BotIQ Systems

Airports & Transit

INDUSTRY CONTEXT

Airports, rail stations, and transit hubs manage large volumes of passengers moving through constrained spaces under strict safety, security, and compliance requirements. Even minor service disruptions, congestion, or unclear messaging can escalate quickly—causing delays, crowding, and safety concerns. Static signage and manual announcements are often too slow or inconsistent to keep pace with rapidly changing conditions.

Operators require automated, location-specific communication that adapts in real time, improves passenger flow, and supports safe, efficient operations across terminals and platforms.

Scenario

During peak travel hours, a terminal experiences congestion near security checkpoints and platform changes due to a temporary closure. Staff struggle to redirect passengers quickly, resulting in crowd buildup, missed connections, and traveler frustration.

BotIQ Systems Solution

BotIQ delivers a responsive passenger communication and flow management system:
- Dynamic Digital Displays are placed at entrances, checkpoints, concourses, platforms, and transfer points.
- Precision Sensing LiDAR monitors passenger density, queue buildup, and movement patterns.
- The LiDAR Controller evaluates congestion thresholds and triggers automated messaging.

- Optional audio alerts reinforce critical announcements in noisy environments.
- Solar and cellular options support temporary deployments during construction or events.

Messaging updates automatically as conditions change—reducing bottlenecks, improving wayfinding, and enhancing passenger safety.

AIRPORT & TRANSIT USE CASES

Use Case 1: Crowd Density & Congestion Management

Description
Detect and manage passenger congestion at checkpoints, platforms, or concourses before conditions become unsafe.

Example Display Messages
- "AREA CONGESTED — USE ALTERNATE ROUTE"
- "CHECKPOINT BUSY — PROCEED TO GATE B"
- "PLATFORM FULL — PLEASE WAIT"
- "SLOW MOVING TRAFFIC AHEAD"

Value
- Improved passenger flow
- Reduced overcrowding
- Safer terminal operations

Use Case 2: Service Disruptions & Platform Changes

Description
Communicate real-time service changes clearly and immediately to passengers.

Example Display Messages
- "SERVICE DELAY — EXPECT 10-MIN WAIT"
- "PLATFORM CHANGE — FOLLOW EXIT A"
- "TRAIN CANCELLED — USE BUS SERVICE"

- "GATE CHANGE — CHECK MONITORS"

Value
- Faster passenger response
- Fewer missed connections
- Reduced staff intervention

Use Case 3: Wayfinding & Passenger Guidance

Description
Guide passengers efficiently through terminals during normal operations and special events.

Example Display Messages
- "SECURITY CHECKPOINT → THIS WAY"
- "BAGGAGE CLAIM → LEVEL 1"
- "TRANSFER TO LINE 2 → RIGHT"
- "EXIT FOR GROUND TRANSPORTATION"

Value
- Improved traveler experience
- Reduced confusion and congestion
- More efficient use of staff

Use Case 4: Safety & Security Zone Messaging

Description
Warn passengers of restricted areas, hazards, or safety zones within terminals or platforms.

Example Display Messages
- "AUTHORIZED PERSONNEL ONLY"
- "STAY BEHIND YELLOW LINE"
- "NO ENTRY — RESTRICTED AREA"
- "WATCH YOUR STEP"

Value

- Improved safety compliance
- Reduced incidents
- Clear boundary enforcement

Use Case 5: Emergency & Evacuation Communication

Description

Deliver immediate, authoritative instructions during emergencies such as evacuations, severe weather, or security incidents.

Example Display Messages

- "EMERGENCY — EVACUATE IMMEDIATELY"
- "FOLLOW EXIT SIGNS"
- "SHELTER IN PLACE — AWAIT INSTRUCTIONS"
- "SECURITY INCIDENT — REMAIN CALM"

Value

- Faster, safer evacuations
- Reduced panic and confusion
- Improved coordination with emergency response

OPTIONAL ENHANCEMENTS FOR AIRPORTS & TRANSIT

- AI Cameras: Detect unusual behavior and congestion patterns
- Audio Alerts: Ensure announcements are heard in noisy terminals
- Solar Power: Temporary or outdoor deployments
- Cellular Connectivity: Rapid installation without local networks

WHY BOTIQ SYSTEMS FOR AIRPORTS & TRANSIT

- Automates passenger communication and flow management
- Reduces congestion without increasing staff workload
- Adapts instantly to operational changes
- Enhances safety, compliance, and passenger experience