



Hyunsung Co., Ltd.

HYUNSUNG

Company Introduction

Established in 2018, Hyunsung is a start-up company that designs and develops compact and functional IoT terminals both for High-tech logistic business to modern daily life. One of the key features of high-tech logistics is that it is very important to monitor the transportation environment such as temperature, humidity, and shock in freight transportation. While in modern life, many people choose to adopt a pet as their companion, but because of their nature, pets tend to wander off, get lost, or be stolen, and because of these, that is why pet tracking is important.

Our corporative vision is to become smart IoT company that leads to innovation in the global market.



2018

Company Founded

In the same year after Hyunsung was founded, we signed MOU with **Samsung Electronic Company** for collaborating in developing Logistics IoT device.

2019

Established company-affiliated research center

- Achieved \$7 Million in sales
- Certified as a Venture Business Company from Korea Venture Capital Association
- Signed MOU with Xperanti Malaysia for collaborating IoT device development
- Signed MOU with UnaBiz as a IoT Ecosystem Partner Program
- Supplied Intelligent Rail Robot system to Seoul City
- Selected as a startup company in High-tech logistics IoT terminal from TIPS program

History



2020

More Achievement

- Selected as a host business operator of 2020 IoT verification program utilizing intelligent rail robot and AI technologies from NIPA
- Selected as a startup company in high-tech logistics IoT terminal from TIPS program
- Selected as a supplier in Intelligent Rail Robot for Sejong City

History

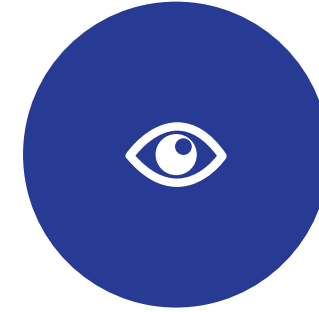
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HYUNSUNG



Mission

In Hyunsung we believe that with excellent and efficient management, there will be more opportunities for everyone. Our mission is to remain committed to providing excellent products to all customers through a continually empowered team, innovation, and development



Vision

We are inspired by a single goal: a world with efficient management. We believe that commitment and innovation come to progress and promise better opportunities.

Objectives

Global Market

We will expand our business operations beyond borders and ensure that all international customers are acquainted with our product.



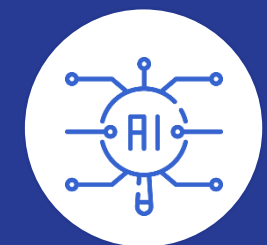
Adapting to Customer Needs

Offer products that are priced appropriately and provide our customers with a variety of products to meet customer needs.



Innovation and Development

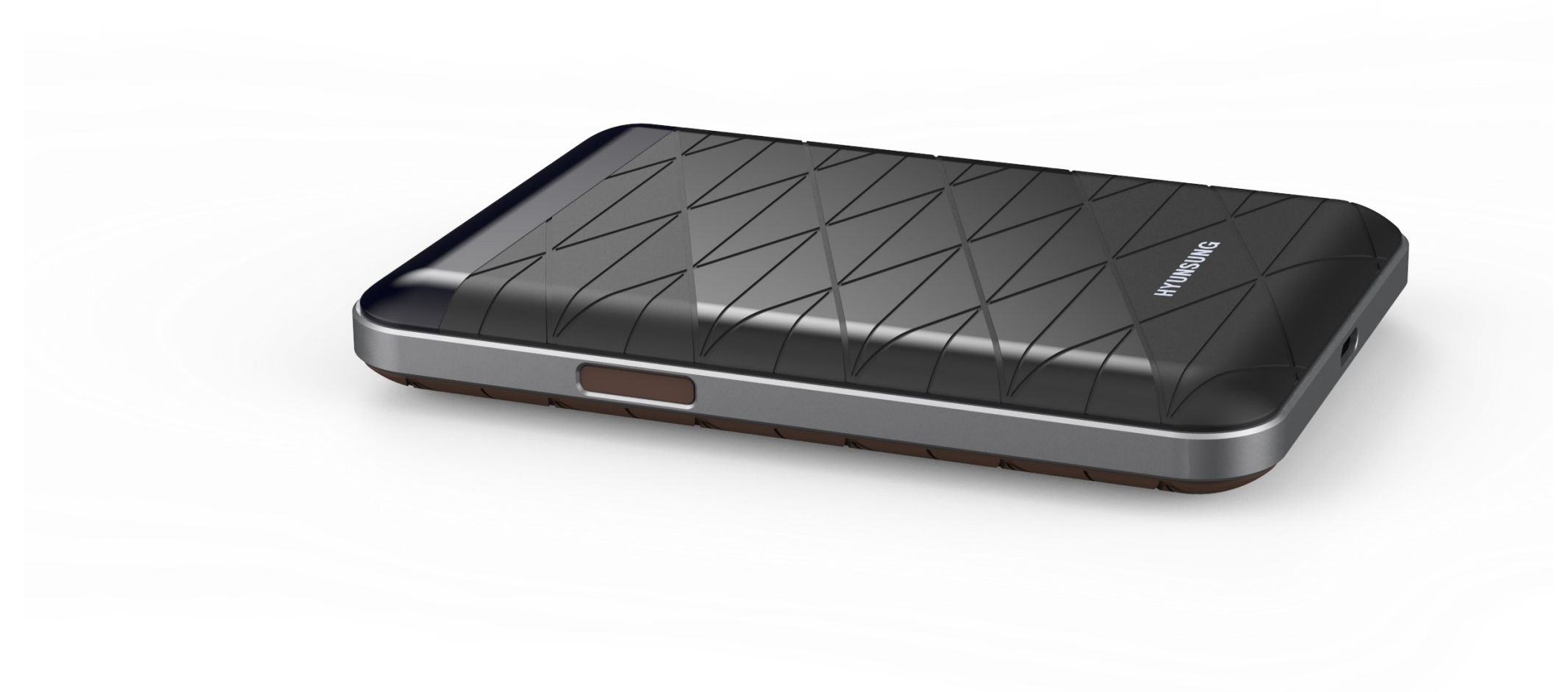
Technology change and grow fast. We are an attempt to follow the growth and become the leading in IoT business by keep innovating and developing our products.



Hyunsung Smart Logistic Tracker

Hyunsung Smart Logistic Tracker is an IoT terminal that monitors the entire delivery process tracking from the warehouse until to the customer.

- Compact design
- Low battery consumption
- Support global roaming in low-frequency spectrum bandwidth
- Biometrics security service
- No subscription needed



Competitor



North Carolina based
vehicle tracker company



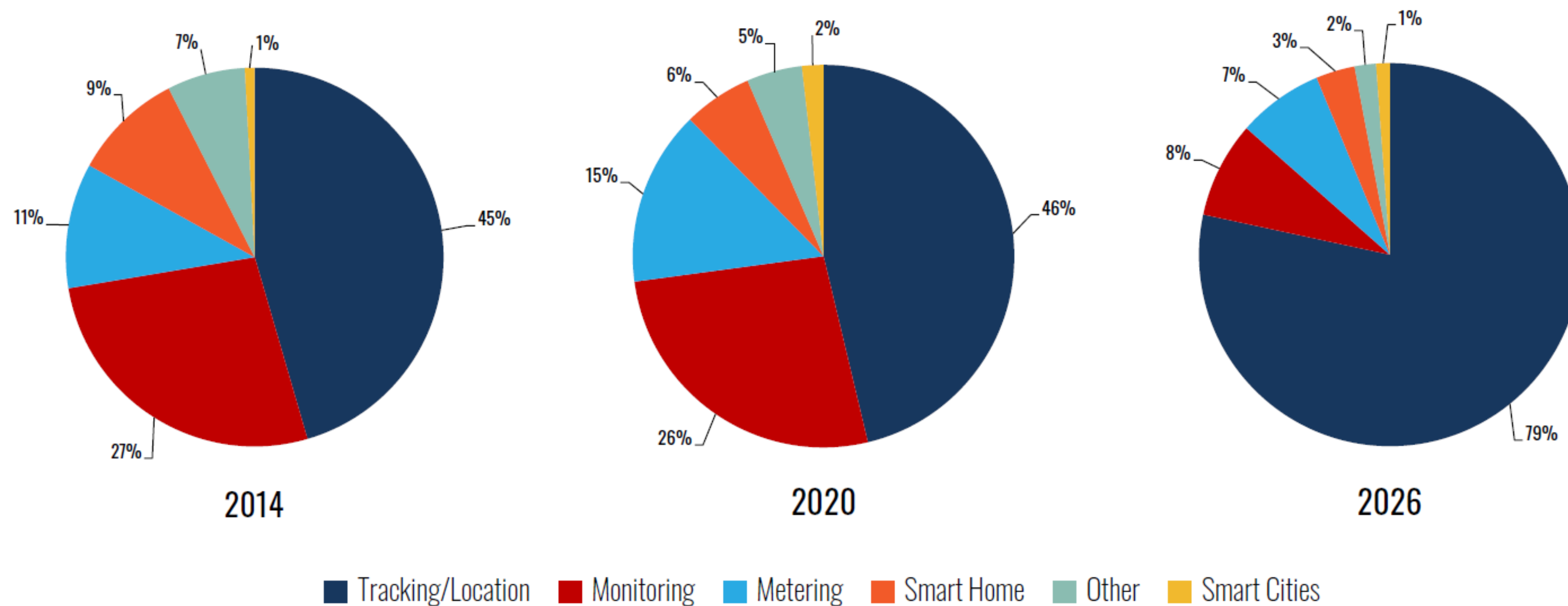
Boston based logistic
tracker company



Berkshire, United Kingdom
based tracker company

Market Opportunity

The fastest-growing category of cellular IoT application is tracking, which is being spurred on by businesses' needs to diversify their supply chains and acquire greater visibility into the location of their assets and how they are performing. The post COVID-19 economy will rely on automated supply chain management more than ever to ensure business operations are not disrupted by similar events again. The concept can be extended beyond fleets and goods.



What is the benefit of logistic tracking?

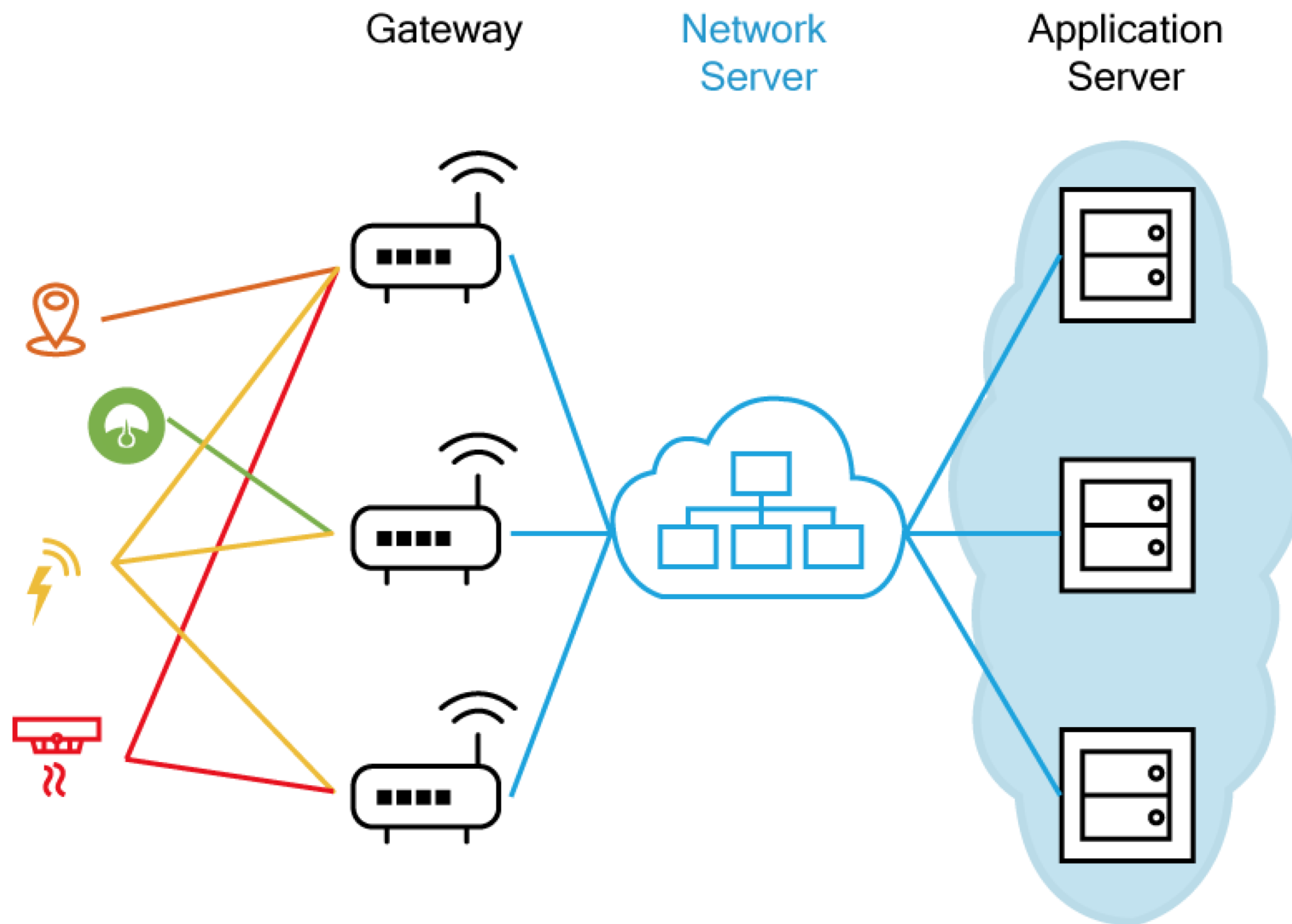
Logistic tracking is used to monitor the location and status of shipments, allowing manpower to be scheduled and actions taken should in case of early delivery or delays in delivery become possibilities.

- Locate shipping in real-time
- Reduce cost while improve efficiency
- Improve customer service
- Improve efficiency and accuracy
- Our smart logistics tracker battery is extendable in case of long-term usage



Product Specification

Device Type	Biometric authentication logistics security terminal for logistic tracking
Network	3G (Global Roaming) & Sigfox Monarch (LPWAN)
Local Network	WiFi & Bluetooth 5.0
Biometric Authentication	Biometric authentication through connected smartphone
Position Tracking Sensor	Outdoor location tracking: GNSS (GPS, GLONASS) Indoor location tracking: WiFi AGPS
Battery	1200 ~ 3500mAh (Battery Autonomy 15~75 days) (Removable & Extendable, lithium polymer)
I/O	USB Type C
Indicator	Power, 3G Connect, Sigfox Connect, LED and Buzzer
Environment Sensor	Temperature and Humidity
Motion Detector Sensor	6-axis acceleration sensor, barometric pressure sensor
Operating Temperature	-20°C~70°C
Waterproof Test	IP65 Dustproof/Waterproof



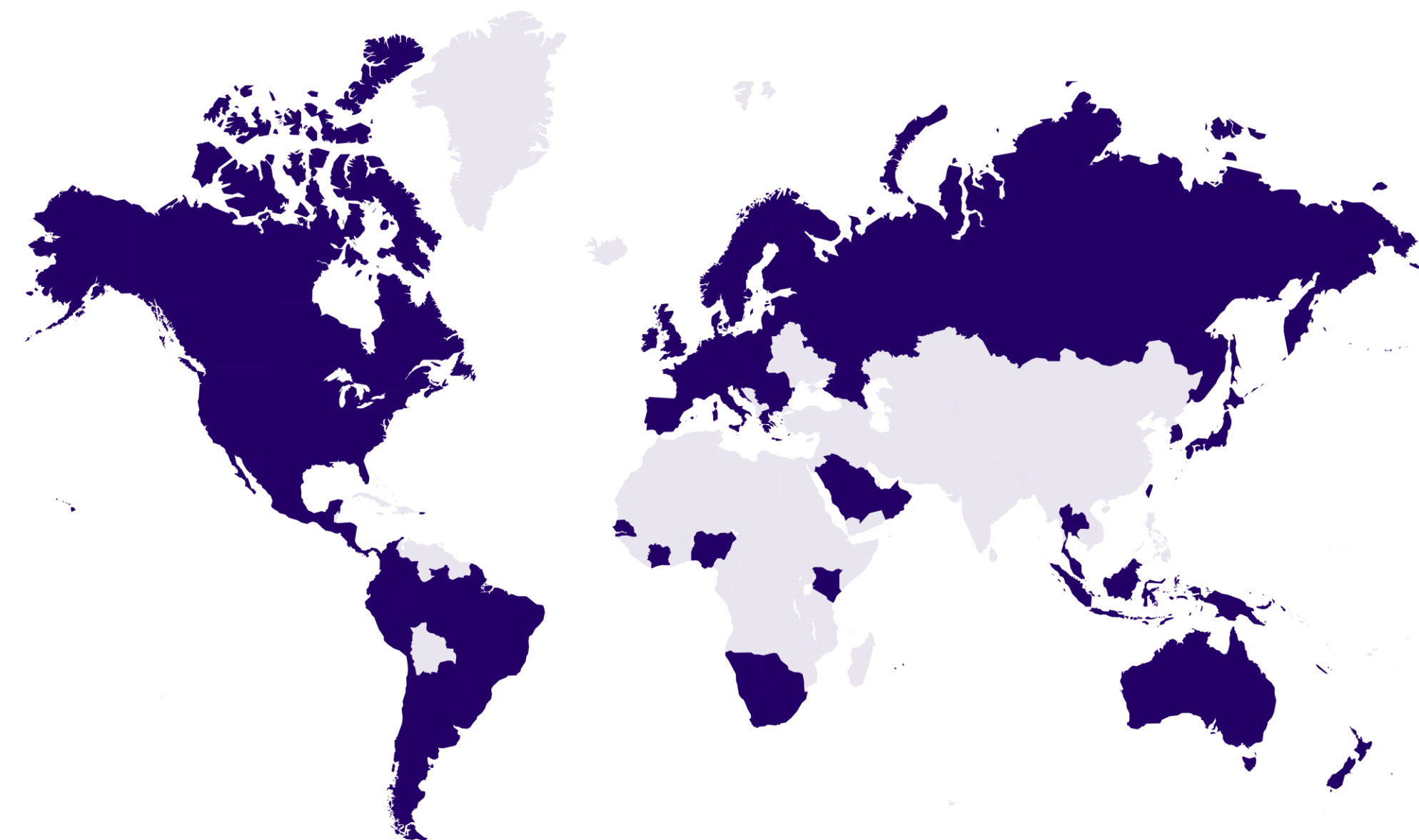
LPWA Network

Low Power Wide Area Network (LPWAN) enables connected devices to communicate over large geographical areas with a low bit rate



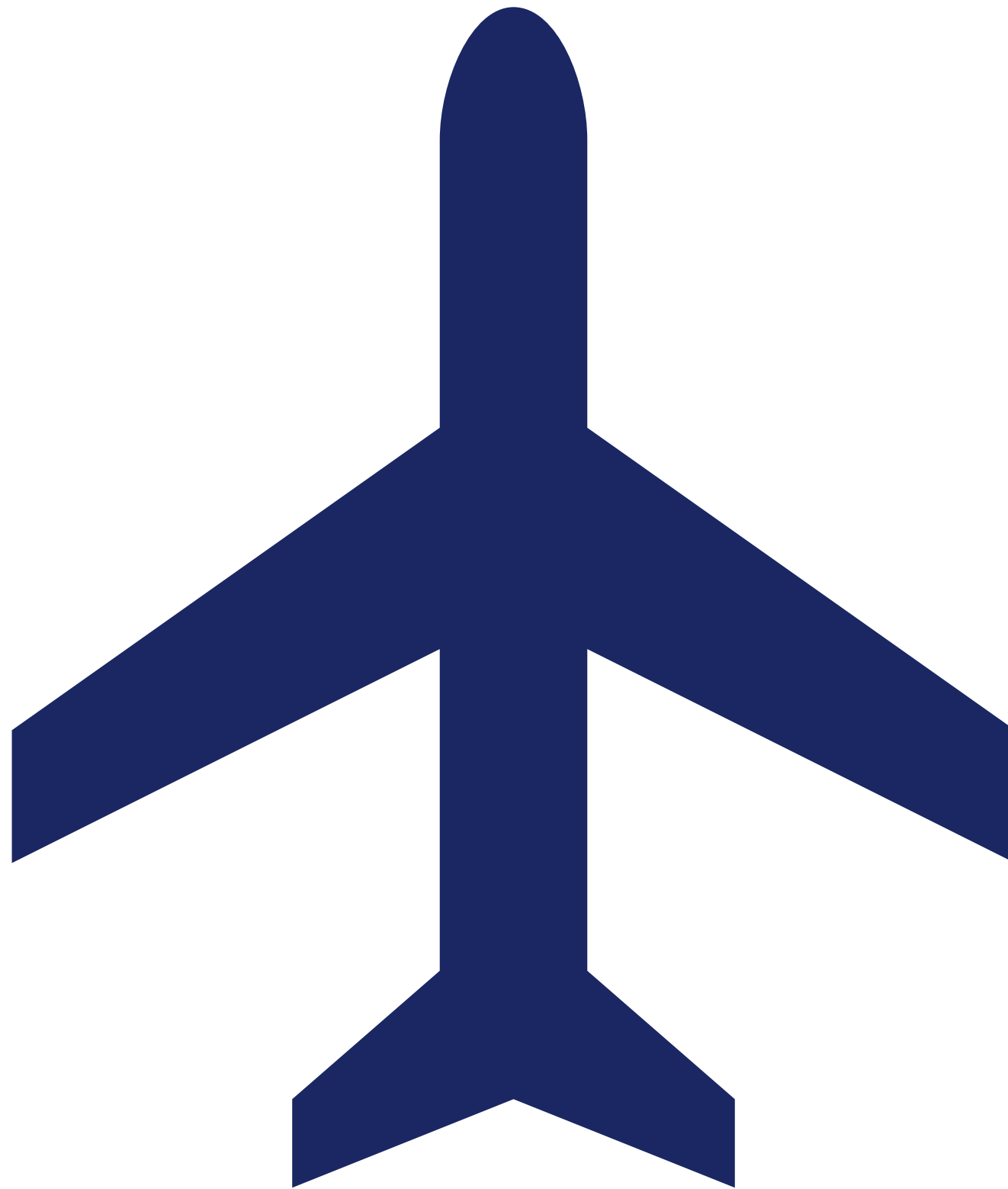
We've got you covered!

Sigfox is already available in 72 countries and regions and aims to cover 100% of the globe in the next few years...



Sigfox Coverage Area

As of November 2020, the Sigfox IoT network has covered a total of 5.8 million square kilometers in a total of 72 countries with a 1.3 billion of the world population reached



Does it work in an Airplane too?

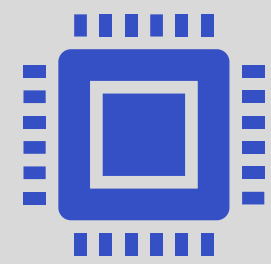
By using air pressure sensor when the airplane reaches up to a certain height, the device will automatically turn to sleep mode.

Hyunsung Intelligent Rail Robot

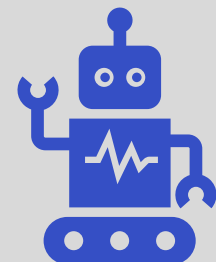
The intelligent rail robot is a key system equipment for accident prevention and safety management of tunnel-type facilities as well as warehouse management of logistics facilities.

It is a system product for logistics and safety management which is a self-driving robot that moves along the rails installed on the warehouse ceiling. It is equipped with various sensors, high-definition and thermal imaging cameras. It is a system that safely manages assets and facilities by utilizing various data collected in real time to identify risk situations and take necessary actions based on deep learning.





The innovative facility safety management platform developed by the convergence of IoT sensor network, intelligent rail robot and AI technology provides a systematic AI analysis and provisioning based on real-time environment.



In case the robot sensor detects heat or hazardous gas, the robot will patrol to the concentrated area to monitor the condition and find the problem

How does it work?

- Manually controlled from the control room or connected mobile device
- Emergency alarm in case of emergency
- Camera can move tilt up and down
- Automatically patrol every 1hr or 30 minutes depends on preferable time

Features

- Monitoring the environment's temperature and humidity
- Monitoring oxygen level
- Monitoring micro dust level
- Detect other hazardous gas
- Gas injection type fire extinguisher equipped (optional)
- Modular-typed multi-sensors mountable
- Supporting in identifying risk situations and performing necessary action based on deep learning

Hyunsung Pet Tracker

Pet tracker is a dog/cat tracker designed to determine your pet's coordinates help you locate them in case of potential escape.

- No subscription needed up to 3 years
- Compact size and light weighted
- Designed with QR code in case of battery shortage
- Built-in Lithium battery up to 3 years with no recharge needed
- It is waterproof, dustproof, and shockproof



Competitor



Kansas City based pet
tracker company



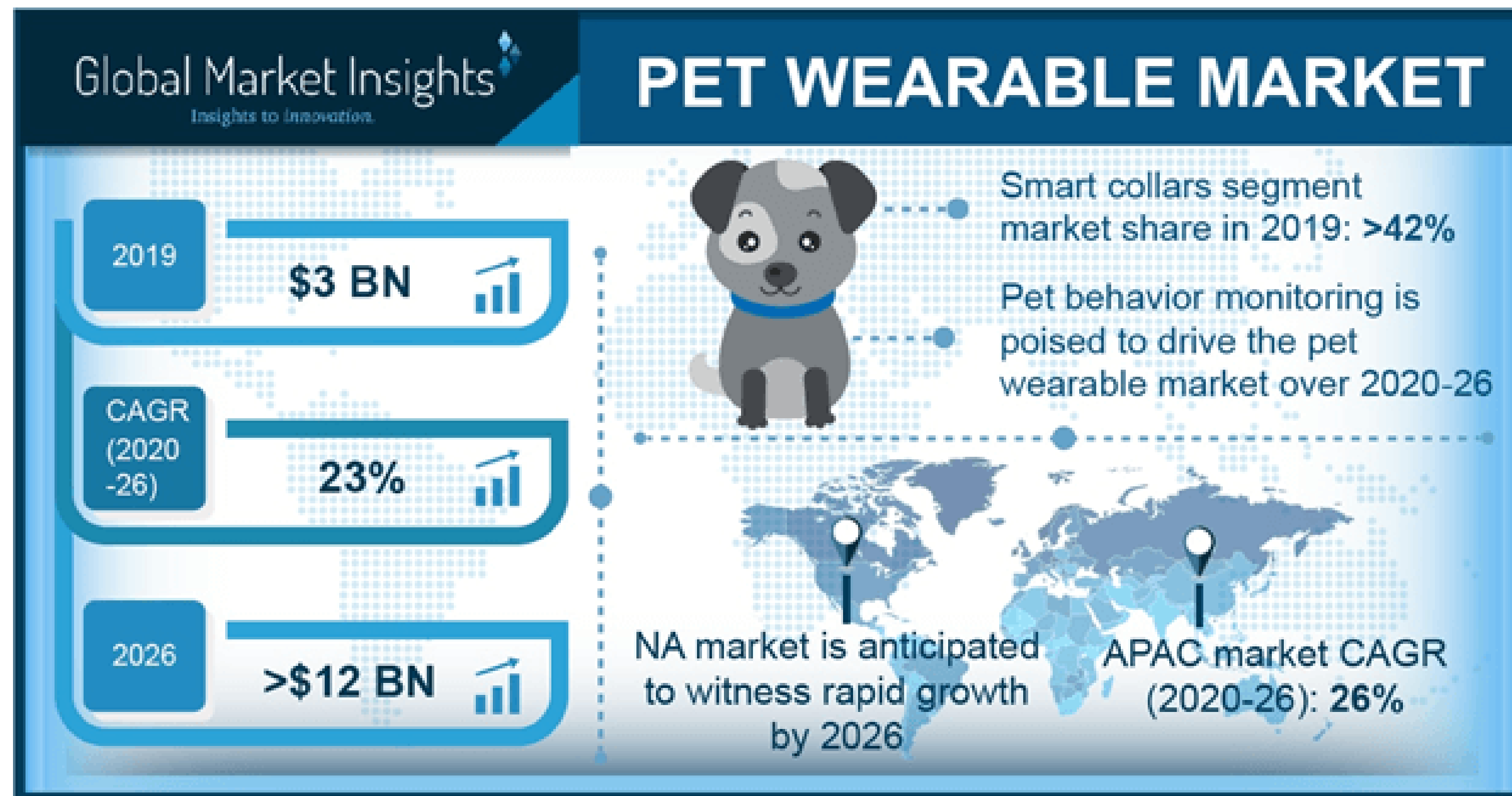
San Fransisco based pet
tracker company



Pasching, Austria based pet
tracker company

Market Opportunity

Pet Wearable Market size exceeded USD 3 billion in 2019 and is poised to grow at a CAGR of around 23% between 2020 and 2026. The global industry shipments are projected to reach 70 million units by 2026. The market growth is attributed to increasing demand from pet owners to adopt advanced devices for the health and well-being of their companions. The demand for GPS integrated pet wearable devices has witnessed a considerable rise in the past few years owing to increase in market penetration of smartphones and mapping applications coupled with growing need for tracking the real-time positioning pets.



Product Specification

Category	Item	Description
MCU	MCU Type / Speed	ARM Cortex-M0+, 32Mhz
Sigfox LPWA	Frequency Band	RC1 Support
	Antenna Type	Internal
GPS	Frequency Band	1575.42 MHz
	Antenna Type	Internal
Battery	Type	Lithium (Non rechargeable battery)
	Voltage / Capacity	3.6 V / 1650mAh
	Battery Life	2 Years
Appearance	Size (mm)	62 x 24.5 x 23
	Weight	TBD
Reliability	Operating Temperature	20°C~60°C
	Waterproof	IP67 Satisfied
	Ruggedness	Dust proof

Do I Need a Pet Tracker?

We strongly believe in your right as a pet guardian to determine what is best for your pet. The sad truth is that in the US according to the estimates of the American Humane Association it is estimates that 1 out of 3 pets become lost at some point in their lifetime and close to 10 million dogs and cats are stolen in the US every year and according to the Coalition for Reuniting Pets and Families, less than 23% of lost pets in the U.S are reunited with their owners.

While microchipping can be of great help if your pet ends up in a shelter, only pet tracker can help you make sure your best friend does not get lost in the first place. A pet tracker allows you to keep track of your pet's location at all times and react on time if there is a chance that he or she may wander off too far.

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MILLION

DOGS AND CATS IN US

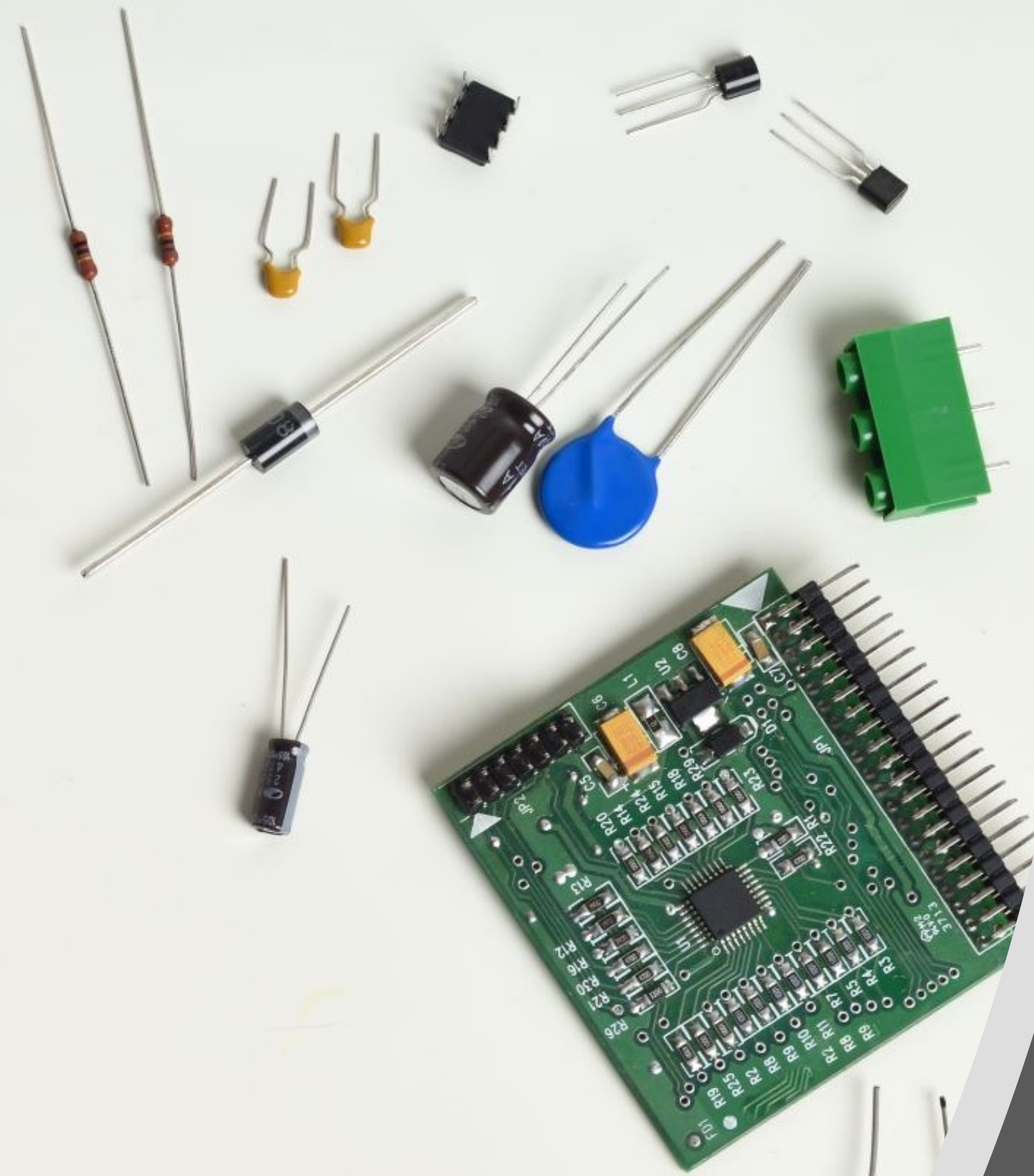
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MISSING

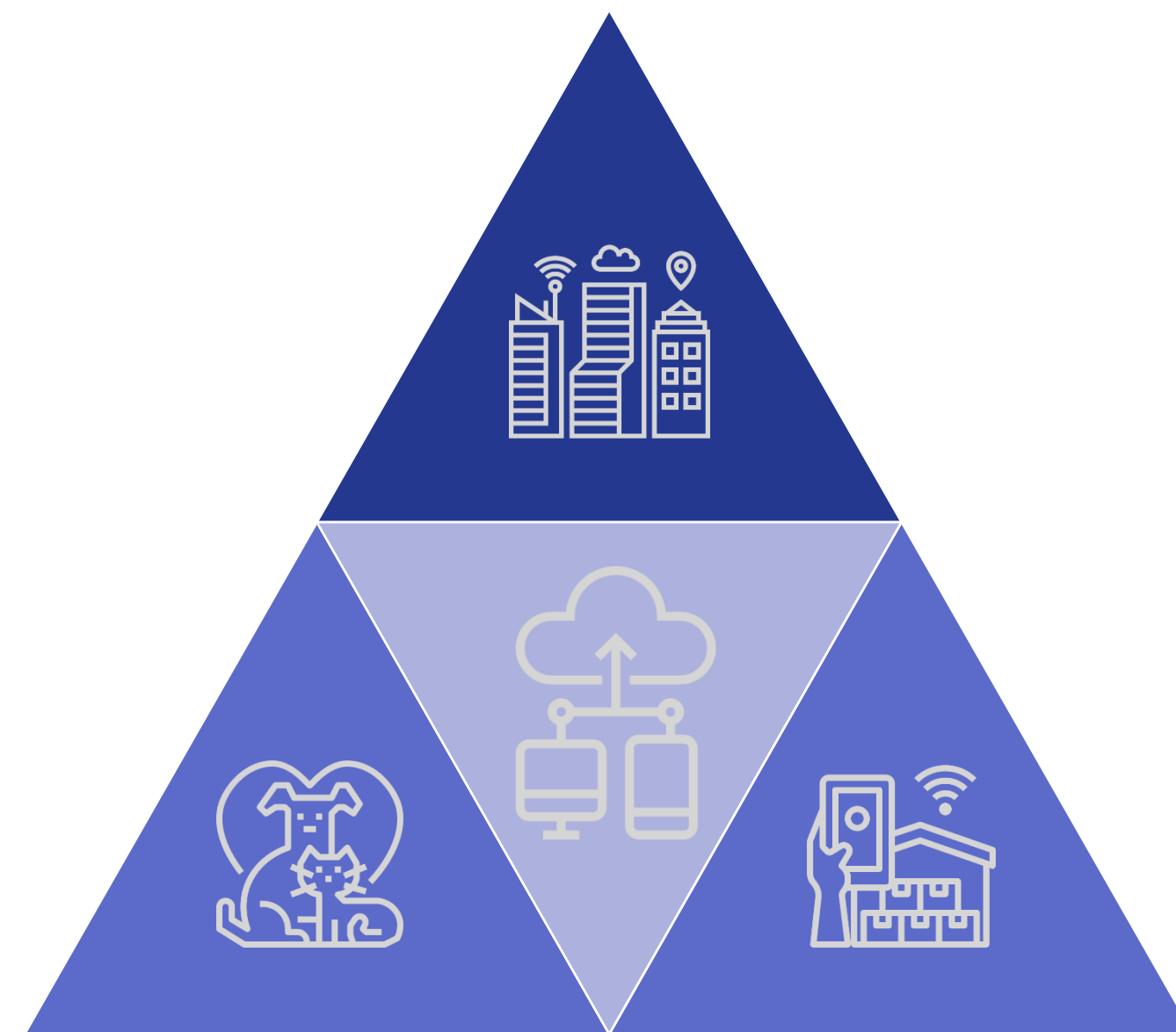
IN THEIR LIFETIME

80%

NEVER
FOUND



IoT Opportunities



Internet of Things

The non-human segment of the internet gives a chance for the global economy to become more human-oriented

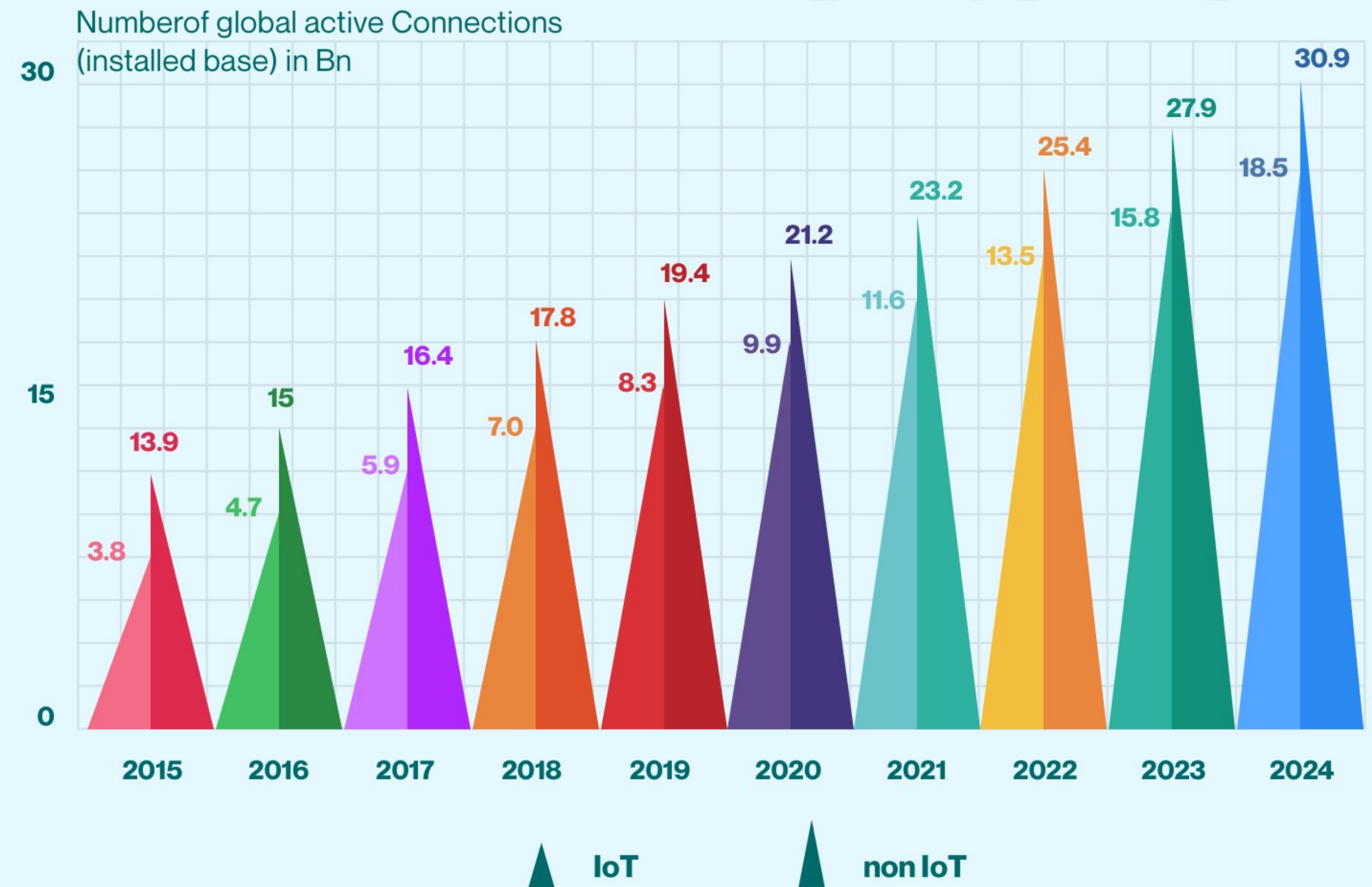
Opportunities

IoT business opportunities are endless as this web segment covers most everyday life and market areas. It connects various tech products from smart city terminals to smart home platforms. IoT era begins at the point where there more devices than people connected to the web.

In conjunction with other advanced technologies, such as Artificial Intelligence (AI) and Machine Learning (ML) the **Internet of Things** is a real opportunity for us to solve problems that humanity could not cope with over the years.

In 2020, the global Internet of Things market was estimated at \$150 billion. At the same time, according to the most conservative estimates, by the end of 2025, the market will exceed \$1.5 trillion.

Total number of active device connections worldwide



How Does IoT Impact Businesses?

The major IoT idea is to make data (as well as Big Data) sharing and analysis fast and accurate. IoT doesn't need a human anymore to get allowances for executing routine tasks, all of them are approved by the user in advance. That's why some business operating spheres may change a lot because of IoT integration into their processes.

Inventory Tracking

IoT software can manage your storage units, measure inner company resources, check if all your hardware is in order. And what is more important, IoT software never makes human-factor mistakes

Automating Efficiency and Productivity

IoT implementation can raise the efficiency of your company twice and even more with no extra investments, make the quality of your product higher, and free up staff time for more creative tasks. Also, it is minimized risk of work accidents

No-office Style

Nowadays, employees can interact with each other, using a variety of digital devices. The head of the company can also monitor employee performance and know exactly what is happening in the company from outside the physical office. This makes it possible to save money on hiring specialists residing in your area.

Thank You

