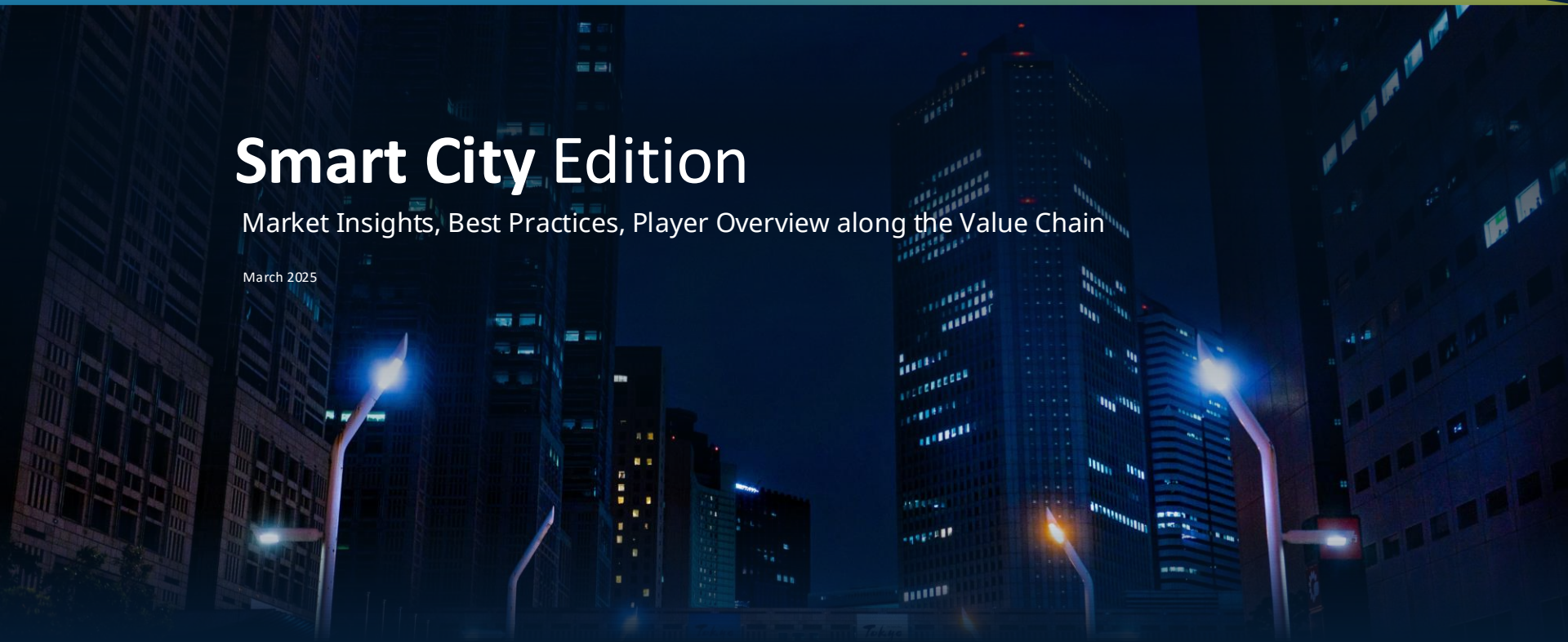
Industry Playbook

Smart City Edition

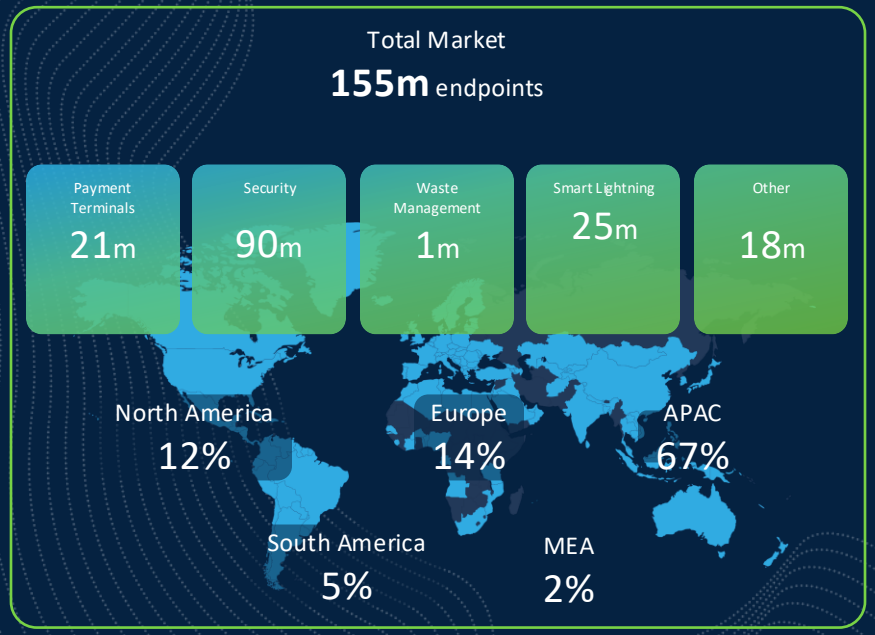
Market Insights, Best Practices, Player Overview along the Value Chain

March 2025



Smart Cities sector is a growing IoT industry requiring global coverage

Relevance of smart cities use cases for the IoT market



1NCE's footprint in the Smart cities sector:

Smart cities customers represent:
6%
of 1NCE customers

Smart cities customers located in
29
countries worldwide

Top 10 countries for 1NCE
1) Romania
2) Italy
3) Poland
4) Greece
5) Switzerland
6) UK
7) Austria
8) Bulgaria
9) Germany
10) France

Smart cities use cases represent:
8%
of managed endpoints

Smart cities customers use 1NCE in
89
countries worldwide

Number of large deployments
131

Typical deployment size
10-50k
endpoints

Sources: Market data courtesy of Transforma Insights, 1NCE Customer Insights
As of Jan 2025, 1NCE served 23,000 customers of which 6% are active in the smart city sector.
Common use cases supported are car and micromobility sharing, smart parking, street lighting, waste management, etc.

6% of our customers are building solutions in the Smart City sector, including environmental and equipment monitoring

	Customers %	Typical applications			Selected customers
Utilities	20%	• Electricity meters • Gas meters	• Water meters • Leak prevention	• Network monitoring • Smart grid	asl, cast4all
Infrastructure	8%	• Remote Maintenance for elevators	• Solar Energy Monitoring • Charging stations	• Water and heating metering	OCEA, zonneplan, LOXAM
Logitics	7%	• Asset tracking • Temperature monitoring	• Telemetry for vehicles • Geo-fencing	• Cold-chain monitoring	blulog, Trackting
Automotive	17%	• Usage based insurance • Road-charging	• Fleet management • Car sharing	• Stolen vehicle recovery • Fuel level monitoring	VIMCAR, TARGA
Industry	9%	• Oil monitoring • Industrial automation	• Tank monitoring • Equipment monitoring	• Industrial sensors	metasphere, autocon
Agriculture	7%	• Remote analysis of bee colonies	• Pest control • Yield monitoring	• Geofencing and alerting	BAYER, FARM, eMitter
Smart Cities	6%	• Cost and energy reduction	• Water leakage monitoring	• Elevator management solutions	FLASHNET, convadis
Healthcare	2%	• Health monitoring • Refrigeration monitoring	• Cleaning monitoring (hotels)	• Digital signage	Zenicor, MICRODEFENDER
Consumer	7%	• Indoor Wellbeing Monitoring	• Professional Coffee Machines' Monitoring	• Energy consumption monitoring	Sentinum FORGING FUTURE, switchee
Retail	1%	• Vending Machines Monitoring	• Payment Processing		CASYOPE

% of Customers in the other verticals – 16%

6% of our customers are building solutions in the Smart City sector, including environmental and equipment monitoring

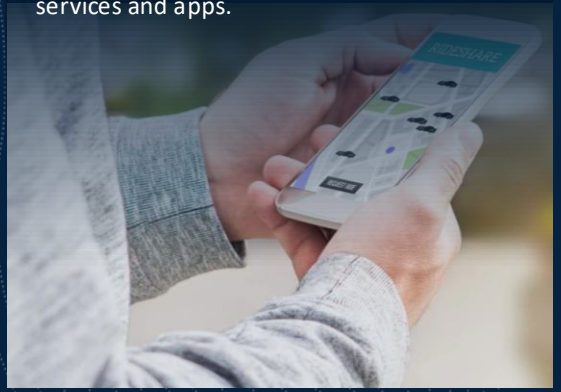
	Customers %			
Utilities		• Electricity meters • Gas meters	• Water meters • Leak prevention	• Network monitoring • Smart grid
Infrastructure		• Remote Maintenance for elevators	• Solar Energy Monitoring • Charging stations	• Water and heating metering
Logistics		• Asset tracking • Temperature monitoring	• Telemetry for vehicles • Geo-fencing	• Cold-chain monitoring
Automotive		• Usage based insurance • Road-charging	• Fleet management • Car sharing	• Stolen vehicle recovery • Fuel level monitoring
Industry		• Oil monitoring • Industrial automation	• Tank monitoring • Equipment monitoring	• Industrial sensors
Agriculture		• Remote analysis of bee colonies	• Pest control • Yield monitoring	• Geofencing and alerting
Smart Cities		• Cost and energy reduction	• Water leakage monitoring	• Elevator management solutions
Healthcare		• Health monitoring • Refrigeration monitoring	• Cleaning monitoring (hotels)	• Digital signage
Consumer		• Indoor Wellbeing Monitoring	• Professional Coffee Machines' Monitoring	• Energy consumption monitoring
Retail		• Vending Machines Monitoring	• Payment Processing	

% of Customers in the other verticals – 16%

Key IoT use cases in Smart cities

Car Sharing

Car and micromobility sharing services use IoT to enable efficient tracking, management, and user access through connected vehicles. Sensors provide real-time data on vehicle location, usage, and battery levels, while cellular connectivity solutions help to deliver this data to cloud services and apps.



Smart Parking

Smart parking powered with IoT solutions helps to remotely monitor parking space occupancy, providing real-time information to both users and owners. Sensors in parking spaces detect vehicle presence, while the delivered data enable space optimization, improve traffic flow and dynamic pricing.

Street Lighting

IoT-based smart street lighting systems contribute to public safety and energy efficiency by using sensors, adaptive brightness, and remote control. They can automatically adjust illumination based on time, weather, or activity, reducing energy consumption and costs.

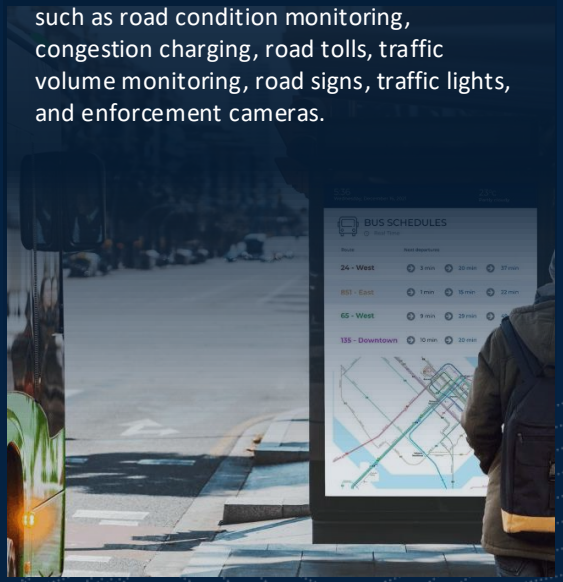
Key IoT use cases in Smart cities

Waste Management

Smart waste management solutions use IoT-enabled sensors and data analytics to optimize collection routes and monitor bin levels in real time. This reduces operational costs, minimizes environmental impact, and improves service quality. Advanced systems also enable waste sorting and recycling for more sustainability.

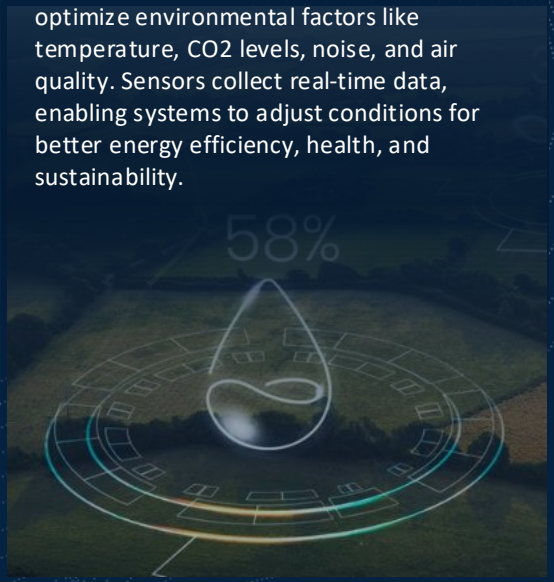
Road Traffic Monitoring

Road traffic monitoring encompasses diverse services associated with road infrastructure, such as road condition monitoring, congestion charging, road tolls, traffic volume monitoring, road signs, traffic lights, and enforcement cameras.



Environmental Monitoring

Smart environmental monitoring uses IoT connectivity and software to monitor and optimize environmental factors like temperature, CO_2 levels, noise, and air quality. Sensors collect real-time data, enabling systems to adjust conditions for better energy efficiency, health, and sustainability.



Overview of players with traction in the market

Key players in Smart Street Lighting

Player	Logo	Location	Description	Website
Signify		Netherlands	Connected LED lighting systems for street lighting	Link
Schréder		Belgium	Adaptive lighting systems that adjust brightness	Link
Lucy Zodion		UK	Intelligent urban lighting controls and management	Link
Flashnet (Lucy Group)		Romania	Advanced lighting control and cloud-based management	Link
TVILIGHT		Netherlands	Real-time light control based on movement	Link
Ubicquia		USA	Streetlight control systems like UbiCell & UbiHub	Link
Quantela		USA	AI-powered automation solutions for street lighting	Link

Overview of players with traction in the market

Key players in Waste Management

Player	Logo	Location	Description	Website
BH Technologies		USA	Solutions for waste collection routes optimization	Link
Bigbelly		USA	Smart waste and recycling services	Link
Bintel		Australia	Waste monitoring systems provider	Link
Dingtek Technology		China	Intelligent waste bins and collection systems	Link
Ecube Labs		South Korea	Solar-powered compacting bins provider	Link
Roadrunner		USA	Fully-managed waste and recycling services	Link
Evreka		Turkey	Intelligent waste management software	Link

Overview of players with traction in the market

Key players in Environmental Monitoring

Player	Logo	Location	Description	Website
Aclima	ACLIMA	USA	Hyperlocal air quality monitoring	Link
Airly		Poland	Real-time air pollution monitoring	Link
Clarity Movement	clarity	USA	AI-powered air quality monitoring networks	Link
Breeze Technologies	BREEZE	Germany	AI-driven air quality sensors and data analytics	Link
Oizom	OIZOM	India	Environmental monitoring for tracking air quality	Link
Vaisala	VAISALA	Finland	Environmental sensors for air quality monitoring	Link
Libelium	libelium	Spain	Sensor networks for real-time air pollution tracking	Link

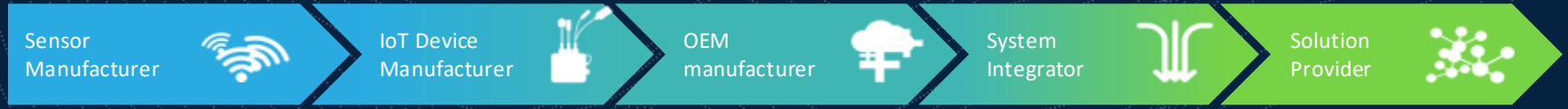
Players 1NCE is supporting in the field

Player		Use Case	More info
Cocoparks	cocoparks	Curb management platform and Cocospots – small detectors designed for easy installation on lampposts	Link
Embever	EMBEVER	A platform for connecting low-power IoT devices with customers on board like Deutsche Bahn and VISIO/ONE	Link
Flashnet	FLASHNET	Maintenance of street lighting infrastructure often via walk-by and re-actively (fixing after problem occurs)	Link
Ecomesure	ECOMESURE	Air monitoring in public spaces, industrial sites, and other environments	Link
Fahfon Sence	FAHFON	An all-in-one station measuring 17 parameters, i.e., rain, humidity, wind speed / direction, pressure, light, UV index, PM1, PM2.5, PM4, PM10, and CO2.	Link
iotech	iotech	The secure distribution of COVID-19 vaccines; environmental monitoring	Link
Sensoneo	((SENSONEO))	Waste management across the large number of bins in real-time	Link
Pixoo	PIXOO	IoT-based monitoring in stores, offices, and accommodation facilities	Link
Powerdot	pwdt	Developing and operating electric vehicle (EV) charging infrastructure	Link

Find more at the **1NCE Knowledge Base**

Understanding the roles of players along the value chain

Creating connected products in the Smart City industry means to maneuver through the IoT ecosystem



Building components measuring environ-mental data such as:

- Traffic flow
- Air quality
- Noise levels
- Waste levels
- Pedestrian movement
- Weather conditions
- Etc.

Putting together required technical components such as:

- Chipset
- Modem
- Sensors
- Battery / Power

Line production and integration of IoT devices into assets:

- Smart street lights
- Smart parking solutions
- Connected waste bins
- Environmental monitoring stations
- Etc.

Specialized in bringing software and hardware components together:

- Hardware design
- Connectivity design
- Cloud integration
- Software enablement

End-to-end owner of the solution, focus on selling and servicing:

- City government partnerships
- Infrastructure development contractors
- Smart City-as-a-Service
- Etc.

1NCE has a dedicated offering for Smart City

	Typical customer requirements	Standard offerings	1NCE Offering
Pricing	• Single SKU • Cost transparency • Often only low data use cases	• Multiple suppliers for each region • Monthly fees, overage charges • Data selling focus, high data preferred	✓ All-in-1: $10/10 years of service ✓ Transparent: no monthly fees ✓ Lifetime Flat: 500 MB, 250 SMS
Coverage	• Global coverage • Support of LPWA technology • Multiple network and operator switch	• Country group pricing, zoning • No or limited NB-IoT and LTE-M support • Different SIMs for different regions	✓ 173 countries coverage; no zoning ✓ +50 LPWA networks supported ✓ Global SIM with eUICC support
Service	• Device Management • API support • Interoperability	• Device Mgmt not included • API use not available or at high cots • No compatibility with 3rd party software	✓ Included in 1NCE OS ✓ All functions exposable through API ✓ Can be natively used with 1NCE Plugins

We bring your data from the sensor to the cloud

1NCE Platform

Connect

- 500 MB
- 250 SMS
- 173 countries
- VPN / APN
- Data Streamer

OS

- Cloud Integration
- Location Services
- Energy Saver
- APIs
- Device SDKs

$10 for 10 years

Business	Industrial	Chip
$1.00	$2.00	$2.50

Sensor Data

Our 1NCE Lifetime Flat is the new standard in IoT

1NCE IoT Lifetime Flat

10 years of service including:

1NCE Connect

- 500 MB
- 250 SMS
- 173 countries coverage
- Open VPN
- API Usage & APN
- Data Streamer
- Monthly data limits
- IMEI Lock
- Freedom to Switch
- 3 months grace period

1NCE OS

- Cloud Integrator
- Device Locator
- Energy Saver
- Device Authenticator
- Device Inspector
- Device SDKs and Blueprints
- LwM2M Service
- Device Controller
- Admin Logs
- Access to Developer Hub (Documentation)

One time fee: $10.00

SIM Options

Business

$1.00

Industrial

$2.00

Chip

$2.50

- ✓ Already covers all requirements for most IoT uses cases
- ✓ Already sold to 23,000+ customers in 100 countries
- ✓ Widely used across all industries and verticals
- ✓ No minimum order quantities*

Optional Add-Ons and Extensions

Data Top-Up Additional 500 MB and 250 SMS	+$10.00	Advanced Device Locator High-res network location service	
Lifetime Extension Additional 10 years, 500 MB and 250 SMS	+$10.00	Plugins Integrated 3rd Party Software	Free Trial
High Data Option High throughput 25Mbit/s	$5.00 / GB	High Security Data Routing IPSec / VPC Peering services	$1,800+ / yr

- ✓ Add-Ons trusted by 4,000+ advanced users
- ✓ Co-developed with and for customers

All prices and information as of February 2025

* For IoT SIM Card Business only. Industrial-grade SIMs are MOQ 100.

About 1NCE

Fast

23,000+ customers won in 7 years

400+ team across Europe, Asia and US

30 million managed endpoints

+100% year on year average growth

"1NCE launched its flat rate life-time connectivity offering for connected devices in 2018 and has achieved unparalleled growth in the past two years."

Johan Fagerberg, CEO, Berg Insight

Strong

- Global access under a strong a family of local network operators
  - EU — Deutsche Telekom AG
  - USA — T-Mobile US
  - Asia — SoftBank
  - China — 中国电信 CHINA TELECOM
  - Claro — Claro
  - Bell — Bell

Everywhere

Can be used for multiple IoT applications

1NCE is a company offering a software platform for connected products that delivers future-proof, hassle-free IoT in 173 countries and regions. The software platform enables customers to easily, securely and reliably collect device data and turn it into actionable intelligence. This accelerates time-to-market for data collection projects by months, increases device lifetime by years, and allows efficient management of sensors from initial deployment to the end of the product lifecycle. More than 23,000 users and 60 Fortune 500 companies trust 1NCE with 30 million connected products worldwide.

Explore More about 1NCE

1NCE Shop

Shop Now

Contact

Contact Us

Knowledge Base

Knowledge Base

Stay up to date with us on Social Media