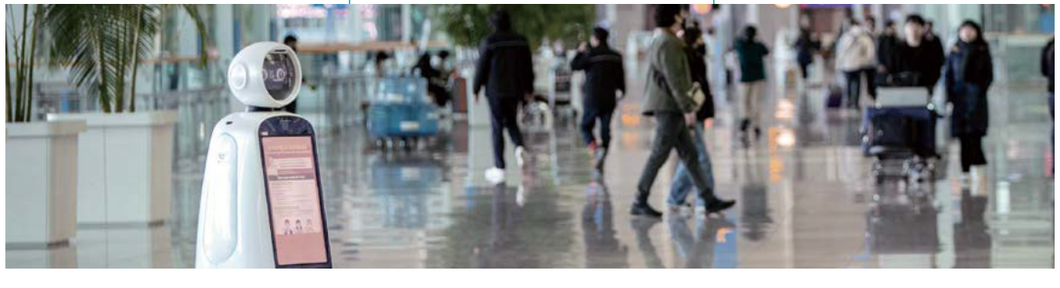
IIAC has established itself as a leading airport operator by delivering exceptional customer experiences. Incheon International Airport has achieved a unique record by ranking first in the World Airport Service Quality (ASQ) Survey for 12 consecutive years, from 2006 to 2017.

- World's Best Airport in service quality for 12 consecutive years
- Various cultural performances and art pieces to improve customer satisfaction
- Terminal 1 – Culture Port
  Terminal 2 – Art Port

TECHNOLOGICAL ADVANCEMENTS

IIAC continuously leads in innovative airport operations by developing and implementing advanced technologies such as artificial intelligence (AI) and the Internet of Things (IoT). With the new "smart paradigm" IIAC is enhancing customer satisfaction and operational efficiency.

- Automated check-ins and immigration
- Usage of AI robots in guidance, cleaning, and baggage handling
- Analysis and prediction of congestion, passenger flow, and baggage movement through big data



MAXIMIZING NON-AVIATION REVENUE

IIAC's non-aviation revenue accounts for more than 66% of its total revenue and has been steadily maximized through strategic commercial revenue development and efficient operation. In 2018, non-aviation revenue rose 9% when Terminal 2 opened.

- Since 2011, duty-free shops have ranked No. 1 in airport sales worldwide
- Seamlessly connecting travel excitement with duty-free shopping to elevate its value

SUCCESSFUL AIRPORT CITY

IIAC has been advancing the Airport City Development Project to create customer value and increase aviation demand, attracting a large-scale investment of USD 3.6 billion. As the development progresses, it is generating synergies among various commercial, office, and leisure facilities.

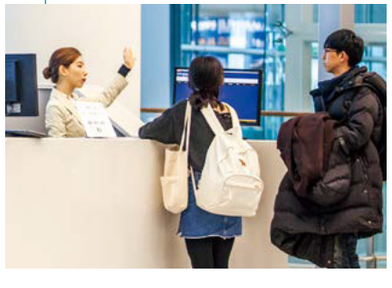
- Create new passenger demand and revenue streams
- Developing an integrated aviation and tourism cluster through projects such as a smart racing park, art storage facility, Hallyu theme park, and Oseong Mountain tourism development

DEDICATED AVIATION TRAINING

The Incheon International Airport Academy is one of the world's first airport training centers, and it is designated as a regional aviation training center of excellence by ICAO. The center operates 40 training programs, including ICAO- and ACI-certified programs as well as fellowship and customized training courses, to enhance employee capabilities.

- Over 4,000 airport executives from over 120 countries have completed training programs at Incheon International Airport Academy
- Established in 2024, the Korea Aviation Academy (KAA) aims to enhance aviation professionals' competencies





IIAC BUSINESS



IIAC BUSINESS

"LEAD THE FUTURE OF AIRPORTS BASED ON EXTENSIVE EXPERTISE AND SUCCESSFUL EXPERIENCES"

Leveraging world-class airport operation and management experience, IIAC is integrating overseas airport projects with cutting-edge airport solutions. The ultimate goal is to go beyond simply providing services and to lead innovation at the forefront of international airport operation and construction.
IIAC has successfully entered diverse markets, including Asia, the Middle East, and Africa, and aim to continue analyzing local market characteristics and collaborating with partners to set new standards in global airport operations.

OVERSEAS PROJECTS

01 **Providing expertise in airport construction and operation to countries worldwide**

02 **Offering customized services tailored to the characteristics and demands of local markets**

"REALIZE ADVANCED AIRPORTS INTEGRATED WITH THE LATEST INNOVATIVE TECHNOLOGY"

IIAC will maximize operational efficiency, enhance customer satisfaction, and achieve sustainable growth through advanced airport solutions incorporating the latest technology. With these innovations, IIAC aims to lead the future of airports and provide safe and convenient experiences to customers worldwide.
In particular, IIAC plans to combine overseas airport projects, such as airport construction and operational consulting services, with advanced airport solutions to provide specialized services to our customers. This integrated approach enhances operational efficiency and focuses on delivering the highest value desired by customers.

IIAC SOLUTIONS

01 **Implementing various innovative solutions such as One-ID System and Smart Apron Control Platform Solution**

02 **Maximizing customer satisfaction by creating an intelligent airport and a seamless passenger experience**

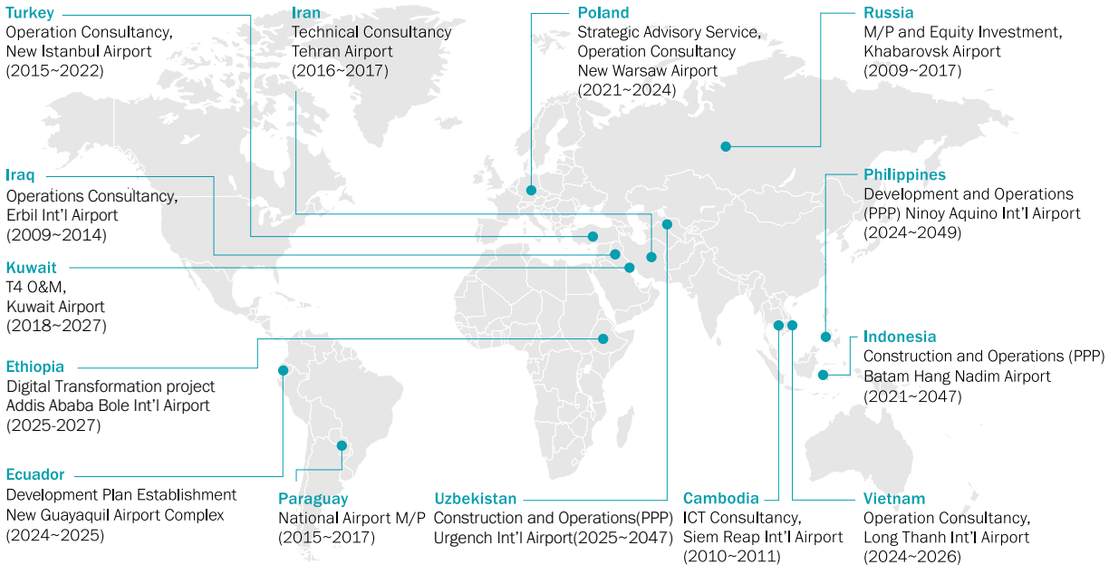


OVERSEAS PROJECTS

OVERSEAS PROJECTS

“THE VALUE OF EXPERIENCE BUILT THROUGH TIME AND EFFORT”

Based on its accumulated experience and expertise in airport construction, operation, and management, IIAC has secured overseas airport projects worth a total of USD 585.58 million across 42 projects in 18 countries, including the Uzbekistan’s Urgench International Airport PPP project, the Kuwait Airport Terminal 4 consignment operation project, Ethiopia’s Addis Ababa bole International Airport Digital Transformation project and the Vietnam Long Thanh International Airport management and operation consultancy, further strengthening its position as a global airport operator.



Business Scope

Based on its extensive expertise and rich experience, Incheon International Airport has been exporting its accumulated know-how in airport development and overall operations to the world. Our business scope mainly covers planning, construction, operations, and investment projects.

Consultancy Project

Planning/Construction

- Feasibility Study
- Master Planning
- Construction Management
- Project Management
- ORAT

Operations

- Aviation Marketing
- Commercial Development
- Passenger Service
- Aviation Security
- Staff Training

Investment Projects

- Public-Private Partnership (PPP) Projects
- Management Concession Project
- Equity Acquisition & Investment

KEY PROJECTS

Project Overview

Philippines Manila Ninoy Aquino International Airport Public-Private Partnership Project

Client	Department of Transportation (DOTr), Manila International Airport Authority (MIAA)
Project Period	25 years (2024~2049)
Contract Amount	USD 60 Million
Work Scope	Rehabilitation, Operation, Optimization, and Maintenance of Ninoy Aquino International Airport



Operation and Management Kuwait Airport T4

Client	Directorate General of Civil Aviation (DGCA)
Project Period	6 years (2018~2024)
Contract Amount	USD 160 Million
Work Scope	Operations, Management, Maintenance, Staff Training, Enhancement & Services Development, Etc.



Indonesia Batam Hang Nadim Airport Public-Private Partnership Project

Client	Batam Indonesia Free Zone Authority
Project Period	26 years(2021~2047)
Contract Amount	USD 37.4 million
Work Scope	Renovation of T1, Construction of T2, operation and maintenance(Including a new cargo terminal)



Uzbekistan Urgench Airport Public-Private Partnership Project

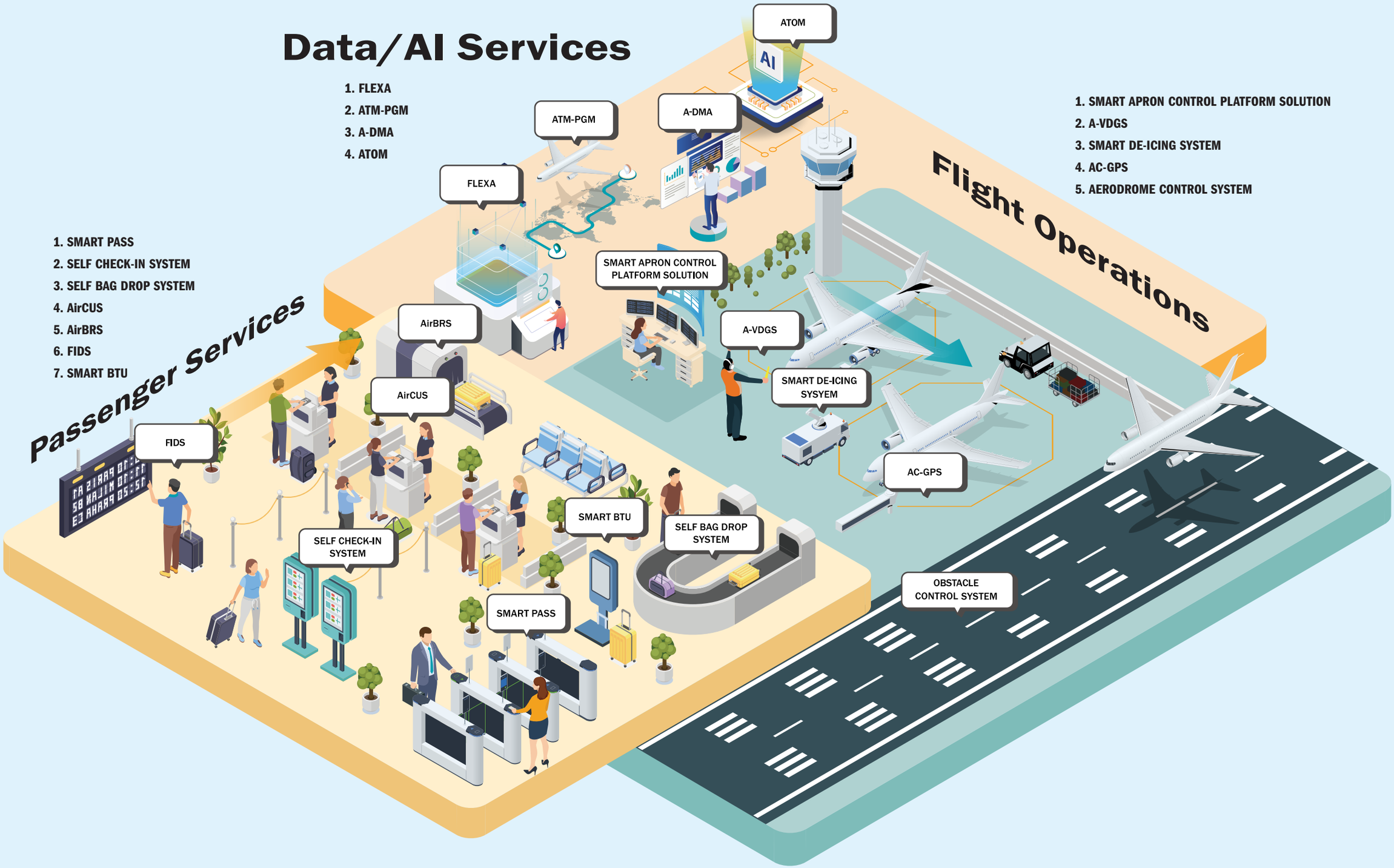
Client	Uzbekistan Airports
Project Period	22 years(2025~2047)
Contract Amount	USD 138.1 million
Work Scope	New Construction of passenger and cargo terminals, and ancillary facilities, modernization of existing airport facilities, and operation and maintenance.



IIAC SOLUTIONS

Passenger Services	18
Flight Operations	25
Data/AI Services	30

IIAC SOLUTIONS



SMART PASS

One-ID System

Document-free, face recognition service at departure and boarding gates



Benefit Points

+ Seamlessly and conveniently pass through various airport departure systems (e.g., departure halls, boarding gates) using only face recognition
+ Increased passenger satisfaction, faster passenger processing, enhanced security, and improved airport operational efficiency

Solution Video



Core Platform

- One-ID Creation/Management/Disposal
- Internal/External System Integration
- Management System
- Mobile System



Face Recognition System

- Extraction System
- 1:1, 1:N Matching Engine
- Device-specific SDK
- Dynamic Gallery



Registration System

- Mobile App
- Self Check-in Kiosk
- Dedicated Terminal



Face Recognition Terminal

- Provides automatic/manual mode selection functionality
- Self Departure Kiosk/Gate
- Self Boarding Kiosk/Gate

SysOne

www.sysone.co.kr/en/

Business Area

Immigration System
Airport/Port Automated Immigration Checkpoints, Biometric Recognition System

Airport System
One-ID System (Platform, Mobile, Departure Hall/Boarding Gate Terminal)

Access Control System
Automated Gate, Biometric Recognition System

CUBOX

www.cubox.ai

Business Area

Passenger Processing
- Self Departure Kiosk/Gate & Management Solution
- Self Boarding Gate & Management Solution
- ABC e-Gate & Management Solution

Biometric
- Face Recognition System

Video Analysis
- AI-Based Intelligent Video Analysis System
- AI-Based X-Ray Automated Prohibited Item Detection System

SELF CHECK-IN SYSTEM

An automated boarding pass issuance system used by multiple airlines



Benefit Points

+ Centralized management of all self check-ins, allowing real-time policy implementation
+ An administrator monitoring screen that intuitively displays usage and congestion levels



Stable Platform

- IATA CUSS TS 1.3, 1.4, 1.4Rev2, 1.5.1
- IATA Resolution 740, 792
- Compliance with IATA RP 1709c, 1791d Standards



Automated Recovery and Differentiated System

- Automatic recovery in case of a failure in the airline's Self Check-in application
- Even if some airline applications experience malfunctions, the CUSS platform operates normally



Real-time Message Transmission

- In case of a malfunction in Self Check-in, a real-time message is sent to the maintenance team



Visual Element Insertion

- Provide an automated software system that dynamically changes the Self Check-in waiting screen

aim Systems
automated & Intelligent mode

www.aim.co.kr

Business Area

High-tech
Factory Operation System, Factory Evaluation System, Equipment Operation System, Equipment Analysis System, Data Backup and Retrieval System

General Manufacturing
Small/Medium Factory Operation System, Data Backup and Retrieval System

Airport
Self Check-in, Self Bag Drop, Common Use Passenger Processing System (CUPPS), Baggage Reconciliation System (BRS), BHS Auto-Tag-Reader (ATR), Biometric-Based Business, Etc.

Key Businesses (including Others)

Provision of Automated Passenger/Baggage Solutions for Airports
Self Check-in and Self Bag Drop Systems

Smart Factory Implementation and Consulting Services for Semiconductor/Display Factories and Manufacturing Industry
Factory Operation System, Factory Evaluation System, Equipment Operation System, Equipment Analysis System, Etc.

Implementation Performance
- Development and Deployment of Self Check-in/Self Bag Drop Platform Software for IIAC
- Development and Deployment of Self Check-in/Next-Generation Common Use Passenger Processing System (Integrated CUPPS and Self Bag Drop System) for Korea Airport Corporation

SELF BAG DROP SYSTEM

Automatic baggage check-in system used by airlines



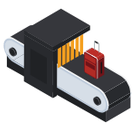
Benefit Points

- Real-time detection of human intrusion and changes in baggage status
- Baggage count and tub presence check



Stable Platform

- IATA CUWS Guide
- Compliance with IATA CUSS TS 1.5.1 Standard



Automatic Baggage Recognition

- Baggage requiring tub usage is automatically detected, enabling mandatory tub usage
- Baggage count check



Automatic Identification of Bag Wheel Position

- For safe baggage handling, the bag wheel position is automatically identified, guiding it to prevent direct contact with the baggage belt



Real-time Message Transmission

- In case of a malfunction in the Self Bag Drop, a real-time message is sent to the maintenance team

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AirCUS

New Common Use Passenger Processing Systems (CUPPS)

A common-use platform that allows multiple airlines to efficiently manage passenger processing tasks like check-in and boarding by sharing the airport's infrastructure (Certified for CUPPS CTE 1.04)



Benefit Points

- Reduce operating costs by sharing airport infrastructure such as counters, devices, and gates
- Provide system customization and optimization to meet the airport’s environments and requirements



Streamlined Passenger Processing

- Operation is integrated with a shared platform for maximized efficiency
- Manual work is reduced, processes are sped up, and automation errors are minimized
- Scalability and flexibility allow for increased demand and future expansions



Enhanced Airport Competitiveness

- Shorter wait times and seamless check-in/boarding improve passenger experience
- Cutting-edge technology boosts competitiveness as a global airport
- Stable operations attract more airlines and increase airport capacity



Cost Savings

- The initial system implementation costs and operations expenses for airlines were reduced
- Stable performance with minimal downtime reduces maintenance costs



Data-Driven Decision Making

- Real-time data supports operational and resource management decisions
- Efficient reporting helps improve airport services and operational environment

Urielsoft
The Best Partner of Aviation Systems

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Business Area

Passenger Transport System
We develop and provide all transport systems necessary for passengers from check-in to boarding

Interface Solution
We provide various system-to-system, system-to-device interface solutions

Airport Infrastructure
We design and provide the device and software required for check-in, immigration, and boarding

Training Solution
We provide training solutions for passenger processing program and x-ray security tasks

Consulting Service
We provide consulting services for introducing and configuring smart airport IT systems

Key Businesses (including Others)

Passenger Transport Solutions
- Check-in Platform/Application (CUPPS, CUSS)
- Local Departure Control System (LDCS, LBA)
- Baggage Systems (BRS, SBD)
- Check-in Devices (BPP, BTP, BGR, MRP)

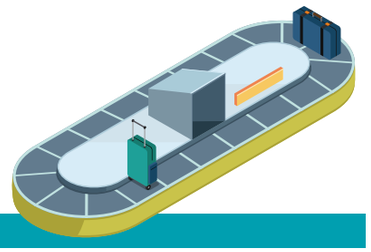
Operation and Management Solutions
- Declaration System (GD, APIS, PNR)
- Auto Border Control System
- Remote Device Management System
- Airport Airside Management System
- Flight/Cargo Information Display System

Future Solutions
- Biometric Passenger Transport System
- Off-Airport Check-in System
- UAM Passenger Transport System

AirBRS

Baggage Reconciliation System (BRS)

A system that identifies the real-time location of baggage and ensures that checked baggage is tracked and managed to be loaded onto the same flight as the passenger



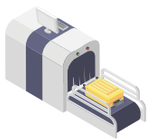
Benefit Points

- ✚ Provides accurate baggage reconciliation services in compliance with IATA Resolution 753
- ✚ Ensures fast and convenient verification of baggage matching with airline BSM information



Real-Time Tracking of Baggage

- Full compliance with IATA RP 1745 and IATA Resolution 753 (Baggage Tracking)
- Track the real-time location of baggage by scanning bags at tracking points from check-in to the final loading onto the aircraft
- Handles all bag types, such as normal, rush, and crew bags, and provides the bag details and its real-time status



Faster and Accurate Baggage Handling

- Scanning bags with wireless scanners increases speed and reduces human errors
- The real-time dashboard displays bag message transmission status, enabling immediate response to any issues
- Direct interface of additional information that is not included in BSM, such as passenger reservation information, to enhance accuracy



Maximized Efficiency with Real-Time Information

- Interfaces real-time airport information, including flight or boarding gate information, enabling immediate responses to any changes
- Enhances on-time departures by minimizing baggage mishandling, leading to improved airport operational efficiency



Services for Enhanced Convenience

- Ensure stable service delivery with a dual-structured baggage message transmission and reception modules
- Compact terminals are provided to improve operational convenience for handling baggage in ramp areas

FIDS

Flight Information Display System

A system that displays real-time flight operation information to airport users, airlines, and airport operation personnel



Benefit Points

- ✚ Configure the information display system using an information control system and internal/external system interfaces
- ✚ Display flight schedule information to airport users/operators on various devices composed of LCDs and LED modules

Solution Video



Page-Making

- It allows page tool display creation to optimize passenger service support and device display
- Flight information, airside control, check-in counter, and gate displays



Flight Data Processing

- Electronic Flight Strip
- Arrival Manager and Airspace Monitoring



Planning Modules

- It provides various automated features to support operating tasks and management of the flight schedule and aircraft



System Management

- IATA, ICAO Code
- Operation Factors
- User Authorization

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- Off-Airport Check-in System
- UAM Passenger Transport System

SmartPort Technologies

www.smartport.kr

Business Area

Solutions
Smart AODB, Smart FIDS, Smart FOCS, Smart MRO, Smart eSMS, Smart ATCS, Smart Simultaneous Implementation, Smart WMS

SI/SM
IT services for construction and operational management of airport and airline IT systems, Etc.

Consulting
ISP, Business Area Analysis (BAA), Business System Design (BSD), Etc.

Mechanical Equipment
Request for modification of business description
Simultaneous implementation of AI X-Ray, X-Ray Scanner, Express Center IPS, and other customs automatic sorting facilities, Etc.

Key Businesses (including Others)

Airport Operation Management System
Airport Integrated Operation Management, Airport FIDS, Airport Control Simulator

Airline Operation Management System
Airline operation management, crew management, maintenance history management

Airport Express Center Operation Management
Construction and operation management of the Express Center's automated sorting system

SMART BTU

Smart Baggage Test Unit

A passenger convenience service that measures the weight and size of baggage and determines compliance with airline regulations



Benefit Points

- Provide an integrated service, including measuring size and weight, offering airline-specific regulation guidance, and delivering content and advertisements
- Enhance management efficiency through remote control via the platform and maintain consistent scale accuracy with continuous after-sales service (A/S)

Solution Video



Maximized Operational Efficiency and Customer Convenience

- No need to provide a separate scale, reducing costs incurred due to regulation changes
- Improve efficiency in scale management
- Minimize confusion during check-in by pre-measuring baggage weight and size



Baggage Measurement

- Provide passengers with the baggage weight and size measurement results
- Check airline-specific regulations
- Verify compliance with regulations



Posting of Airline-specific Regulations for Departures

- Guide passengers based on carry-on/checked baggage regulations to determine baggage suitability
- Provide permissible quantities and detailed information, considering various scenarios such as exceeding specific dimensions, margin of error guidance, or offering carry-on information only



Broadcasting of Airport Content and Advertisements

- Display the video in portrait orientation when no luggage is on the device
- Display the same video in landscape orientation without interruption when luggage is placed for measurement

BluStoneDXT x CAS
We Weigh the World

www.blustone.co.kr

www.cas.co.kr

Business Area

Development of Integrated Services for Measurement and Metrology Hardware (H/W)
Development and operation of various integrated services combining blockchain, AI, and big data technologies based on measurement and metrology information

Integrated IoT Service Platform
Development of an integrated IoT platform for remote control of various devices such as healthcare, distribution-type smart scales, and smart BTU

Web/App Services
Development and provision of various Web/App services offering convenience, such as Smart Home, Smart Mirror, and apps for persons with disabilities

Key Businesses (including Others)

System and Service Development
- Development of Smart Scale Integrated Management Service
- Development of Incheon Airport Smart Quarantine System
- Development of KASTO Intelligent Meter Distribution Management System
- Development of Smart Metering and History Management System
- Development of Service Integrated Control Platform (BSD)
- Web/App Service Planning and Development
  - LH Smart Home, Smart Mirror, Home Repair Services for People with Disabilities, Internet Shopping Mall/Website, CBS Rainbow App, Etc.

Operation Management
- Incheon Airport Smart BTU Integrated Operation Management
  - HW/SW Maintenance, SW Feature Enhancement

Solution
Sensors, Industrial Metering, Research Metering, Distributed Metering, Metering, Health & Living, Calibration

SMART APRON CONTROL PLATFORM SOLUTION

A system that can selectively display and control multiple control support system information on a screen



Benefit Points

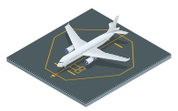
- Maximizes situational awareness for apron controllers by applying AI, big data, AR, and other technologies
- Quick decision support to enhance control work efficiency

Solution Video



Controller's Video View

- Displays 360° panorama view based on video stitching
- Displays thermal CCTV and tracking CCTV footage
- Displays apron CCTV footage



AI-Based Aircraft Identification

- Identifies and recognizes aircraft marks and colors
- Identifies and recognizes airlines
- Identifies ground-moving objects (operational equipment)
- Identifies facilities (terminals, taxiways, Etc.)



Digital Twin and Surround View

- Provides aircraft movement and planned route information
- Provides de-icing aircraft information
- Detects and notifies abnormal conditions like pushback, hot spots (crossroads), and restricted area intrusions



AI-Based Voice Recognition and Identification for Control

- Real-time input of control communication voice data
- Speaker recognition and diarization
- Visualization through chat-type interface
- Real-time warning system for readback discrepancies

GMT

www.gmtc-global.kr

Business Area

Marine
Marine safety/environment/logistics/security

Aviation
Remote control platform for aviation
Land-based K-UAM control platform

Navigation/Communication Solutions
Navigation, radar, ECDIS, ICS, Etc.

Consulting
Control fields for marine, aviation, and land (F/S, ISP, ISMP, Etc.)

Key Businesses (including Others)

Control
Airport Apron and Runway Control, Maritime Traffic Control System, Intelligent Traffic Control, UAM
Equipment
ECDIS, e-Nav, INS, AIS, ICS, VHF-DSC, MF/HF, Satellite, MOB, SART, EPIRB
Communication
AIS, LTE-M, VDES (Ministry of Oceans and Fisheries), V-Pass, LTE
Cloud Service
(PaaS) Control/GIS/AI Platform
(SaaS) Ship Monitoring, Smart Aquaculture, Fishing Gear Management Service Solution
Solutions: Air Traffic Control System, Long-Range Identification and Tracking System (LRIT)
SI: GMDSS System, Vessel Traffic Service (VTS) System
SW: Navigation Communication Equipment, Land-based AIS Base Station System
Service: Integrated Situation Control, e-Navigation System

A-VDGS

Advanced Visual Docking Guidance System

An automated and efficient aircraft visual docking guidance system that provides aircraft docking information to pilots when entering the parking area



Benefit Points

- Contribute to the safe operation of aircraft by providing pilots of approaching aircraft with information such as the remaining distance to the stop position and aircraft azimuth data
- Real-time monitoring and control of the operational status of aprons/gates and A-VDGS



Real-time Status Monitoring

- Monitor the operational status of the cargo parking stands (PDU control, low visibility and lightning operations, event log review, Etc.)
- Monitor parking stand approach through real-time Picture-in-Picture (PIP) surveillance (real-time streaming of webcam and PDU screen)

*Pilot Display Unit (PDU)



Integrated Monitoring

- Integrated status monitoring of Terminal 1, Terminal 2, Boarding area, and Cargo Terminal regions (monitoring the status of a total of 174 parking stands)
- Display the current parking stand status on the HMI based on data acquisition and calculation from the integrated system
- Alarm/Alert Functionality



Visual Cycle Guidance System

- Provide A-CDM operational information to apron operation and ground handling companies
- Provide weather information (e.g., lightning alerts), public announcements, Etc. to enhance airport operational efficiency and ground handling safety
- Apron/Gate



NMS Network Monitoring

- Servers and Workstations, Network Switches (L2, L3)
- Real-time network monitoring of PDU equipment

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www.ansetech.co.kr

Business Area

ICT Engineering Services 1
Railway, Navigational Aids in Airport, Vessel Traffic/Satellite Raido, National Defense

ICT Engineering Services 2
Smart City, Intelligent Transportation System, Etc.

Global Business
Official Development Assistance (ODA)

Research & Development
ICT-based Research & Development Service

Key Businesses (including Others)

Defense MRO (Maintenance, Repair, and Operations) Industry
Development of military maintenance capabilities, localization of military component manufacturing

Consulting Services
Electromagnetic pulse (EMP) impact analysis, radio interference analysis, radio measurements (signal, interference)

Products
Advanced Visual Docking Guidance System (A-VDGS), Smart Deicing System

SMART DE-ICING SYSTEM

Visualization and transmission of deicing information through visual information display devices, and real-time operation information management via the integrated information management system



Benefit Points

- Centralize all information required for aircraft deicing into the Integrated Management Server to automate deicing procedures and enhance operational efficiency
- Provide deicing status information in real-time to the Electric Message Board (EMB) and Information Input Client (IPC)

*EMB: Electric Message Board **IPC: Information inPut Client



Automatic Aircraft Guidance Integrated with Deicing Operation Management

- Automatic aircraft detection and deicing PAD location guidance
- Enhance aircraft type detection and location information analysis capabilities using the YOLO model with Lidar (3D) and thermal imaging (2D) AI video data

*You Only Look Once (YOLO)



Aircraft Detection and Position Tracking through Sensor Fusion

- Cross-complementation between multi-channel Lidar and thermal imaging cameras (Deep Learning via AI) to mitigate performance degradation due to external environmental changes (e.g., rain, snow, fog, low visibility)
- If each sensor independently fails to temporarily detect or track an aircraft, check the status of other sensors and switch the sensor priority



UI-based Information Delivery via IPC (Tablet)

- Prevent errors that may arise during information transmission via voice (conversation)
- Share operational status and result records with minimal tablet (pad) touches



Integrated Management Server and Client

- Collect information by communicating with other terminal devices such as the EMB, IPC, and Integrated Management Client
- Receive aircraft deicing information in connection with the airport system
- Check the deicing schedule and the status of the deicing area

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AC-GPS

Ground Power Unit (GPU)

A device installed under the passenger boarding bridge that converts terminal power into the required power for aircraft and supplies it



Benefit Points

- A power supply that continuously provides external 115V, 400Hz power to the aircraft instead of auxiliary engines for inspection
- It provides various information to operators, such as power factor of load, real-time operation status, input/output data display, Etc.

Solution Video



External GUI Panel

- AC-GPS ensures ease of operation by triple operation (Remote Control Box, External GUI Panel Output Connector)
- Support for various communication methods [RS232, RS422, RS485, Modbus, TCP/IP (Option)]

* GUI: Graphic User Interface



Physical Safety

- This product is a sealed structure and it is designed to be attached to the lower part of a boarding bridge. Access to AC-GPS is usually restricted
- The product meets the enclosure protection class IP55 to suit the external environment



Electrical Safety

- Prevention of accidents through primary and secondary isolation using transformer
- The fuse to protect overvoltage and overcurrent prevents accidents
- A surge protector is installed to protect the incoming induced lightning from the input



Safety

- In an emergency, the user can cut off the power of the AC-GPS quickly through the emergency stop button
- The interface of the boarding bridge is interlocked with the cable-reel system
- The error of the monitor circuit is protected in advance by real-time monitoring

EHWA TECHNOLOGIES INFORMATION
POWER SYSTEMS

www.eti21.com

Business Area

Industry
Uninterruptable Power Supply, Charger, Rectifier, Mold Transformer, Etc.

Power Generation/Plant
Automatic Voltage Regulator, Mold Transformer, Etc.

Public Transportation
AC Switchgear, DC Switchgear, SCADA System, AC-GPS, Etc.

National Defense
Power System for Guided Weapon/Radar System, Etc.

Key Businesses (including Others)

Data Center/Computer Center
Construction of Uninterruptible Power Supply System for Servers

Defense Industry
Construction of Power Supply System for Weapon Systems

Railway/Transportation Corporation
Construction of DC 1500V Power Supply System (for Electric Train Power Supply)

Nuclear Industry
Construction of Power Supply System for Critical Loads of Safety-Grade and Non-Safety-Grade Equipment

Aviation Industry
Construction of Ground Power Supply System for Aircraft

Aerodrome Obstacle Control System

The System is an automated system that accurately reproduces real-world terrain, objects, and various facilities through precision surveying. By providing a precise and detailed representation of the airport environment, it facilitates comprehensive Obstacle Control operations.



Benefit Points

- Enhancing Flight Safety and Operational Efficiency
- Establishing a Foundation for Aeronautical Information Utilization
- Implementing Aeronautical Information Management (AIM)



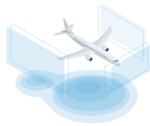
3D data management

- View and analyze 3D data layers from airborne LiDAR, high-resolution aerial imagery, and ground precision surveys. -Perform 3D OLS profile analysis in accordance with ICAO, FAA, and national/local standards.



Obstacle Safety Analysis

- Provide obstacle safety analysis and management with integrity-driven obstacle control.
- Detect and manage Obstacle Limitation Surface (OLS) penetrations.



e-TOD & AMDB

- Manage e-TOD and AMDB datasets based on accurate terrain and obstacle information to support precise flight procedure design.
- Ensure seamless aeronautical information exchange through AIXM conversion with data consistency and integrity.



AIP Chart & Precision Terrain Overlay on DEM

- Supports overlay visualization of ICAO Type A/B and Precision Approach Terrain Chart (PATC) 3D geospatial data on DEM.

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Business Area

Aerodrome Obstacle Control System

OLS (Obstacle Limitation Surfaces) Compliance & Safety Assessment

Aeronautical Applications (e-TOD, AMDB)

Key Businesses (including Others)

- Precision surveying of aerodrome obstacles
- Obstacle analysis & modeling, including simulation and 3D analysis
- Assessment of obstacle exceedance against Obstacle Limitation Surfaces (OLS)
- Safety assessment and risk review for aircraft takeoff and landing
- Operational support for obstacle management through an automated Obstacle Control System
- Establishing the foundation for Aeronautical Information utilization
- Building databases for AIM implementation and for use in aeronautical applications (e-TOD, AMDB)

FLEXA

Easy-to-use Decision Maker for Airports

Data-driven airport simulation and optimization solution



Benefit Points

- Combine passenger and aircraft data to provide optimal simulation results for airport operations
- Provide services even to data-deficient airports through technical collaboration with the world's largest aviation data company, Cirium

Solution Video



Terminal Resource Management

- Streamline airport resource operations, such as check-in and security screening, and provide an optimal staff allocation scheduler
- Calculate expected congestion and waiting time based on changes in operating hours/ personnel



Whole Terminal Simulation

- Provide predictive scenarios for potential changes in overall airport operations, such as airline relocation
- Derive the best proposal from the suggested scenarios and provide simulator results



Airport Masterplan Automation

- Calculate annual facility requirements for the airport using aviation data
- Provide technical support for optimal master planning by estimating expected saturation periods



Pax flow and traffic management

- Collect waiting time, queue, and movement path information per passenger
- Provide terminal foot traffic and passenger characteristics data through efficient passenger simulation

Flexa

flexa

Business Area

Solutions
Simulator & Master Planner (New Construction/Expansion Strategy Development)

Consulting Services
Terminal Optimization: Optimization and Improvement of Terminal Operations
Construction and Capacity Planning: Strategic Expansion Plans and Capacity Planning

Global Business
Survey Planning and Consulting Support for Passenger Delay Time Surveys

Key Businesses (including Others)

- Unmanned Airport Research and Development
- Air Traffic Management (ATM) Research and Development
- Consulting for Airline Relocation According to T2 Phase 4 Expansion
- Consulting on Optimal Solutions for T1 Security Screening Equipment Improvement
- Pre-Feasibility Study for Incheon Airport's Overseas Airport PPP Project

ATM-PGM (KPI Monitoring System)

Air Traffic Management–Performance Gap Management

A system that calculates and serves the KPIs recommended by ICAO to measure the performance of air traffic in the country



Benefit Points

- Rapid decision support solution for aviation traffic management
- A safe and efficient air traffic management driven by data



Introduction to ATM-PGM (Air Traffic Management-Performance Gap Management)

- A solution that derives Key Performance Indicators (KPIs) as recommended by the International Civil Aviation Organization (ICAO) to measure national air traffic performance and displays a variety of analysis results
- Management of annual air traffic performance goals



ATM-PGM Features

- KPIs measured in real time over months or years
- Calculating and storing intermediate data in a database for providing results of long-period KPIs by real-time
- Aircraft flight path analyzed based on international standard aircraft track format (e. g., Asterix Cat.)



Main Features–Dashboard

- Dashboard for monitoring overall KPI goal management
- Provide historical and current year values for the relevant KPI
- Provide current-year target values for the relevant KPI



Main Features–Detailed Analysis of Individual KPIs

- Common Features: Screen reset, layout configuration, KPI result report
- Provide chart results by airport
- Provide chart results by airline

IB Leaders

www.ibleaders.co.kr

Business Area

Solutions
IB Sheet, IB EFS, GEO-GEN, SKY-ROAD, IB-TWRSIM

Aviation System Development
Aviation Traffic Management, Airport Operations Management, Aviation Safety Management, Aviation Information Management

UAM/UTM System Development
UAM Flight Management System, UAM Traffic Management System, Drone Traffic Management (UTM)

Key Businesses (including Others)

Integrated Aeronautical Information Management
Advanced Meteorological Information (AMET), Digital Aeronautical Information (DAIM)

Air Traffic Flow Management
Airport Collaborative Decision Making (ACDM), Network Operations (NOPS), Runway Sequencing (RSEQ)

Flight Route Management
Communications Infrastructure (COMI)

Airspace & Airport Cap Capacity Management
Airport Accessibility (APTA)

Aviation Safety Management
Safety Assurance, Safety Promotion

A-DMA

Airport Digital Transformation Maturity Assessment

Developed by Incheon International Airport, A-DMA is the first SaaS platfrom to assess, benchmark, and guide your airport digital transformation.



Benefit Points

- Clear Visibility of DX Maturity
- AI-Driven Global Benchmarking
- End-to-End DX Management Platform
- Actionable Short- and Long-Term DX Roadmaps
- Enhanced Operational Efficiency and Service Innovation



Web-based assessment with AI insight and benchmarking

- End-to-End Web Platform AI-Powered
- AI-Powered Best Practices
- Benchmarking Insights



Diagonosis Services

- Preliminary Diagnosis
- Detailed Diagnosis



Expert guidance with automated PDF reporting

- Expert-Driven Strategy
- Automated Reporting



DX Governance & KPI Management

- DX KPI definition and tracking
- Progress monitoring by domain and indicator
- Contiunuous improvement with AI support

Incheon Airport

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A-DMA Business Area

Airport Digital Maturity Assessment
Assessing the digital transformation maturity of airports.

DX Strategy & Roadmap Advisory
Supporting digital strategy development and short-, mid-, and long-term roadmaps

Benchmarking & Best Practice Intelligence
Providing global airport benchmarking and best practice insights

A-DMA Key Businesses Area (including Others)

Digital Maturity Assessment SaaS
A SaaS platform for airport-specific digital maturity assessment

AI-assisted Evaluation & Reporting
AI-supported assessment, analysis, and automated reporting

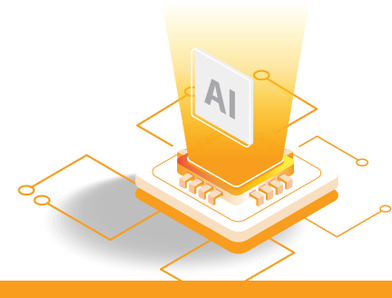
Global Airport Bechmarking
Comparative analysis by airport size, region, and maturity level

DX Improvement & KPI Execution
Connecting assessment results to actionable KPIs and improvement initiatives

ATOM

AI-powered Terminal Operations Manager

Automate, Optimize, and Transform operations to deliver seamless airport management. Real-time congestion insights via AI video analytics on the land-side; automated and optimized gate and carousel allocation on the air-side — all in one unified platform.



Benefit Points

- Automation: AI-powered automation reduces manual workload through real-time congestion monitoring, security threat detection via video analytics, and intelligent resource assignment
- Optimization: Delivers measurable KPI improvements through data-driven optimization of resource assignment, minimized passenger walking distances, and reduced aircraft turnaround times



AI-Powered Terminal Monitoring

- Real-time congestion analysis: Tracks queue lengths, wait times, and passenger density
- Security incident detection: Identifies crowd anomalies via video analytics



Predictive Resource Optimization

- Demand forecasting: Predicts passenger volumes using historical data
- Resource allocation: Optimizes check-in counter and security staffing



Airside Operations Optimization

- Intelligent carousel assignment: Allocates carousels to minimize walking distances
- Smart stand allocation: Reduces ground handling costs and remote stand usage



Automated Request Management

- AI chatbot interface: Receives resource reallocation requests from airlines
- Intelligent evaluation: Assesses feasibility of operational change requests

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ATOM Business Area

Airside Operations Optimization Data-driven gate and carousel allocation optimization and automated reallocation processing through AI chatbot

Landside Terminal Monitoring predictive resource allocation for security checkpoints and check-in counters and AI video analytics-based real-time congestion monitoring

ATOM Key Businesses(including Others)

Airside
- Stand Allocation System
- Carousel Assignment Optimizer
- AI Reallocation Chatbot

Landside
- Resource Allocation Optimizer
- Video Analytics Congestion Monitor
- Queue Wait Time Predictor

aim Systems
automated & Intelligent mode

GMT

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BluStoneDXT

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Technologies

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We Weigh the World

Urielsoft
The Best Partner of Aviation Systems

CUBOX

WAVE TECH

ETI EHWA TECHNOLOGIES INFORMATION
POWER SYSTEMS

SysOne

Flexa

Incheon Airport

Contact International Investment and Consulting Group
Tel +82-32-741-2104
Email jy.lim@airport.kr
Address 47, Gonghang-ro 424beon-gil, Jung-gu, Incheon (22382)

www.airport.kr

