



ABM *for* AVIATION

Technology Solutions Guide

Technology Makes Airports Responsive to Traveler Needs

While serving hundreds of thousands of travelers every day, your airport is also generating millions of data points.

Those data points are an opportunity to improve traveler experience, gain operational efficiencies, and automatically direct teams to respond to needs at gates and concourses at peak times.

In working with some of the busiest airports around the country, ABM is using and piloting new technologies to optimize virtually all aspects of facility management and cleaning with measurable results.

ABM works in partnership with innovative IoT and data platforms leaders and we are creating unique technology solutions based on what airport leaders are asking for.

Here is a snapshot of what we are working on to create responsive airports:



Gate Traffic Data



Digital Counters
& Alerts



ACI Survey Data
Integration



Smart Restrooms



Internet of Things



Real-Time
Response Systems



Centralized
Dashboards



Innovation
Incubation



Smart Restrooms and Their Impact on Traveler Satisfaction

Washroom and terminal cleanliness are the two most essential infrastructure factors that impact overall passenger satisfaction according to reports from Airports Council International. Restrooms are typically a passenger's first destination after they deplane. ABM teams go beyond scheduled cleaning to use data and technology to surge crews to specific gates and times to respond to a day's air traffic.

Attendants and Technologies

ABM scheduling and supporting technologies work in tandem to ensure restrooms are clean, functioning and fully stocked with paper and soap. Many leading airports have a full-time attendant in most restrooms to keep everything clean, dry and stocked. Attendants are trained to anticipate customer needs whether pointing a guest to an available stall or helping out the elderly or those with mobility challenges.

Restroom Ratings and Immediate Response

ABM is using technology that lets passengers rate their experience as "exceptional," "average" or "poor" by selecting a happy, neutral, or sad face on a tablet as they exit. If they pick the sad face, they get a series of options to share feedback, from cleanliness to lack of supplies to a water leak. Within seconds, an ABM supervisor gets a mobile alert and can act to quickly correct the issue.

"Smart Clean" Tech

Working with airport facility teams, ABM is helping pilot solutions across the IoT maintenance ecosystem to gain new real-time insights to exceed traveler expectations and maximize productivity and cost efficiency. This "Smart Clean" package provides detailed information about restrooms and janitorial staff, including passenger throughput, cleaning time stamps, staff activity and the alert log.

IoT Innovation

A host of top-tier companies is packing solutions, featuring IoT equipped flush and urinal valves, faucet alerts for leaks and clogs, and water usage monitoring. Vacancy indicator lights on bathroom stalls help queues move quickly while tracking usage and peak times.



ABM Clean: Intelligent Platform for Airport Operations

ABM Clean is an intelligent platform that gives airport leaders unmatched visibility into operations. Using proprietary artificial intelligence (AI), beacons and mobile devices, ABM Clean delivers more functionality than any other solution on the market.

Demand-Based Resourcing

ABM Clean enables you to schedule services and assign employees based on where people are needed most. You can set automatic schedules or redirect resources to priority tasks throughout the day. Work is tracked as it is completed.

Beacons for Real-Time Intelligence

ABM's revolutionary beacon technology optimizes work by demand instead of by resources. Work order statuses, team member locations, audit results and other factors are all viewed in real time. Task start/stop times are logged to track and understand time required to perform the task. This data provides performance metrics to increase workforce productivity, gain efficiency, and optimize resource allocation and cross-utilization.

Faster Response Times

Through real-time proximity data and AI, the nearest team member is automatically dispatched to support emergent work orders. Problems are identified and

resolved faster. Satisfaction issues are mitigated before they escalate.

Flight Data Integration

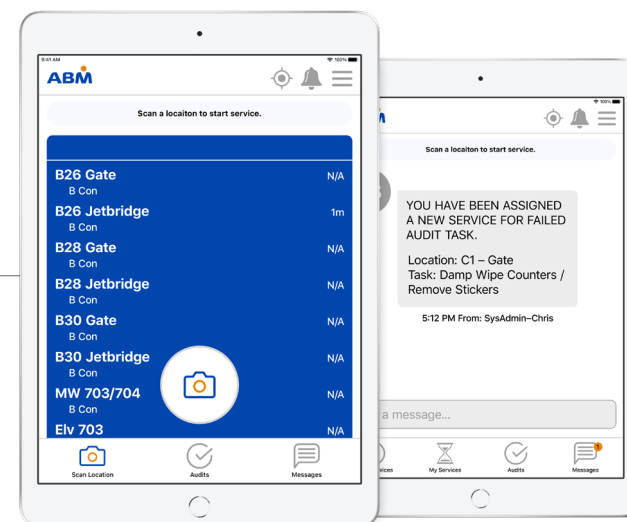
Real-time OAG flight status data is integrated directly into the ABM Clean platform, automatically adjusting staffing workflows to best serve both the airport and travelers.

Costly Hardware Investments Avoided

With ABM Clean's AI-driven software, there is no hardware to install, delivering greater visibility than any sensor-based platform. Real-time flight data drives modeling to provide insights from occupancy to consumable levels.

Sensor Data Errors Mitigated

With each sensor/unit installed in the airport, you risk inaccurate data and costly repairs. That hardware also gets outdated rapidly and may not integrate with any future CMMS, adding cost to replace equipment.



ABM CLEAN: Real-Time Intelligence

- ✓ Schedule Tasks
- ✓ Assign Resources
- ✓ Scan Locations
- ✓ Check Off Completion
- ✓ Get Notes from Teams
- ✓ Send Notes and Reassign Failed Tasks
- ✓ Identify Priorities
- ✓ Reassign Teams for Urgent Services

Mission Control for Airport Facility Services

The emerging integration of data, systems, IoT-connected tools and mobile devices will create new ways to improve the traveler experience for facilities teams and airport leaders.

Real-time Response

ABM aviation solutions give airport teams new tools to schedule their days, reset priorities and respond to the airport's changing needs in real time. Using gate data, passenger forecasts for the next month and seasonal peaks as well as peak periods unique for your airport, you gain a predictive model ready when passenger traffic surges.

Centralized Dashboard and Control

That same data creates a single source of truth collected in one dashboard to help airport teams make day-to-day and longer range decisions. Now this cross-platform data can be used for integrated predictive analytics. Issues are solved before they become problems. Labor is managed with ultra-efficiency. Trends are identified early. All this information provides data-driven metrics to determine the macro effects of janitorial investments over time, helping airports set benchmarks and optimize efficiency and cost savings.

Innovation Incubator for Airports

ABM is working with the teams at ATL and other airports to develop innovation incubators for tech solutions to elevate guest services and custodial efficiencies. We are identifying emerging systems and technologies that align to the unique needs of each airport.

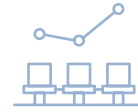


Blue Sky Opportunities

Data and technology open your airport to new opportunities to elevate the traveler experience while optimizing health and safety initiatives, operational efficiency, cost savings and resource management.

The ABM aviation team is ready to share more about our technology solutions, best practices, emerging trends and their impact on passenger satisfaction scores at some of the leading airports in the country. Let's talk about accelerating innovation for your airport and your travelers.

[ABM.com/Aviation](https://abm.com/aviation)
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