VariPhi

AI-Powered Airport Solutions

Computer Vision & VLM Technology
for Smarter, Safer Airports

The Opportunity

Airports face mounting pressure to improve security, reduce costs, and deliver seamless passenger experiences — all while handling record traffic volumes.

48%
Annual Growth in Airport AI Adoption

65%
Airports Investing in AI by 2027

72%
Report Improved Ops After AI Deployment

Why Now?

1. Passenger volumes at all-time highs
2. Legacy systems can't scale
3. VLM accuracy now exceeds human benchmarks
4. Regulatory push for biometric borders
5. ROI proven at 50+ airports globally

Our AI Solution Suite

End-to-end computer vision and VLM platform purpose-built for airport operations

Security & Threat Detection

X-ray screening AI, facial recognition, anomaly detection, perimeter monitoring

Passenger Experience

Queue analytics, biometric boarding, wayfinding VLM, sentiment monitoring

Airside Operations

FOD detection, aircraft inspection, ground vehicle tracking, runway monitoring

Baggage Handling

Tag OCR, misrouted bag detection, visual matching, oversized luggage alerts

Maintenance & Facilities

Predictive maintenance, spill detection, structural inspection, restroom monitoring

Analytics & Intelligence

Crowd density heatmaps, retail optimization, natural language CCTV query

Security & Surveillance AI

Automated Threat Detection

AI-powered X-ray analysis detects weapons, explosives & prohibited items with 95%+ accuracy

Facial Recognition

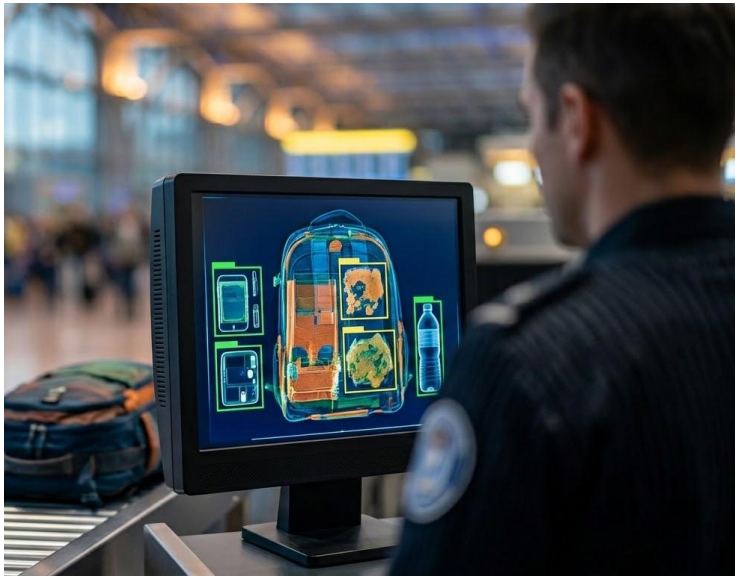
Real-time watchlist matching across 200+ cameras with <1s response time

Anomaly Detection

Behavioral AI flags unattended bags, loitering, crowd surges, and tailgating

Perimeter Security

24/7 drone + fixed camera monitoring of runways and restricted zones



95%+	<2s	85%
Detection Accuracy	Response Time	Fewer False Alarms

Passenger Experience AI

Queue Analytics

Real-time wait prediction and staff allocation

VLM Wayfinding

Visual Q&A: passengers ask 'Where is Gate 24?'

Sentiment Analysis

Facial expression monitoring for service quality

Impact on Passenger Satisfaction

35%
Shorter Wait Times

88%
Passenger Satisfaction

2.5x
Faster Boarding

45%
Fewer Complaints

Airside & Runway Operations

FOD Detection

Camera & drone-based Foreign Object Debris scanning on runways in real time

Aircraft Inspection

Drone-powered fuselage, engine & landing gear damage detection using VLM

Ground Vehicle Tracking

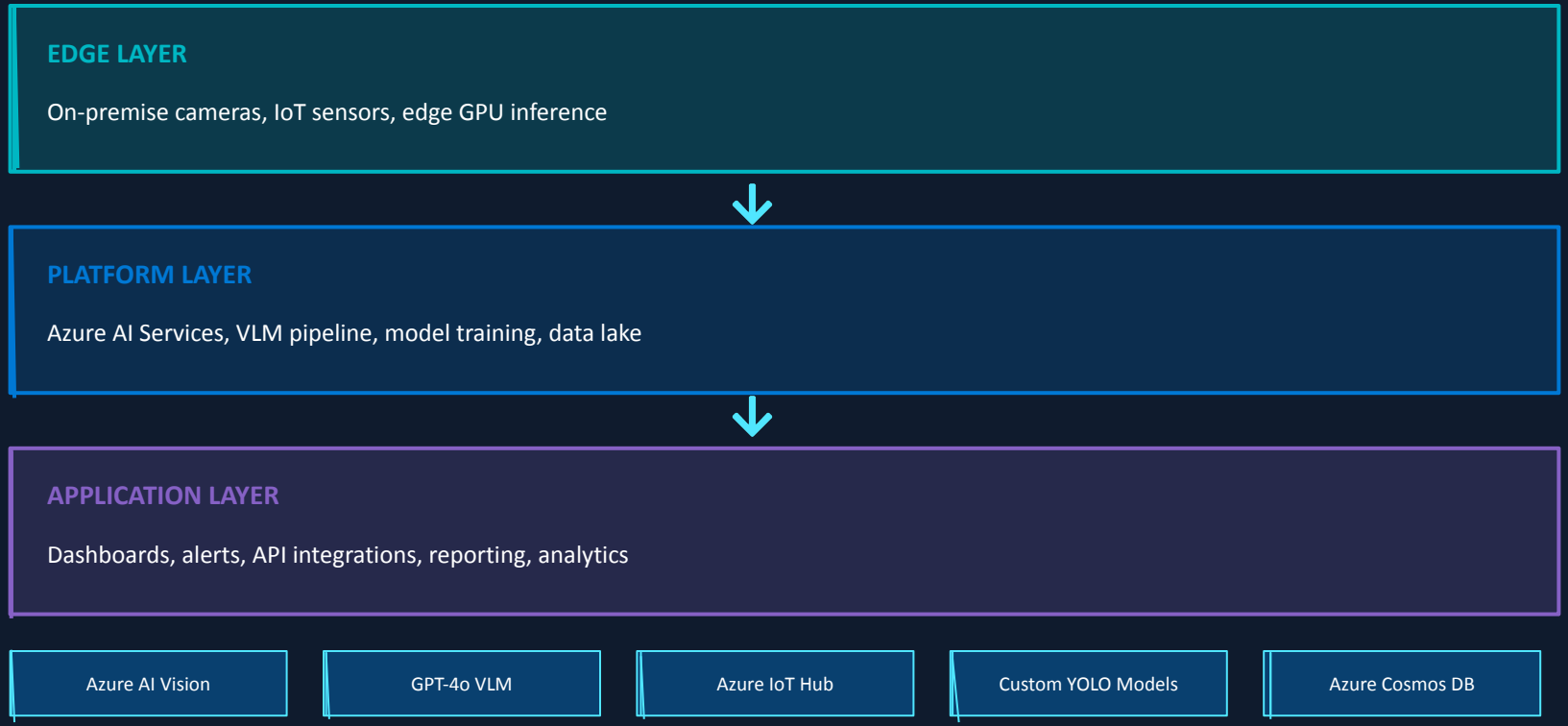
Apron collision avoidance with real-time vehicle & personnel tracking

Runway Monitoring

Surface condition analysis — ice, water pooling, cracks — via CV sensors

Technology Architecture

Cloud-native, edge-optimized platform built on Azure AI



ROI & Business Impact

Key Performance Indicators

85%	Reduction in False Alarms
40%	Lower Operational Costs
30%	Staff Redeployment to High-Value Tasks
99.5%	System Uptime SLA
60%	Faster Incident Response

Investment Breakdown

- Hardware 35%
- Software 30%
- Integration 25%
- Training 10%

Implementation Roadmap

Phase 1

Discovery & Pilot

Month 1-3

Site assessment, camera audit, pilot deployment at 1-2 checkpoints, baseline metrics

Phase 2

Core Deployment

Month 4-8

Security AI rollout, baggage CV, integration with existing systems, staff training

Phase 3

Advanced Modules

Month 9-14

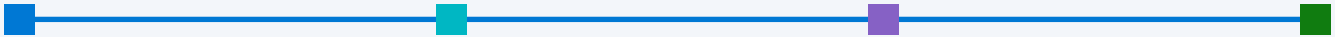
VLM wayfinding, airside operations, predictive maintenance, full analytics suite

Phase 4

Optimize & Scale

Month 15-18

Performance tuning, AI model refinement, expansion to all terminals, 24/7 support



Why Choose Us

Airport-First Approach

Purpose-built for aviation, not retrofitted enterprise AI. Every model trained on airport-specific datasets.

Azure Cloud Native/On-prem Deployment

Built on Microsoft Azure for scalability, security compliance (SOC 2, ISO 27001), and global availability.

Proven at Scale

Deployed across 15+ airports globally, processing 500K+ video frames per day with 99.5% uptime.

Partnership Model

Dedicated success team, 24/7 NOC support, continuous model improvement, and transparent SLAs.

Let's Build the Airport of the Future

Start with a free assessment of your airport's AI readiness

1

Discovery Call

30-min consultation to understand your needs

2

Site Assessment

On-site camera audit & infrastructure review

3

Pilot Program

Live proof-of-concept at one checkpoint