

Intelligence At Every Layer

IntegraOS™

One operating platform behind Video, LiDAR and Radar - from resilient edge detection to enterprise orchestration, automated response and measurable engineering outcomes.

- Detect with confidence
- Decide in real time
- Act automatically
- Prove the outcome

IntegraOS™ Is Behind the Intelligence

Every layer. One operational framework.

A complete intelligence path - not another isolated application

IntegraOS connects diverse technologies, translates protocols, fuses detections, applies operational logic and delivers the right response. The same platform can operate at the edge, across an enterprise and as an optional cloud service.

ACTION + EVIDENCE

DMS • beacons • alerts • reports • synchronized replay

OPTIONAL CLOUD / SaaS

portfolio access • cross-enterprise insights • managed services

ENTERPRISE OPERATIONS

unified UI • digital twin • engineering studies • orchestration

IntegraOS Edge Intelligence

fusion • rules • tracking • local recording • resilient automation

FIELD + SENSOR LAYER

video • LiDAR • radar • controllers • signs • third-party systems

Local resilience

Critical detection, logic, recording and response continue at the edge without dependence on cloud, cellular or internet connectivity.

Unified operations

One visual framework supports configuration, health, alerts, maps, playback, reports and multiple simultaneous use cases.

Open integration

Drivers and bridges connect sensors, controllers, signs, legacy devices and third-party applications.

Expandable value

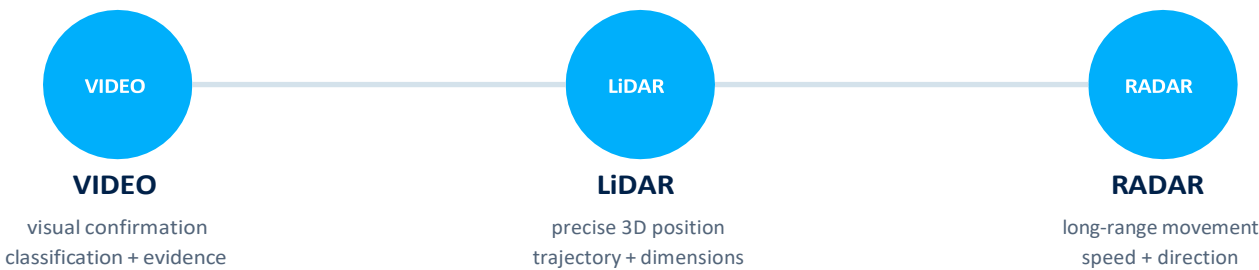
Add locations, technologies, analytics and workflows without rebuilding the operating model.

The intelligence is consistent from device to decision.

Field inputs may change. IntegraOS keeps the operational language, automation and evidence model consistent.

Complementary Sensors. Higher-Confidence Decisions.

Integra converts signals into shared context.



IntegraOS Fusion + Orchestration



One Deployment. Multiple Operational Returns.

- Safety + VRU protection
- Traffic operations + planning
- Security + perimeter
- Parking + logistics
- Engineering evidence
- Automated response

Protect VRUs. Find Risk Before the Crash.

Continuous conflicts, near misses and exposure intelligence.



PEDESTRIANS • CYCLISTS • SCOOTERS • WHEELCHAIR USERS • WORKERS

From crash history to leading indicators

IntegraOS can continuously measure how road users move, where conflicts develop and which conditions repeatedly create risk - giving engineers evidence before a severe outcome occurs.

TTC Time-to-collision	PET Post-encroachment time
ΔV Closing speed	GAP Minimum separation
PATH Evasive movement	EXP VRU exposure

Engineering study outputs

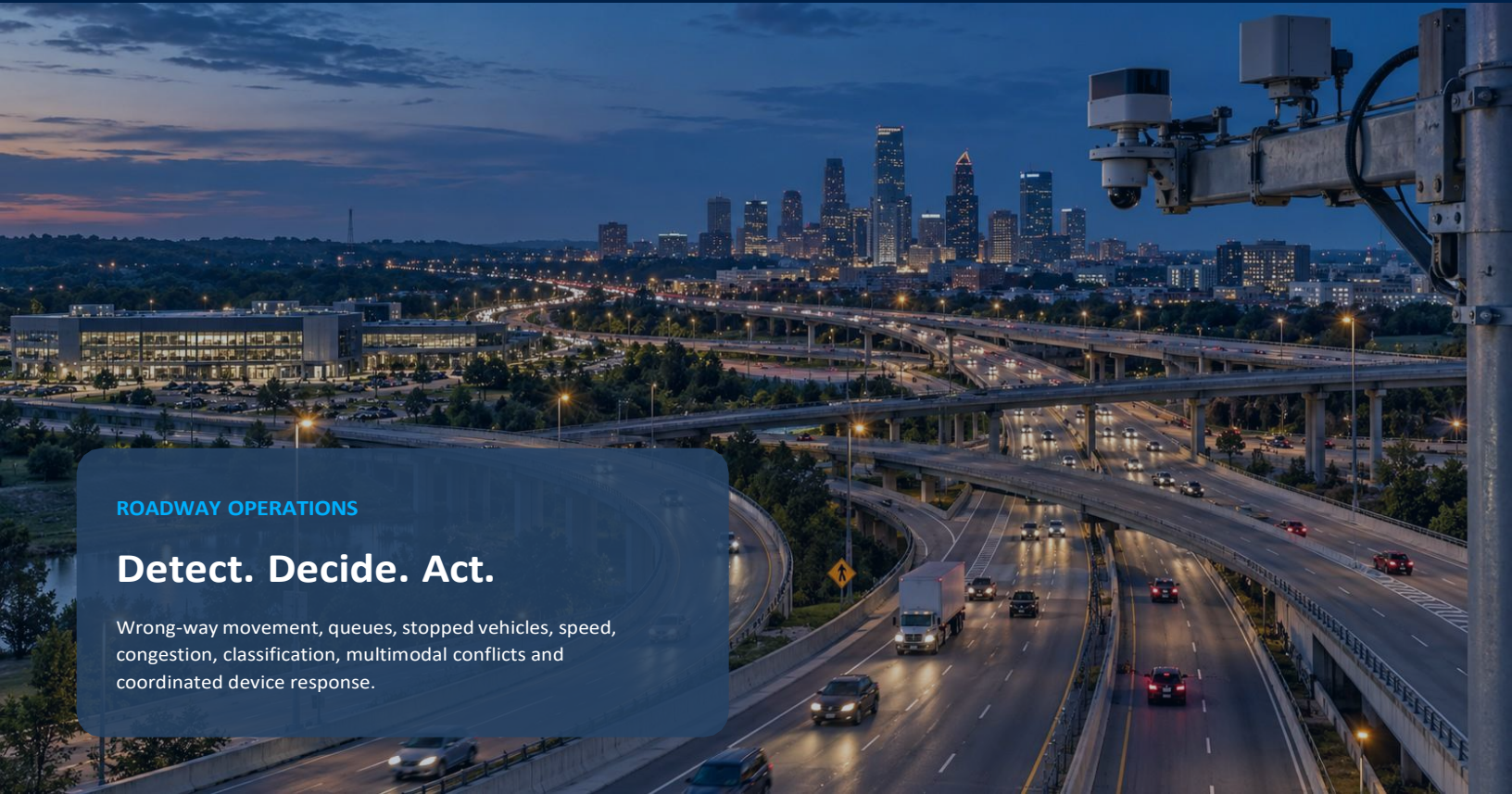
● Turning movements	● Speed + volume	● Gap acceptance	● Queue + delay
● Crossing behavior	● Conflict heat maps	● Origin-destination	● Before-and-after

MITIGATE • VERIFY • IMPROVE

Identify the pattern, select a countermeasure, automate protection and measure the before-and-after result.

One Corridor. Many Use Cases.

Real-time operations plus continuous planning intelligence.



ROADWAY OPERATIONS

Detect. Decide. Act.

Wrong-way movement, queues, stopped vehicles, speed, congestion, classification, multimodal conflicts and coordinated device response.

WRONG-WAY

Track ramp-to-mainline movement; distinguish self-correction; activate DMS, beacons and notifications; preserve synchronized replay.

TRAFFIC FLOW

Counts, speed, occupancy, class, dimensions, queues, dwell, bottlenecks and travel behavior from one operational dataset.

SMART CITY

Shared infrastructure supports mobility, public safety, curb management, events, multimodal planning and cross-department insight.

WORK ZONES

Detect intrusions, unsafe approach speeds, worker exposure and queue formation; issue driver and worker warnings locally.

IntegraOS keeps the same interface, rules framework and evidence model across applications.

Operational Intelligence Across Markets

Same platform. Sector-specific outcomes.



DEFENSE + CRITICAL INFRASTRUCTURE
Perimeter intrusion, unauthorized movement, protected zones, threat verification and continued local operation during network disruption.

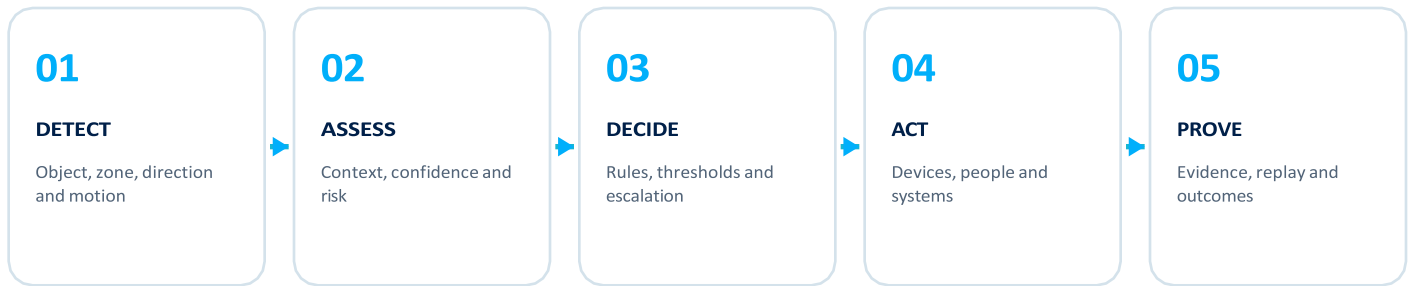
LOGISTICS + PORTS
Gate queues, truck and trailer movement, dock dwell, equipment utilization, route compliance and worker-vehicle conflicts.

SMART PARKING
Occupancy, turnover, guidance, overstay, wrong-way travel, reserved-space enforcement, pedestrian safety and revenue reconciliation.

TRANSIT + AIRPORTS
Bus-lane activity, platform and curb safety, roadway congestion, restricted-zone entry, ground movement and incident response.

Logic That Moves from Detection to Response

Configurable, multi-condition and locally resilient.



EXAMPLE: DEVELOPING VRU CONFLICT

IF

A pedestrian enters the crossing and an approaching vehicle is tracked

AND

Vehicle speed and predicted path create a time-to-conflict below threshold

THEN

Activate warning devices, notify operations and preserve pre/post-event data

PLUS

Link video with LiDAR/radar trajectory and add the event to engineering analysis

Responses can be graduated to match risk



Automation may incorporate object type, zone, speed, direction, trajectory, signal phase, queue state, confidence, sensor confirmation, schedule and equipment health.

THE BUSINESS CASE

More Value From Every Layer

IntegraOS™ improves ROI by turning shared sensors, infrastructure and data into multiple operational outcomes - while maintaining one intelligence, automation and evidence framework.

REUSE

Extend cameras, radar, controllers, signs and networks already in place.

CONSOLIDATE

Reduce isolated applications, interfaces, servers and training paths.

AUTOMATE

Shorten monitoring, verification, notification and reporting effort.

MITIGATE

Identify risk earlier and support faster, more consistent response.

OPTIMIZE

Improve throughput, occupancy, dwell, asset use and revenue assurance.

EXPAND

Add use cases and locations without rebuilding the operating model.

One Sensor Deployment. Multiple Operational Returns.

One platform behind the intelligence: IntegraOS™.

The Operating System for Intelligent Transportation Infrastructure

ROI depends on site conditions, integrations, operating practices and implementation scope. Establish a baseline and measure verified outcomes.

IntegraOS™ and Integrator-AI- are trademarks of Blue-Band, LLC. All rights reserved. All other trademarks are the property of their respective owners.

Contact: Genesis Factor, LLC

**www.mobilespector.com www.YouTube.com/@genesisfactor
sales@mobilespector.com (317) 496-0763**