

ANMD-MRS28-271 · Smart City & Infrastructure AI

AI Traffic Management Systems

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

AI traffic management systems fuse adaptive signal control, AI traffic-analytics platforms and connected-vehicle / V2X infrastructure to cut congestion, crashes and idling-related emissions across urban road networks. This decision-grade study sizes the global market in value and units deployed (intersections), with corridor coverage as a penetration lens, across system type, analytics platform and deployment scale, across seven regions and four scenarios to 2032, with outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report’s backbone, not an afterthought. Beyond mobility, AI traffic management delivers measurable congestion-emission reduction, road-safety gains and fuel-and-time savings, strengthening the livable-cities and natural-capital story.

Mapped Sustainable Development Goals:

SDG 11	SDG 3	SDG 13
Sustainable Cities & Communities	Good Health & Well-Being	Climate Action

Measurable sustainability outcomes assessed:

- Congestion-emission reduction across road networks
- Road-safety gains and crash reduction
- Fuel-and-time savings from optimised flow
- Surveillance and data-privacy governance, algorithmic bias and cybersecurity as material risks

Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

53	9	7	40+
Chapters	Report Parts	Regions Covered	Country Markets
2025–32	4	25+	3
Forecast Horizon	Forward Scenarios	Companies Profiled	SDGs Mapped

MARKET OVERVIEW

From fixed-time signals to responsive networks — real-time optimisation that moves people and freight.

The AI traffic management market is moving from pilot corridors to citywide deployment. Demand is driven by worsening congestion, road-safety mandates and transport-decarbonisation targets, supported by maturing edge-AI and V2X technology across North America, Asia Pacific and Europe. The market is read two ways — value and units deployed (intersections), with corridor coverage as a penetration lens — and forecast under four scenarios, each region reported separately.

- North America leads adaptive-signal upgrades — U.S. federal infrastructure funding, DOT modernisation and Vision Zero programmes
- Asia Pacific is the scale engine — China, India, Japan and Singapore, deploying citywide ITS across dense, fast-growing metros
- Platform and application segment the value — across adaptive control, AI analytics and V2X, corridor to citywide
- Outcome data is the differentiator — measurable delay, stop and emissions reductions fixed-time signals cannot match

REGIONAL OUTLOOK

Across seven reporting regions, the report separates early-commercialisation leaders from high-growth and emerging markets — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Markets & Drivers
North America	Modernisation leader	United States, Canada — infrastructure funding, DOT upgrades, Vision Zero
Asia Pacific	Scale engine	China, India, Japan, Singapore — citywide ITS, dense metros
Europe	Safety & emissions	Germany, United Kingdom, Netherlands — low-emission zones, V2X pilots
Latin America	Emerging	Brazil, Mexico — congestion relief, corridor deployments
Africa	Frontier	South Africa, Kenya — urban-mobility upgrades, donor finance
Middle East	Frontier	UAE, Saudi Arabia — smart-city megaprojects, V2X investment

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
• Urban congestion & travel-time cost • Road-safety & Vision Zero mandates • Transport-decarbonisation targets • Infrastructure-funding & DOT modernisation • Edge-AI, V2X & connected-vehicle maturity	• Legacy-signal & controller integration cost • Data-privacy & camera-use concerns • Procurement cycles & municipal budgets • Interoperability & vendor lock-in • Cybersecurity of connected infrastructure

SEGMENTATION SNAPSHOT

By System Type	Adaptive signal control · AI traffic analytics · connected-vehicle / V2X
By Analytics Platform	Edge AI · cloud analytics · hybrid · digital-twin
By Application Scale	Corridor · district · city-wide
By End User	City DOTs · traffic authorities · system integrators · transit agencies
By Business Model	CAPEX purchase · managed-service · SaaS · outcome-based
By Deployment Scale	Pilot · district · citywide

TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

Part I — Report Foundation, Discovery and Strategic Intelligence

- › Chapter 1. Scope, Methodology and Report Architecture
- › Chapter 2. Industry Discovery Summary — AI Traffic Management Systems
- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

Part II — Market Intelligence, Sizing, Forecasting and Segmentation

- › Chapter 5. Industry Overview and Market Evolution
- › Chapter 6. Market Dynamics
- › Chapter 7. Global Market Size and Forecast, 2020–2032
- › Chapter 8. Market Segmentation Analysis
- › Chapter 9. End-User and Demand-Side Intelligence
- › Chapter 10. Pricing, Cost and Commercial Model Intelligence

Part III — Regional and Country Intelligence

- › Chapter 11. Global Regional Intelligence Framework
- › Chapter 12. North America Market Intelligence
- › Chapter 13. Europe Market Intelligence
- › Chapter 14. Asia Pacific Market Intelligence
- › Chapter 15. Latin America Market Intelligence
- › Chapter 16. Africa Market Intelligence
- › Chapter 17. Middle East Market Intelligence
- › Chapter 18. Rest of World Market Intelligence

Part IV — Technology, Innovation and Category-Specific Intelligence

- › Chapter 19. Technology Landscape and Architecture
- › Chapter 20. Emerging and Next-Generation Technology Intelligence
- › Chapter 21. Category-Specific Intelligence Module
- › Chapter 22. Research, Innovation and Funding Landscape

Part V — Company, Competition, Patent and Project Intelligence

- › Chapter 23. Competitive Landscape
- › Chapter 24. Company Profiles
- › Chapter 25. Mergers, Acquisitions, Partnerships and Ecosystem Intelligence
- › Chapter 26. Patent Landscape and Intellectual Property Intelligence
- › Chapter 27. Project, Deployment and Case-Study Intelligence

Part VI — Sustainability, ESG, SDG, Climate and Natural-Capital Intelligence

- › Chapter 28. Sustainability Intelligence Suite
- › Chapter 29. ESG Intelligence and Double Materiality
- › Chapter 30. ESG and Sustainability Framework Alignment
- › Chapter 31. SDG Intelligence
- › Chapter 32. Carbon, Net-Zero and Climate-Mitigation Intelligence
- › Chapter 33. Water, Biodiversity and Natural-Capital Intelligence
- › Chapter 34. Circular Economy and Resource-Security Intelligence
- › Chapter 35. Social Impact, Human Capital and Community Intelligence
- › Chapter 36. Climate Risk, Adaptation and Resilience Intelligence

Part VII — Supply Chain, Policy, Legal, Economics and Finance

- › Chapter 37. Value Chain, Supply Chain and Geopolitical Intelligence
- › Chapter 38. Policy, Regulation and Incentive Intelligence
- › Chapter 39. Legal, Contracting and Risk-Allocation Intelligence
- › Chapter 40. Unit Economics, CAPEX, OPEX and Return Analysis
- › Chapter 41. Investment, Sustainable Finance and Bankability Intelligence

Part VIII — Scenario, Future Intelligence and Final Due Diligence Verdict

- › Chapter 42. Scenario Analysis and Future Intelligence
- › Chapter 43. Sustainability Due Diligence Framework and Data-Room Index
- › Chapter 44. Risk Register, RAG Rating and Anti-Greenwashing Screen
- › Chapter 45. Bottom-Line Verdict and Strategic Recommendations
- › Chapter 46. Implementation Roadmap and Stakeholder Playbooks

Part IX — Annexes, Directories and Reference Material

- › Chapter 47. Methodology Annex
- › Chapter 48. Corporate Directory and Company Intelligence Annex
- › Chapter 49. Patent Directory and Patent Intelligence Annex
- › Chapter 50. Project Intelligence Annex
- › Chapter 51. Forecast Annex
- › Chapter 52. Sustainability KPI Annex
- › Chapter 53. Reference Annexes

COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans ITS and mobility-technology vendors, platform specialists and integrated system providers. Deal activity — ITS platform acquisitions, AI-analytics partnerships and citywide framework contracts — signals a market consolidating around bankable, repeatable platforms.

Representative players profiled in the full report:

Siemens Mobility GmbH · Kapsch TrafficCom AG · Cubic Corporation (Trafficware) · SWARCO AG · Yunex GmbH (Yunex Traffic) · and 20+ further profiled players across platforms, components and integration.

Investment intelligence: venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a Go / No-Go / Conditional-Go investment verdict.

KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global AI traffic management systems market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How do measurable delay and safety outcomes change the business case versus fixed-time control?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the technology align with the SDGs and emerging disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most smart-city market studies stop at deployment counts and revenue. This report is built as a sustainability and governance due diligence instrument — fusing market sizing with ESG, SDG, climate, data-ethics and resilience intelligence and a decision-ready bankability verdict in a single architecture.

- › **Triangulated sizing** — every market read so value and units (intersections) reconcile rather than conflict.
- › **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- › **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- › **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- › **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- › **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear Go / No-Go / Conditional-Go investment verdict.

WHO SHOULD BUY THIS REPORT

Investors and infrastructure / PE funds, ITS and mobility-technology vendors, system integrators, city DOTs and traffic authorities, transit agencies, lenders, policymakers, and corporate strategy and ESG teams.

ACCESS THE FULL REPORT

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

WANT THE COMPLETE DETAILED TABLE OF CONTENTS?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.