

# Smart Street Lighting Systems

## ANMD-MRS28-272 · Smart City & Infrastructure AI

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

Smart street lighting systems combine connected LED luminaires, lighting control nodes and central management software (CMS) to cut energy and maintenance while turning lighting poles into a citywide sensing and connectivity backbone. Beyond dimming and fault detection, they host environmental, traffic and safety sensors, making lighting infrastructure a platform for broader smart-city services. This report is a comprehensive, decision-grade study of that market across system type, control-node type, application scale, end user, business model and deployment scale, spanning history 2020–2024, a 2025 base year, a 2025–2032 forecast and long-term outlooks to 2035, 2040 and 2050.

### SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

The sustainability case is the report's backbone. Beyond illumination, smart street lighting delivers measurable energy and emissions reduction, maintenance savings and light-pollution control, strengthening the efficient-cities story. The analysis applies double materiality, maps outcomes to GRI, SASB, ISSB, TCFD, CSRD and the EU Taxonomy, and links contributions to SDGs 11, 7 and 13. Sensor-data privacy, connectivity-energy footprint, equitable lighting and cybersecurity are treated as material risks — with greenwashing and SDG-washing screens applied throughout.

#### Mapped Sustainable Development Goals:

|   |   |   |
|---|---|---|
| <p><b>SDG 11</b><br/>Sustainable Cities</p> | <p><b>SDG 7</b><br/>Affordable Clean Energy</p> | <p><b>SDG 13</b><br/>Climate Action</p> |
|---|---|---|

**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

|  |                                       |  |                                       |
|--|---------------------------------------|--|---------------------------------------|
| <p><b>53</b><br/>Chapters</p>              | <p><b>9</b><br/>Report Parts</p>      | <p><b>7</b><br/>Regions Covered</p>      | <p><b>40+</b><br/>Country Markets</p> |
| <p><b>2025–32</b><br/>Forecast Horizon</p> | <p><b>4</b><br/>Forward Scenarios</p> | <p><b>25+</b><br/>Companies Profiled</p> | <p><b>3</b><br/>SDGs Mapped</p>       |

## MARKET OVERVIEW

### Smart street lighting is moving from LED retrofit to networked control and multi-service platforms.

Demand is driven by municipal energy-cost pressure, decarbonisation targets, and ESCO-financed retrofit models. The market is read two ways — value and units (luminaires / control nodes), with networked-control penetration as a maturity lens — forecast under conservative, base, accelerated and disruption scenarios, every projection resolved to the 2025 base year and each region reported separately rather than folded into Rest of World.

- Europe leads networked control, anchored by energy-efficiency directives, ESCO models and mature CMS adoption.
- Asia Pacific is the volume engine, with China and India retrofitting tens of millions of luminaires under smart-city missions.
- North America scales on ESCO retrofit, where utility and municipal LED-plus-control programmes drive deployment.
- Control node and application segment the value, across NEMA, Zhaga and integrated nodes, and across street, district and citywide systems.

## REGIONAL OUTLOOK

Across the seven reporting regions, the report separates deployment leaders from high-growth and emerging markets, profiling named country sub-markets, policy regimes and project pipelines in each. Latin America, Africa and the Middle East are assessed on their own merits — never aggregated into Rest of World — and every forecast resolves to the 2025 base year.

| Region        | Stage          | Lead Country Markets & Drivers                                       |
|---------------|----------------|--|
| Europe        | Control leader | Netherlands, UK, Germany — efficiency directives, ESCO, CMS adoption |
| Asia Pacific  | Volume engine  | China, India — mass luminaire retrofit, smart-city missions          |
| North America | ESCO-driven    | United States, Canada — utility and municipal LED-plus-control       |
| Latin America | Emerging       | Brazil, Mexico — LED retrofit, PPP financing                         |
| Africa        | Frontier       | South Africa, Kenya — efficiency upgrades, donor and PPP finance     |
| Middle East   | Frontier       | UAE, Saudi Arabia — smart-city lighting megaprojects                 |

## KEY MARKET DRIVERS & RESTRAINTS

| Drivers  | Restraints   |
|--|--|
| <ul style="list-style-type: none"> <li>• Municipal energy-cost &amp; efficiency pressure</li> <li>• Decarbonisation &amp; LED-mandate targets</li> <li>• ESCO-financed retrofit economics</li> <li>• Smart-city sensor-platform demand</li> <li>• Maintenance &amp; fault-detection savings</li> </ul> | <ul style="list-style-type: none"> <li>• Upfront retrofit CAPEX &amp; financing</li> <li>• CMS interoperability &amp; standards</li> <li>• Data-ownership &amp; connectivity costs</li> <li>• Procurement and tender complexity</li> <li>• Cybersecurity of networked nodes</li> </ul> |

## SEGMENTATION SNAPSHOT

|                             |   |
|-----------------------------|---|
| <b>By System Type</b>       | Connected LED luminaires · lighting control nodes · central management software |
| <b>By Control Node</b>      | NEMA socket · Zhaga · integrated · gateway-based                                |
| <b>By Application Scale</b> | Street / corridor · district · city-wide  |
| <b>By End User</b>          | Municipalities · utilities · ESCOs · facility managers                          |
| <b>By Business Model</b>    | CAPEX purchase · ESCO / lease · managed-service · outcome-based                 |
| <b>By Deployment Scale</b>  | 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.

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**COMPETITIVE & INVESTMENT SNAPSHOT**

The competitive field spans lighting and smart-infrastructure vendors, platform specialists and integrated system providers. Profiled players include Signify N.V., Itron, Inc., Telensa Holdings Ltd, Acuity Brands, Inc. and Schröder SA. Other profiled names include Current Lighting Solutions, LLC, CIMCON Lighting, Inc., Twilight B.V., Ubicquia, Inc. and Echelon Corporation. Deal activity — CMS platform acquisitions, ESCO partnerships and citywide retrofit contracts — signals a market consolidating around networked, sensor-ready platforms. Investment intelligence spans venture, growth, infrastructure, climate and blended finance, green bonds and sustainability-linked loans, culminating in a bankability assessment and investment verdict.

## KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global smart street lighting systems market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How do technology and adoption shifts change value versus legacy approaches?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the category align with the SDGs and disclosure regulation?

## WHY ANMD — THE DIFFERENCE

*Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG and natural-capital intelligence and a decision-ready bankability verdict in a single architecture.*

- **Triangulated sizing** — every market read three ways so value, volume and installed-base views 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, conditional investment verdict.

## WHO SHOULD BUY THIS REPORT

Investors and infrastructure / PE funds, lighting-technology vendors and OEMs, municipalities and utilities, ESCOs and facility managers, lenders and procurement leaders, regulators and policymakers, and corporate strategy and ESG teams — alongside strategic corporate planners and decision-makers.

### 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.

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### 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](http://www.anewmarketdynamics.com). The full detailed table of contents will be sent directly to your registered company email address.

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