videonetics

Safer Journeys Ahead: True AI-Powered Solutions for Highways, Expressways, Tunnels & Toll Plazas

Predict Incidents. Streamline Traffic, safeguard Every Mile.

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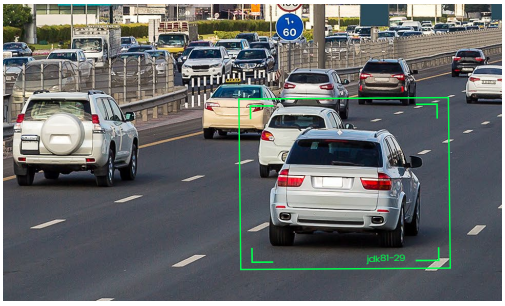
Why Highways, Expressways, Tunnels & Tolls Demand Intelligent Surveillance

Modern Road networks face escalating challenges: rising traffic density, unpredictable driver behaviour, visibility loss, accidents, toll violations, and poor incident coordination. Traditional surveillance systems are reactive and fragmented. The demand for intelligent, integrated platforms is critical, offering real-time situational awareness, proactive risk detection, and seamless response across complex road infrastructures.

Key Challenges

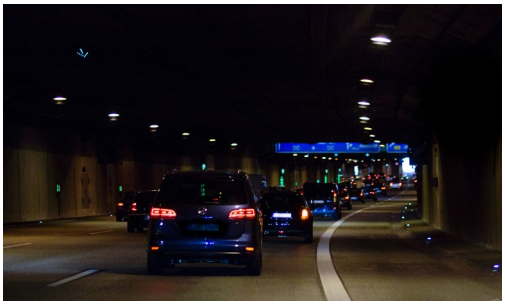
High-Speed Accidents & Sudden Disruptions

Fast-moving traffic increases the severity of crashes and demands rapid detection and response.



Toll Lane Misuse & Congestion

Manual toll collection or basic ANPR systems struggle with accuracy and lane violations.

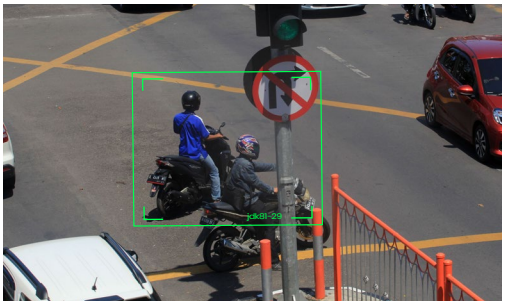


Limited Visibility in Tunnels & Fog Zones

Traditional systems fail in low-light, high-humidity, or low-visibility conditions.

Fragmented Monitoring Across Assets

Lack of integration leads to delayed incident coordination across highways, expressways, tunnels, and tolls.



Security Vulnerabilities in Remote Corridors

Loitering, vandalism, and Traffic Rule violations often remain undetected in isolated stretches.

True AI for Safer, Smarter Roads

What Videonetics Offers:

Videonetics brings a unified platform powered by True AI, purpose-built for complex transit networks.

AI-Enabled Video Management

Unified command center for highways, expressways, tunnels, and toll plazas with real-time monitoring.

Intelligent Incident Detection

Detects crashes, obstructions, stalled vehicles, fires, wrong-way driving, lane violations, and over speeding, instantly.

Real-time situational awareness to drivers

Automates visual display systems and dynamic signage, based on average speed, congestion or visibility conditions for the corridor up ahead.

Infrastructure Health Monitoring

Triggers sirens, fire doors, dynamic signage, and dispatches responders without delay.

Integrated Law Enforcement Tools

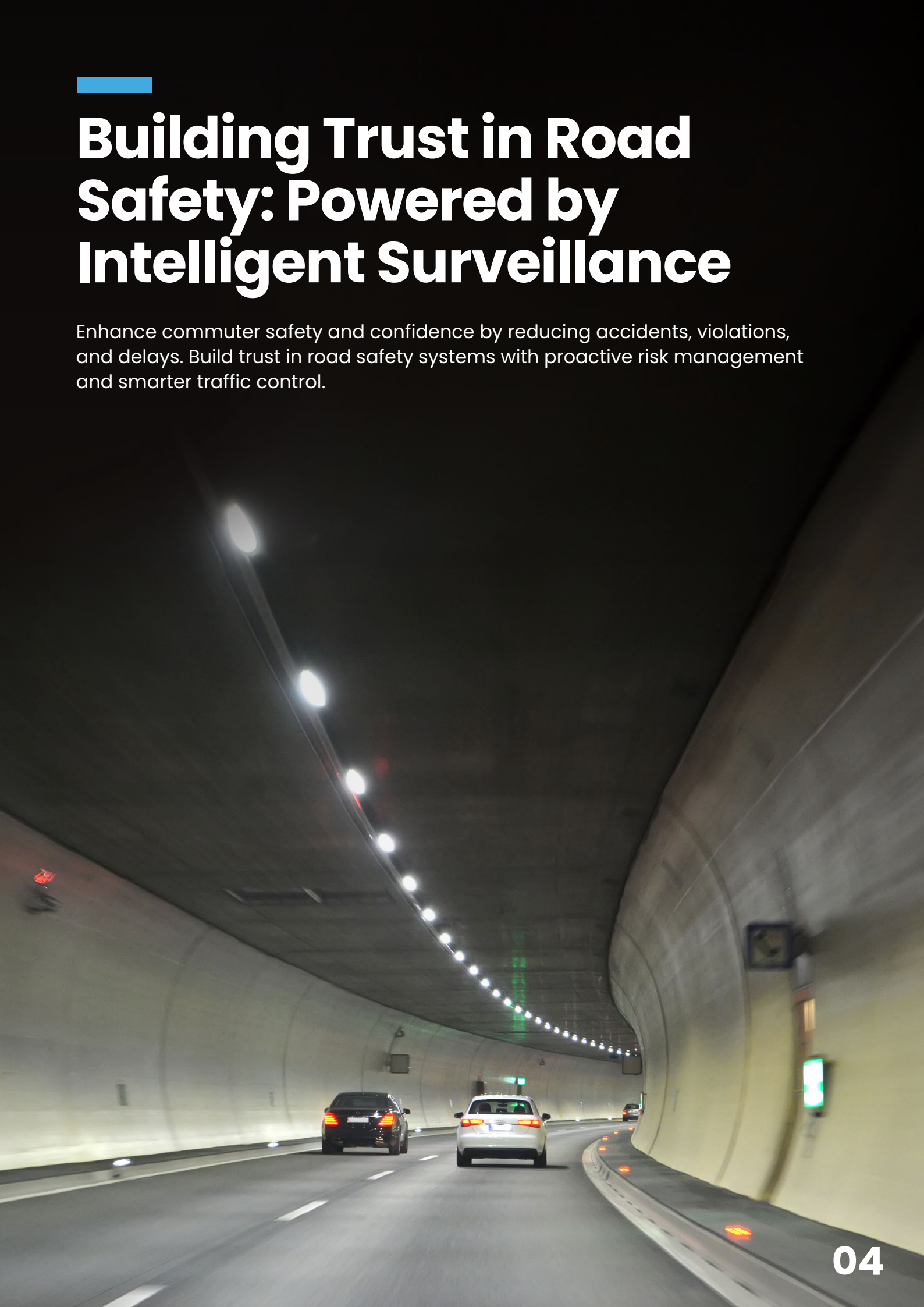
Supports live incident alerts, video evidence sharing, and AI-driven crime detection.

Toll Operations Intelligence

Tracks queue lengths, captures license plate numbers & identifies vehicle class, providing real-time business intelligence and situational awareness to toll plaza operators.

Building Trust in Road Safety: Powered by Intelligent Surveillance

Enhance commuter safety and confidence by reducing accidents, violations, and delays. Build trust in road safety systems with proactive risk management and smarter traffic control.



Advantages of Choosing Videonetics:

Unified Visibility Across All Corridors

End-to-end monitoring from highways to expressways and tunnels to toll booths — in one intelligent platform.

Faster Emergency Response

True AI cuts critical seconds in detecting and responding to fires, crashes, and wrong-way driving.

Smarter Traffic Control, Safer Roads

True AI adjusts lane, speed, and signage to ease flow and prevent risks before they escalate.

Proactive Infrastructure Maintenance

Integrate alerts from IOT sensors and prevent costly closures due to structural faults or equipment failure.

Compliance Made Simple

Auto-generated reports, video logs, and analytics support audits and insurance claims.

Seamless Scalability for Infrastructure

Whether it's a highway, expressway, or mountain tunnel, the system adapts effortlessly with multi-site camera integration.

Built for Extreme Environments

Reliable in high-humidity, low-light, and vibration-prone conditions, ensuring seamless operations across highways, expressways, tolls and tunnels.

Real-World Use Cases

Highways & Expressways

- Detect speeding, wrong-way driving, stalled vehicles, and accidents (including blind spots/high-speed zones).
- Enforce variable speed limits and enable smart diversions via dynamic signage.
- Classify vehicles for lane/load optimization.

Tunnels

- Detect fire, smoke, heat, and monitor for structural damage, water ingress, and debris.
- Auto-activate ventilation, alarms, emergency doors, and smart lighting based on conditions.
- Low-light detection of vehicle halts/human presence and provide incident replay for audits.

Toll Plazas

- AI-powered toll evasion/violation alerts and license plate recognition linked to databases.
- Monitor lane discipline, vehicle profiling/weight for overloading, and touchless payment anomalies.
- Live queue analysis for optimized staffing and clearance.

Law Enforcement & Crime Deterrence

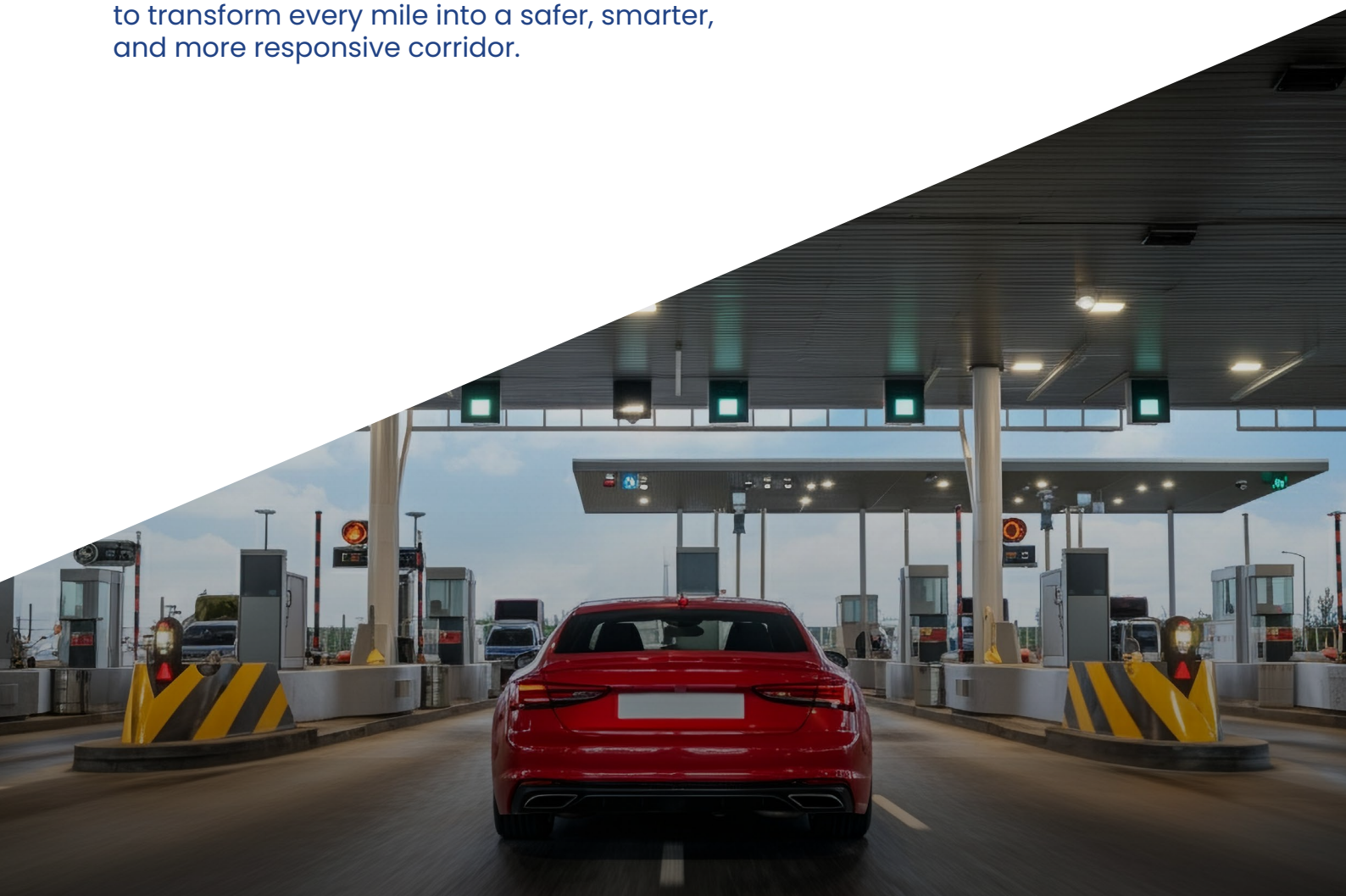
- Detects loitering, crowd formation, intrusion, unauthorized access, and vandalism near critical infrastructure.
- Provides real-time streaming and alerts to support active field enforcement.
- Captures high-resolution video logs for investigations, with facial recognition integration for police collaboration.

Revolutionize Road Safety—From Highways to Tolls

Today's highways, expressways, tunnels, and toll plazas demand more than passive surveillance. They require intelligent, unified systems that prevent incidents, optimize flow, and ensure safety at scale.

Videonetics Delivers AI-Powered Video Intelligence

to transform every mile into a safer, smarter, and more responsive corridor.



Partner with Videonetics
Schedule your Personalized Demo Today

We look deeper to simplify the world. Making it *Safer, Smarter and Happier.*

videonetics
Look Deeper

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