acuvate®

... where Acumen drives Innovation

Go Green

With Acuvate's Smart & Sustainable Transport Solutions

Take Control of Noise Pollution in Your City With Modified Muffler Detection

With urban populations on the rise, noise pollution is becoming a significant challenge for city administrations. Environmental noise, especially road traffic and vehicular, is impacting the health and well-being of citizens around the country. According to Dangerous Decibels, out of the 40 million cases of hearing loss across America, **10 million** are noise-related.

Many states have established permitted noise levels from vehicles. But they grapple with identifying and penalizing those with modified mufflers and exhaust systems that cause the vehicles to exceed permitted noise levels.

Acuvate can help you address this challenge.

Acuvate's Smart & Sustainable Transport Solutions - Modified Muffler Detection

Complete elimination of manual effort	Potential revenue gains ~$12M - $30M

Modified Muffler Detection combines AI, IoT, and Cognitive Search to

- Help city administrations slash noise pollution by identifying vehicles with illegally modified mufflers and exhaust systems exceeding permitted noise levels
- Accelerate and digitize the identification and validation process with video evidence and license plate information capturing
- Empower city inspectors with efficient and evidence-based complain-recording and quick action
- Assist city administrations in penalizing miscreants resorting to illegal vehicle muffler modifications, boosting fine revenues for the department

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Reduce Air Pollution in Your City by Idling Vehicle Detection

According to the US Department of Energy, heavy and light duty vehicles combined waste 6 billion gallons of fuel annually. Personal vehicles alone generation 30 million tons of CO2 every year simply by idling. The department also finds that eliminating idling for fuel economy and emission reduction will be equivalent to taking 5 million vehicles off the road. In addition, idling vehicles exacerbate noise pollution in your city, impacting citizens' health and well-being. As a result, governments around the country have air and noise pollution control high on their agenda.

Your role in this agenda matters. With the help of new-age technologies, you can make your cities safer, sustainable, and more livable.

Acuvate's idling detection solution is here to help you achieve these goals.

Acuvate's Video analysis based air & noise pollution monitoring – Vehicle Idling Detection

Quicker resolution of complaints or violations	90% Time Saving

Built on the Microsoft stack, Idling Vehicle Detection combines AI & ML, IoT, and data analytics to empower city administrations and transportation and environment protection stakeholders.

The solution delivers a seamless, easy-to-use platform that :

- Identifies idling vehicles with their ignition on for longer than the permitted time period
- Puts the control in the hands of citizens to report idling vehicles with visual evidence
- Helps government agencies fast-track evidence verification from hours to minutes
- Enhances inspector productivity by updating and resolving evidence-based complaints quickly
- Empowers relevant stakeholders to take control of air and noise pollution caused by idling vehicles

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Reduce Carbon Footprint and Enhance Traffic Safety With Vehicle Counting and Classification

According to the National Highway Traffic Safety Administration, US traffic deaths hit a 20-year high in 2022. At the same time, vehicles contribute a staggering 29% to the US greenhouse gas emissions.

You are tasked with making informed traffic management decisions that enhance public safety and reduce carbon emissions. Analytics-powered solutions can help you take charge.

Acuvate addresses the severe challenge of seamless, safe, and sustainable traffic infrastructure management with its road transportation solution.

Acuvate's Vehicle Classification, Traffic Monitoring, Payload Detection

2X Improvement in ttraffic surveillance control	40% better lane & weight pay load violation detection	Improved Road infrastructure	Enhanced productivity & efficiency of officials

Built on the scalable technology stack from Microsoft, which converges analytics and BI, vision-based methods, IoT cameras, and ML, the solution addresses traffic and transportation bottlenecks to:

The solution delivers a seamless, easy-to-use platform that :

- Deliver on the city administrations' sustainability agendas and reduce carbon footprint
- Empower them to perform more robust traffic surveillance, identify and penalize rogue vehicles or those that break pollution control and traffic safety measures
- Ease traffic congestion, identify peak times, and increase toll fees by classifying and knowing the count and type of vehicles commuting during a typical day
- Analyze and publicize safe routes to schools, hospitals, and other public transit services
- Help transportation departments deliver public safety with safer pedestrian crossings, additional lighting, reconfiguring separate lanes for walking, riding, and mobility assistance devices
- Assist infrastructure planning teams with data-driven planning for road transport across bridges, roads, highways, and pedestrian footpaths
- Reduce accidents and traffic-related deaths

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Make Your Inspection Workstreams Paperless and Efficient With the Zero-Carbon Inspection App

Every time a traffic violation occurs, it entails paperwork from recording the violation to providing evidence, followed by penalty documentation. With the increasing volume of vehicles out on the motorways, the exponential increase in paperwork makes inspection a cumbersome and ecologically unsustainable exercise. According to some statistics, US offices utilize over 12 trillion sheets of paper in a year. The Environmental Protection Agency finds that 2018 alone saw the nation's landfills receive 17.2 million tons of MSW paper and paperboard. The writing is on the wall – something has to be done about this.

Acuvate did something. We built a modern workplace solution that reduces paper utilization in inspection workstreams. It also powers seamless collaboration and always-on visibility into critical traffic and transportation inspection issues.

Acuvate's Inspection App

80% Time savings	7X Paper savings	Insights from Dark data	70% reduction in Total Cost of Ownership

Built on the Microsoft technology stack, the Inspection App automates and digitizes every possible inspection workstream. As a result, city officials have on hand an easy-to-use and navigate modern workplace solution on which they can log their activities, submit them in real-time, and save time on documentation.

Created to address the myriad issues of a paper-based system, the Inspection App:

- Help officers log inspection reports in real-time and not post-facto, increasing accuracy and speed of operations
- Reduce the reliance on paper trails for inspections across bridges and highways, streets, and crime reports, among several other similar workstreams
- Provide senior officers and supervisors access to dashboards to manage reporting and real-time understanding of field activities
- Ensure easy and quick reporting and seamless collaboration between relevant officials and agencies
- Diminish the carbon footprint of inspection workstreams

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Achieve Green and Secure "Paper Trails" With Blockchain-Based Verifiable Credentials

Over the past decades, the transportation industry has seen a seismic shift. As a result, the industry is under pressure to reduce its carbon footprint and ensure secure and legitimate paper trails, credentials, financial transactions, and certifications. It can achieve this with new-age technologies.

These technologies should be capable of reducing the inevitable time lags in report logging and generation and verification of credentials through the labyrinth of paper-based processes. Simultaneously, it should make certifications, contracts, and transactions secure, verifiable, and legitimate.

To address these needs, Acuvate brought blockchain into the equation.

Acuvate's Blockchain-Based Verifiable Credentials & Audits

400% improvement in time required for issuing digital IDs	90% improvement in audit and inspection accuracy

Built on the Microsoft's Blockchain technology, Azure, Power Platform, this Blockchain-based Verifiable Credentials solution increases the efficiency and sustainability of records, registrations, contracts, and credentials management in the transportation sector.

Based on the decentralized approach of blockchain technology, the Verifiable Credentials Solution can be customized to:

- End paper-based manual work across several transportation workstreams
- Issue smart digital registration certificates
- Quickly and efficiency verify vehicle and driver credentials
- Enable safe and secure peer-to-peer exchange, reducing information silos between different transportation stakeholders
- Reduce instances of fake certificates or licenses and information theft
- Achieve sustainability goals by reducing paper utilization

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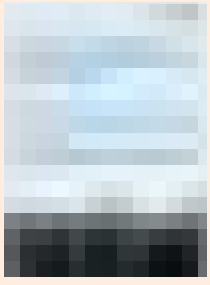

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About Acuvate

With over 16 years of experience in digital solutions, accelerating enterprise-wide digital transformation with our AI accelerators, we provide solutions and services that modernize, automate and support organizations. We leverage all things Microsoft to build & develop smart & sustainable solutions and help our customers transform their conventional processes to match the next-generation technological trend. We have a strong presence in the US, Europe, and Middle East, where we serve multiple Fortune 500 companies. We specialize in New-age AI solutions, Migration & Modernization, and Digital Workplace Solutions

Acuvate is a Microsoft Gold certified partner, Google partner, and has transformed several reputed enterprises globally, including many Fortune 500. With our multi-skilled experts and packaged AI accelerators, we deliver unparalleled efficiencies and accelerate time-to-value for our customers

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