



Industry Playbook

Smart City Edition

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

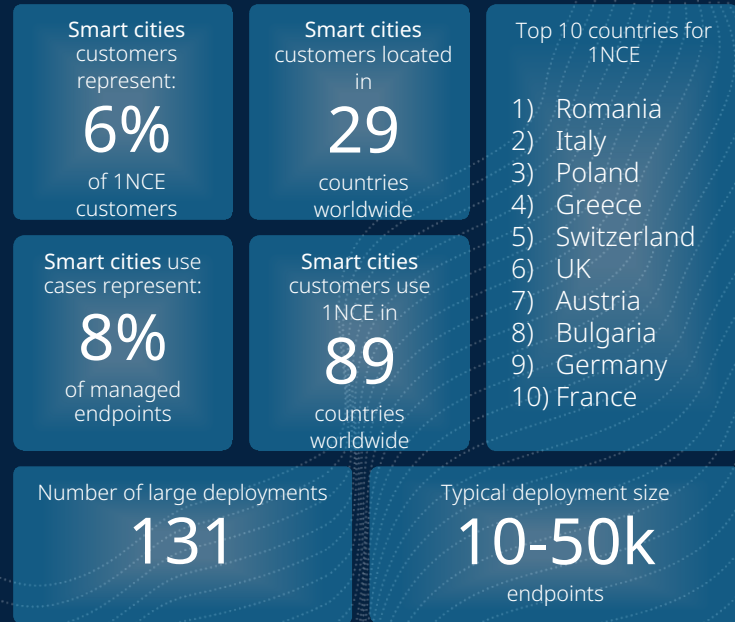
March 2025

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:



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.

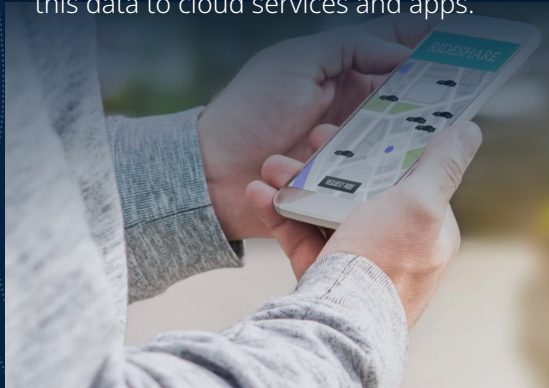
6% of our customers are building solutions in the Smart City sector, including environmental and equipment monitoring

	Customers %	Typical applications			Selected customers
Utilities		<ul style="list-style-type: none">• Electricity meters• Gas meters	<ul style="list-style-type: none">• Water meters• Leak prevention	<ul style="list-style-type: none">• Network monitoring• Smart grid	 
Infrastructure		<ul style="list-style-type: none">• Remote Maintenance for elevators	<ul style="list-style-type: none">• Solar Energy Monitoring• Charging stations	<ul style="list-style-type: none">• Water and heating metering	  
Logistics		<ul style="list-style-type: none">• Asset tracking• Temperature monitoring	<ul style="list-style-type: none">• Telemetry for vehicles• Geo-fencing	<ul style="list-style-type: none">• Cold-chain monitoring	 
Automotive		<ul style="list-style-type: none">• Usage based insurance• Road-charging	<ul style="list-style-type: none">• Fleet management• Car sharing	<ul style="list-style-type: none">• Stolen vehicle recovery• Fuel level monitoring	  
Industry		<ul style="list-style-type: none">• Oil monitoring• Industrial automation	<ul style="list-style-type: none">• Tank monitoring• Equipment monitoring	<ul style="list-style-type: none">• Industrial sensors	 
Agriculture		<ul style="list-style-type: none">• Remote analysis of bee colonies	<ul style="list-style-type: none">• Pest control• Yield monitoring	<ul style="list-style-type: none">• Geofencing and alerting	  
Smart Cities		<ul style="list-style-type: none">• Cost and energy reduction	<ul style="list-style-type: none">• Water leakage monitoring	<ul style="list-style-type: none">• Elevator management solutions	 
Healthcare		<ul style="list-style-type: none">• Health monitoring• Refrigeration monitoring	<ul style="list-style-type: none">• Cleaning monitoring (hotels)	<ul style="list-style-type: none">• Digital signage	 
Consumer		<ul style="list-style-type: none">• Indoor Wellbeing Monitoring	<ul style="list-style-type: none">• Professional Coffee Machines' Monitoring	<ul style="list-style-type: none">• Energy consumption monitoring	 
Retail		<ul style="list-style-type: none">• Vending Machines Monitoring	<ul style="list-style-type: none">• Payment Processing		 

Key IoT use cases in Smart cities

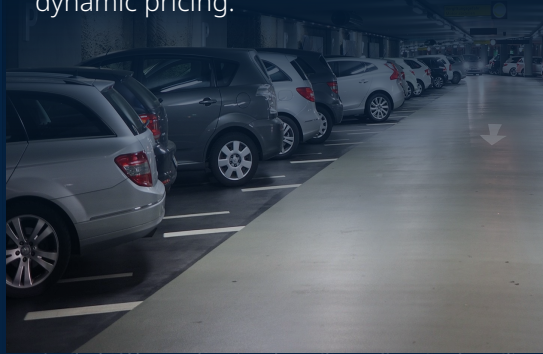
Car Sharing

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

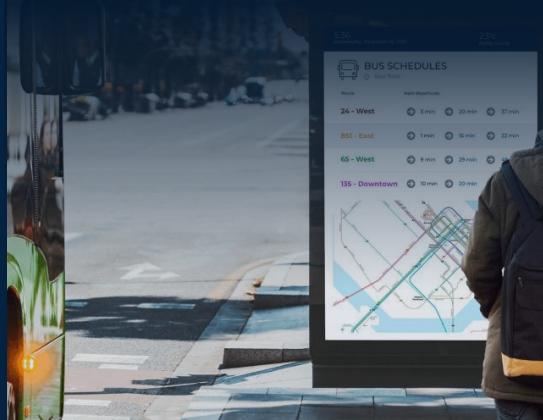
Waste Management

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, CO2 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
Schröder		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

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

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

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








Overview of players with traction in the market


Key players in **Environmental Monitoring**

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

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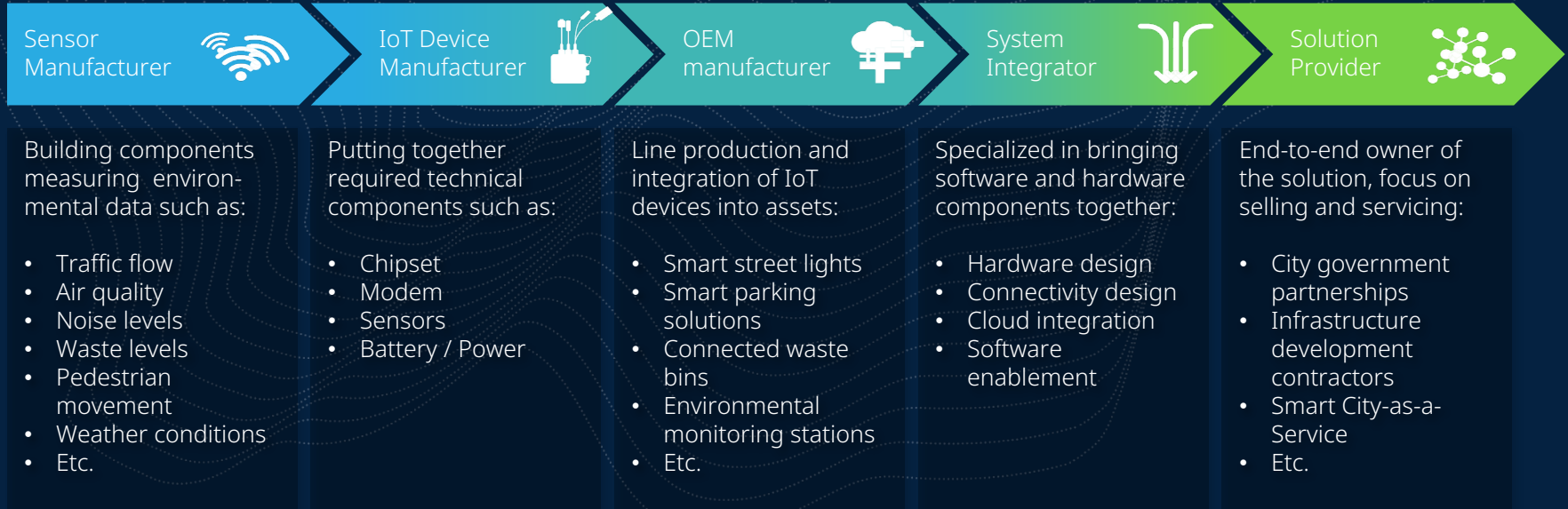
Players 1NCE is supporting in the field

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 SENCE	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	 pwrdt	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



1NCE has a dedicated offering for Smart City

	Typical customer requirements	Standard offerings	1NCE Offering
Pricing	<ul style="list-style-type: none">• Single SKU• Cost transparency• Often only low data use cases	<ul style="list-style-type: none">• Multiple suppliers for each region• Monthly fees, overage charges• Data selling focus, high data preferred	<ul style="list-style-type: none">✓ All-in-1: \$10/10 years of service✓ Transparent: no monthly fees✓ Lifetime Flat: 500 MB, 250 SMS
Coverage	<ul style="list-style-type: none">• Global coverage• Support of LPWA technology• Multiple network and operator switch	<ul style="list-style-type: none">• Country group pricing, zoning• No or limited NB-IoT and LTE-M support• Different SIMs for different regions	<ul style="list-style-type: none">✓ 173 countries coverage; no zoning✓ +50 LPWA networks supported✓ Global SIM with eUICC support
Service	<ul style="list-style-type: none">• Device Management• API support• Interoperability	<ul style="list-style-type: none">• Device Mgmt not included• API use not available or at high costs• No compatibility with 3rd party software	<ul style="list-style-type: none">✓ 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

Your Devices



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

Your Data



Business



\$1.00

Industrial



\$2.00

Chip



\$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



- ✓ 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

Lifetime Extension

Additional 10 years, 500 MB and 250 SMS

+\$10.00

High Data Option

High throughput 25Mbit/s

\$5.00 / GB

Advanced Device Locator

High-res network location service

Plugins

Integrated 3rd Party Software

Free Trial

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

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
- Claro  Claro
- Bell  Bell

Everywhere

Can be used for multiple
IoT applications



Smart
Agriculture



Waste
Management



Industrial
Automation



Fleet
Telematics



Smart City



Tracking



AR / VR



Smart
Buildings



Infrastructure
monitoring



Smart
Metering



Remote
Monitoring



Tracking
Devices

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.

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