



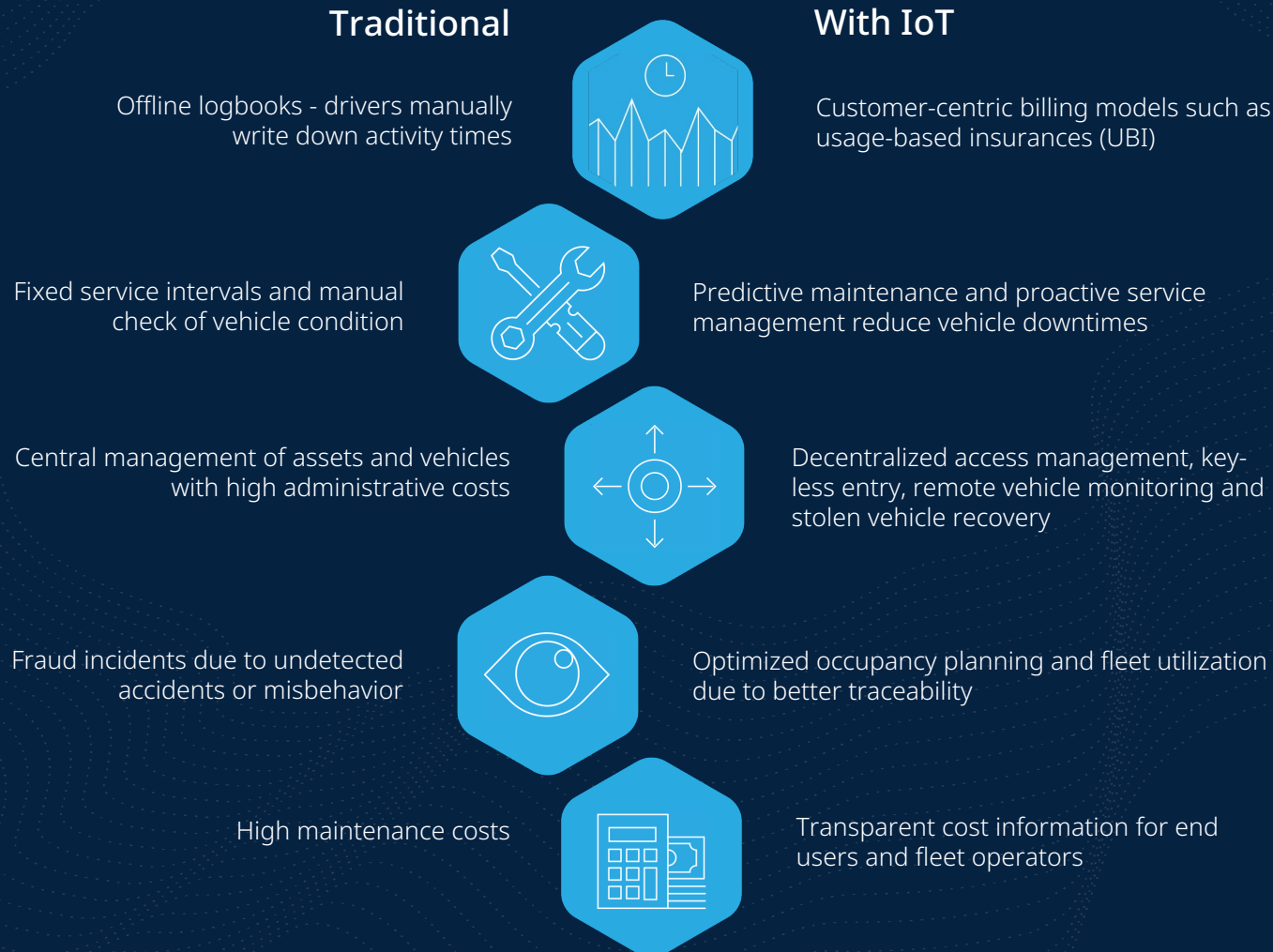
Vehicle Telematics

Connectivity Playbook



Benefits of IoT for Vehicle Telematics

IoT has progressed significantly in the last 10 years, so how does this affect your vehicle's telematics?



Advantages of IoT Along the Value Chain

While the benefits of IoT are clear, how will this directly affect your business?

Car manufacturers/OEMs

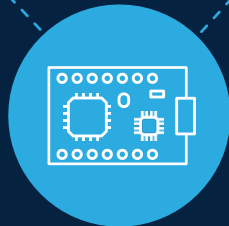
Differentiate from others by being able to offer pre-connected vehicles from the beginning, simplifying customers' connectivity decision and operation

After-market suppliers

Offer retrofit connectivity solutions to equip unconnected vehicles and thereby make IoT-based functionalities accessible to older vehicles

Solution providers

Offer data-based services to customers, make fleet operations more efficient and create new customer-centric features, such as usage-based insurances



Hardware and equipment manufacturers

Provide IoT components that guarantee interoperability and full functionality (e.g., include reliable and licensed embedded connectivity option onto HW)

Application service providers

Develop new applications for end customers in the industrial vertical through access to aggregated data

Fleet operators such as construction companies, logistics providers, car rental enterprises

Connect assets to reduce operating costs, enhance business processes, improve safety, and offer advanced customer-centric services

An Overview of IoT Applications

Understanding the applications of IoT are important to ensure that you can connect to what you need.

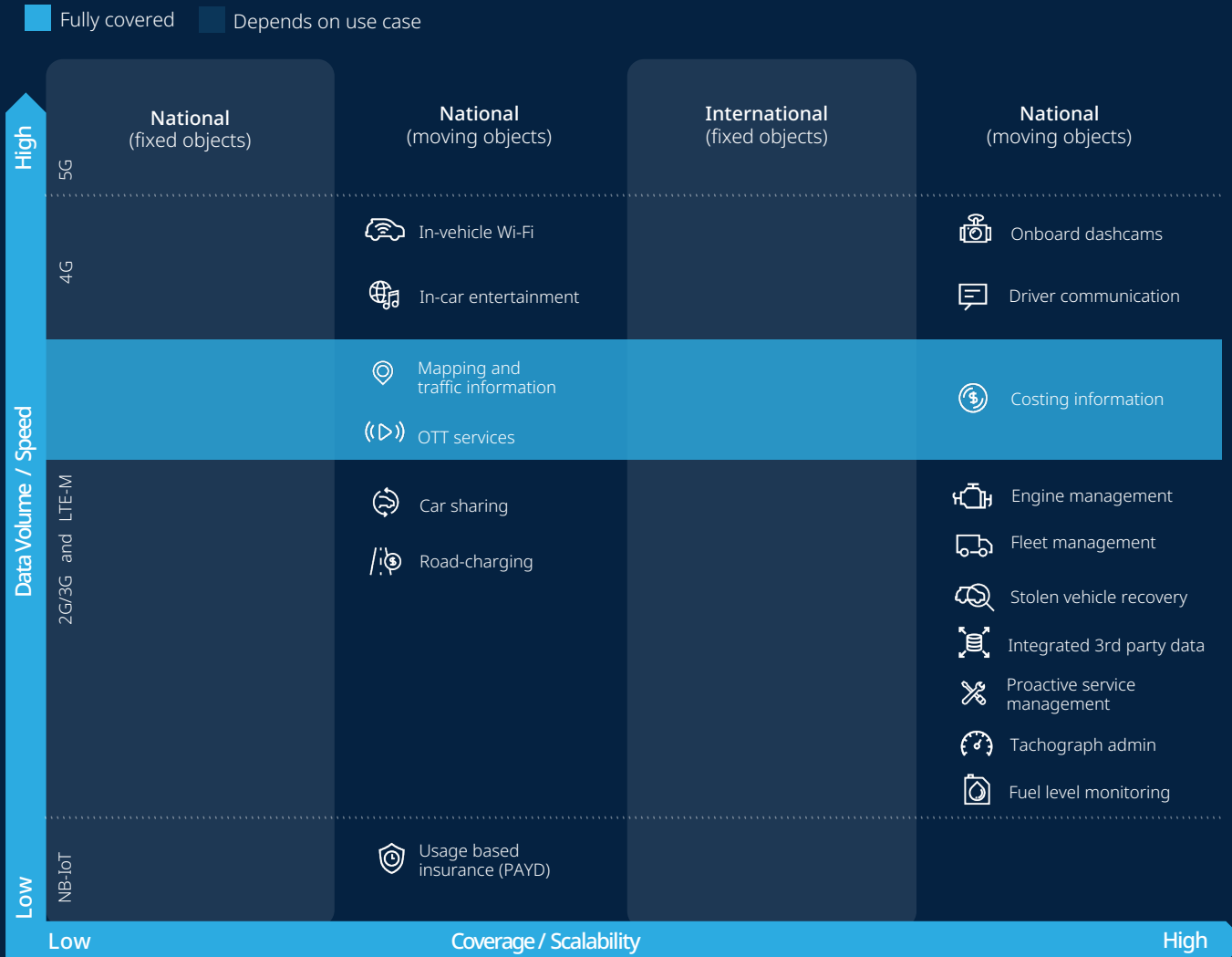
IoT Application	Transmission		Typical Data								Explanation
	Send	Receive	Status	Usage	Location	Updates	Voice/S MS	IP traffic	General	Video Data	
 Fuel level monitoring	↑		✓	✓							Measure and improve fuel consumption
 Usage-based insurance(PAYD)	↑		✓	✓							Allow for usage-based premiums
 Fleet management	↑		✓	✓	✓						Manage and optimize fleet utilization
 Tachograph admin	↑		✓	✓							Administration and automation of tachograph data uploads
 Driver communication	↑	↓					✓	✓			Manufacturers can remotely update engine management
 Engine management	↑	↓	✓	✓		✓					Service data from vehicles can be used to schedule maintenance
 Proactive service management	↑	↓	✓	✓							Upload and update maps and traffic information
 Mapping and traffic information	↑	↓			✓	✓					Provides accurate estimates of trip costs
 Costing information	↑	↓	✓	✓		✓					Optimizes network usage (voltage management, power factors) to remain stable
 Integrated 3rd party data	↑		✓	✓							Shares sensors data (temperature, tire pressure) with other systems
 Onboard dashcams	↑									✓	Uploads footage after an incidents
 In-Vehicle Wi-Fi	↑	↓							✓		Allows for in-car internet services
 Stolen vehicle recovery	↑	↓	✓		✓						Location tracking and alarming systems
 Car sharing	↑	↓	✓	✓	✓	✓	✓				Manages access to vehicles (key-less entry), activation and communication
 In-Car Entertainment	↑	↓						✓	✓		Allows for music or video streaming, web search, online news etc
 OTT services	↑	↓						✓	✓		Loyalty programs etc.
 Road Charging	↑	↓	✓								Automated road charging systems

Status monitoring: Identifier, On-Off status, Integrity, alerts Usage data: consumption data, time patterns, pressure, voltage etc. Location: GPS localization or other.

Sources: Beecham Research, 1NCE

Mapping Applications Requirements

To support your connectivity solutions, uncover what applications 1NCE can provide for your business.



Most common **connectivity types** within the use case:

2G (GPRS)

- Commonly used connectivity type, best coverage
- Sufficient for simple requirements (e.g., location, driving behavior)
- Well understood and trusted

4G (LTE)

- The base of many embedded solutions from OEMs
- Incorporates 'consumer' features, such as in-vehicle Wi-Fi connectivity
- Advanced services for telematics require more bandwidth

LTE-M

- Optimized IoT connectivity standard
- Could provide an attractive low-cost alternative to full LTE
- Future-proof alternative to 2G/3G connections supporting key functions with up to 1Mbit/s

NB-IoT

- Unable to track objects at speeds above 20km/h, which makes it unsuitable for core telematics functions
- Relatively low-bandwidth & lack of support for voice makes it an unlikely alternative to LTE-M

LoRa & Sigfox

- Poorly suited to telematics systems due to low bandwidth
- Major disadvantage in the heavy goods vehicle market due to the lack of pan-European coverage
- Uses unlicensed spectrum, less secure and reliable

Satellite

- Used for high value assets in remote regions (i.e. where cellular coverage is poor or unreliable)
- Limited usage in Europe

Sources: 1NCE, Statista, Beecham Research

1NCE Offering

1NCE is a perfect match with the Telematics solutions, meeting all basic requirements while addressing key challenges:

Requirements	Typical customer challenge	Why 1NCE is the best match?	Standard solutions
Data & Pricing	<ul style="list-style-type: none">All-in-1 solutionCost transparencyLow & high data projects' support	<ul style="list-style-type: none">All-in-1: 10 EUR/10 years for connectivity & softwareOne-time cost: no monthly or hidden feesLifetime Flat: 500 MB, 250 SMS + extra High Data IoT: 5 EUR/GB, speed 25 Mb/s	<ul style="list-style-type: none">Complex & fragmented pricing, costly integrationsMonthly, fixed & hidden feesNo high-data requirements met
Coverage	<ul style="list-style-type: none">Global coverageCellular and LPWA radio technologyMultiple networks and operators switch	<ul style="list-style-type: none">173 countries coverage; no zoning or local pricing discrepancies.Integration with LPWA networks.Freedom-to-Switch to change providers without replacing a SIM.	<ul style="list-style-type: none">Region or zone-restricted coverageNB-IoT and LTE-M limitations (10-20 networks globally)Complex contracts and vendor lock-in
Services	<ul style="list-style-type: none">Device control through one interfaceInteroperability with 3rd party services	<ul style="list-style-type: none">Device monitoring and management included3rd party software, like Datacake, Mender, Microsoft Azure, natively integrated with 1NCE OS and CMP	<ul style="list-style-type: none">Extra costs for monitoring & data managementLimited compatibility with third-party IoT software
Longevity	<ul style="list-style-type: none">Supports emerging technologiesAbility to switch operatorsServices that are liable for the device lifecycle	<ul style="list-style-type: none">NB-IoT or LTE-M for devices with lifecycle of 10+ yearseSIM (eUICC) for flexible, multi-operator functionalityReliable cellular-based networks & Tier 1 operators	<ul style="list-style-type: none">Limited LPWA, especially in challenging environmentsExtra costs due to network or service changesShort-term contracts and pricing models

The 1NCE Promise

Simplify your value chain with an **all-inclusive model** and additional features & services.

1NCE All-in-One Solution

1NCE IoT Lifetime Flat

10 EUR for 10 years lifetime subscription

1NCE Connect

- ✓ 500 MB, 250 SMS
- ✓ 173 countries coverage
- ✓ NB-IoT, LTE-M, 2G, 3G, 4G
- ✓ Connectivity management platform
- ✓ Unlimited API usage
- ✓ VPN, APN included

1NCE OS

- ✓ Device Authentication
- ✓ Energy Saver
- ✓ Device Inspector
- ✓ Device Locator
- ✓ Device Integrator
- ✓ Freedom-to-Switch

1NCE SIM Card
depending on the application

- + IoT SIM Card Business 1 EUR
- + IoT SIM Card Industrial 2 EUR
- + IoT SIM Chip Industrial 2.50 EUR



Extra Services

Top-up Option

when a device reaches data limits in 10+ years

- + Extra 500 MB & 250 SMS for 10 EUR

Lifetime Extension

for those who want to exceed 10 years

- + Extra 10 years for 10 EUR

1NCE Plugins

available to trial for free

- + FOTA by Mender
- + Data Visualization by Datacake
- + Azure IoT Integration by Tartabit
- + Device Debugging by Memfault

Alternative Products

1NCE High Data IoT

for projects with high data requests

- + 5 EUR/GB, speed 25 MB/s

About 1NCE

Delivering **IoT software and connectivity** for life.

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.

Out of 1NCE customer base, we serve today over 16% are from the [Automotive](#) sector and 7% from [Transport and Logistics](#). Vehicle telematics is one of the most frequent use cases we support within the industries.



[1NCE Shop](#)



[Customer References](#)



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