



REIMAGING A **GREENER** WORLD

IoT and sustainability are no longer topics of tomorrow – we are in the middle of development.



ABOUT HYPERNYM

HyperNym is on a mission to transform progressive businesses by delivering innovative, data-driven, and tailored solutions. We're creating secure, smarter, and effective roadmaps for tomorrow. Our dynamic IoT Platform will streamline the complexity of IoT for you and fulfill the needs of our valuable customers.

Pre-build IoT
Apps

IoT
Roadmaps

Integration
Adapter

Bespoke IoT
Development

Cloud Managed
Services

Custom Hardware's
Firmware



9000 CONNECTED
IoT devices connected across
9+ Countries

Our Pledge at COP 28

HyperNym is committed to leveraging IoT technology to combat climate change. We strive to showcase how IoT can contribute to achieving global climate goals and pave the way for a more sustainable and resilient future.



IoT for sustainable development

IoT enables us to monitor, measure, and manage various aspects of our environment and infrastructure. By doing so, we can make data-driven decisions that minimize waste, reduce energy consumption, optimize resource usage, and lower greenhouse gas emissions, contributing to a more sustainable future.



4 Usecases of successfully implementing sustainability in IoT

Fleet Management

Transforming fleet management by monitoring sustainability metrics, reducing carbon emissions, and optimizing transport for a greener future.



Waste Management

waste management solution cuts costs, lowers environmental impact, and promotes recycling and waste reduction for a circular economy.

Utilities

Monitoring and enhancing sustainability in electric and water consumption, providing cost-effective, environmentally conscious insights for a greener future.



Smart Environment

Monitoring and analyzing harmful emissions, enhancing urban safety and environmental health.

Reducing carbon footprint and harmful emissions in fleet management is crucial for several compelling reasons

01

Mitigating Climate Change

Reducing carbon emissions from fleets is crucial to combat global warming and its associated extreme weather events and rising sea levels.

02

Air Quality Improvement

Lowering harmful emissions through sustainable fleet practices enhances public health by reducing respiratory problems and associated costs.

03

Regulatory Compliance

Adhering to stricter emissions regulations is essential for legal compliance and demonstrates environmental responsibility.

04

Cost Savings

Sustainable fleet management practices reduce fuel, maintenance, and insurance costs, leading to significant financial benefits.

05

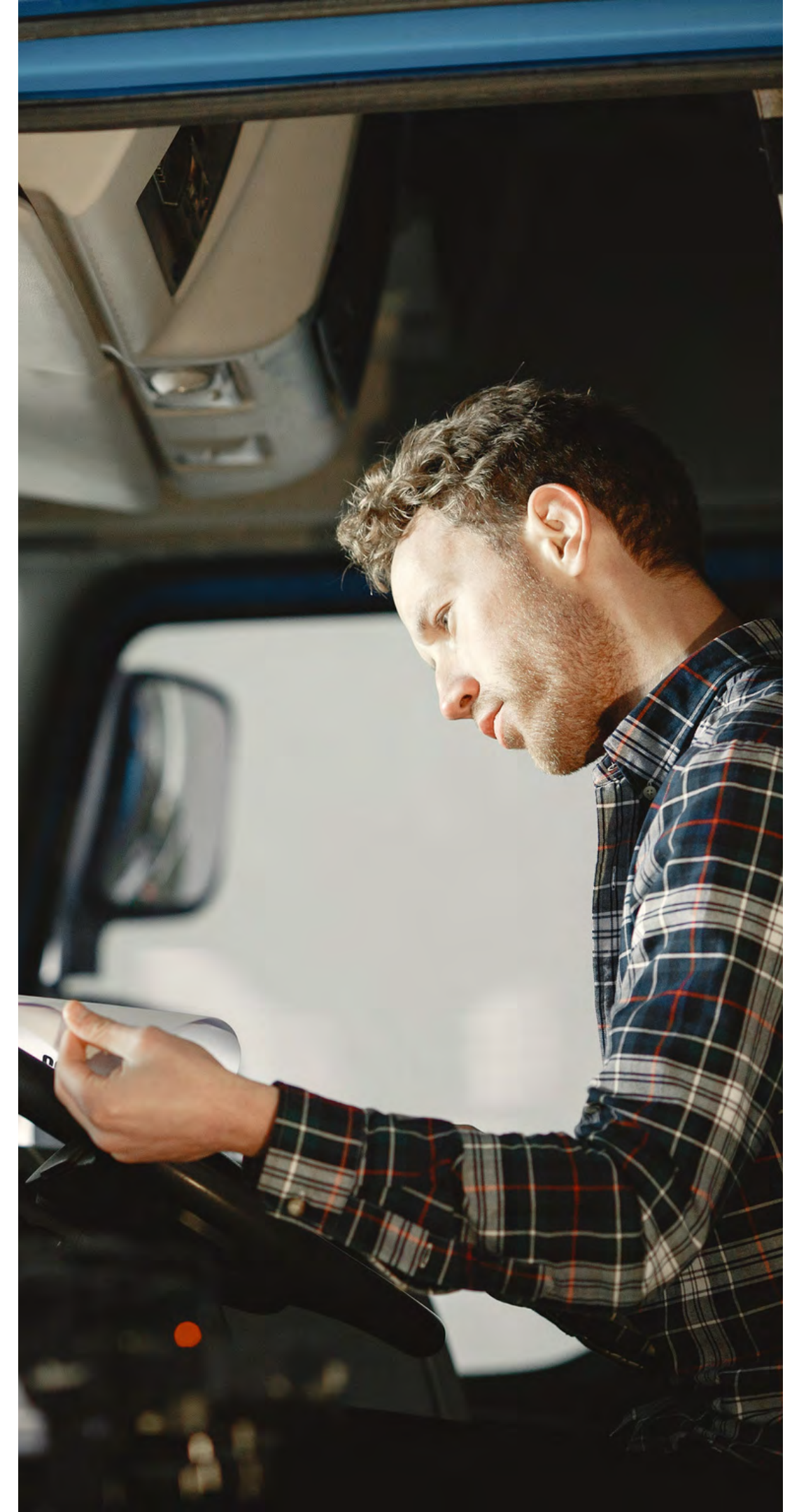
Competitive Advantage

Sustainable fleets attract environmentally conscious customers and investors, providing a competitive edge.

06

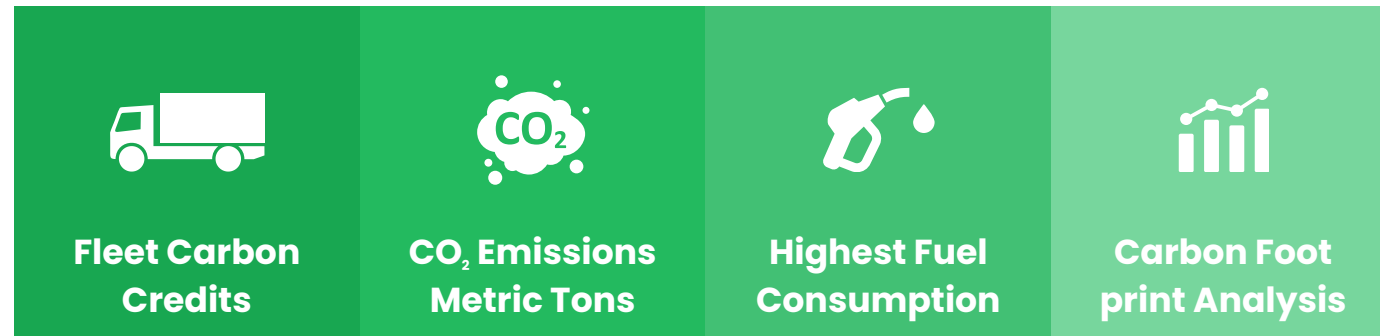
Sustainability Goals

Reducing fleet emissions aligns with corporate sustainability initiatives, showcasing a commitment to environmental impact reduction.



SUSTAINABILITY IN FLEET

Assessing critical factors



Our overarching goal is to contribute to the **reduction of greenhouse gas emissions.**

Through real-time data and advanced analytics, we help organizations optimize fleet performance, resulting in a significant reduction in their carbon footprint.



- **Emissions Monitoring:** Continuously monitor and report on emissions data to ensure compliance with emissions standards and identify areas for improvement.
- **Sustainability Metrics:** Establish key performance indicators (KPIs) to track sustainability progress, including reductions in carbon emissions, fuel consumption, and overall environmental impact.
- **Sustainable Procurement:** When acquiring new vehicles and equipment, prioritize suppliers and manufacturers committed to sustainability and low-emission technologies.

Key challenges in achieving sustainability in smart buildings

01

Resource Scarcity

Fossil fuels are finite resources that will eventually become depleted.

02

Market Volatility

Economic and market conditions can impact the viability of sustainable features and technologies, affecting investment decisions.

03

Interoperability

Compatibility and integration issues between different vendors' products and systems can hinder the seamless operation of smart building technologies.

04

Operational Complexity

Building systems can be intricate, and their operation and maintenance require specialized knowledge.

05

Data Management

Buildings generate vast amounts of data from sensors and devices

06





Energy Performance Variability

Energy performance may differ due to occupant behavior and environmental factors.



SUSTAINABILITY IN UTILITIES

Assessing critical factors

 <p>Energy Use Intensity (EUI)</p>	 <p>Energy & Water Consumption</p>	 <p>Peak Demand Analytics</p>	 <p>Occupancy & Energy Patterns</p>
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HyperNym places a strong emphasis on sustainability within the utilities sector by offering a comprehensive solution that monitors and optimizes electric consumption and the consumption of water and energy in buildings.

Our IoT-enabled platform not only tracks these essential metrics but also integrates sustainable practices to drive positive change.



- **Electric Consumption:** We monitor electricity use, revealing conservation opportunities.
- **Water & Energy Consumption:** Our platform tracks usage for resource management.
- **Sustainable Practices:** We promote energy-efficient upgrades, highlighting high-impact areas.
- **Efficiency & Waste Reduction:** We guide efficient resource use, reducing waste and costs.
- **Data-Driven Decisions:** Our insights empower eco-friendly choices and investments.

Key challenges in achieving sustainability in waste management

01

Lack of data accuracy

Manual recording of fuel consumption and related data is prone to errors, leading to inaccurate reporting and analysis.

02

Inefficient Reporting

Generating fuel consumption reports and analyses from manual records can be inefficient, hindering decision-making and optimization efforts.

03

Complexity of Route Planning

Optimizing routes for multiple vehicles, considering various constraints and dynamic factors, can be highly complex.

04

Resource Allocation

Balancing the allocation of resources, including vehicles and drivers, across routes can be difficult, affecting efficiency.

05

No Overflow Protection

Sensors provide early warnings when bins are nearing capacity, helping to prevent overflows and the associated environmental and public health issues.

06

Energy Performance Variability

Energy performance may differ due to occupant behavior and environmental factors.



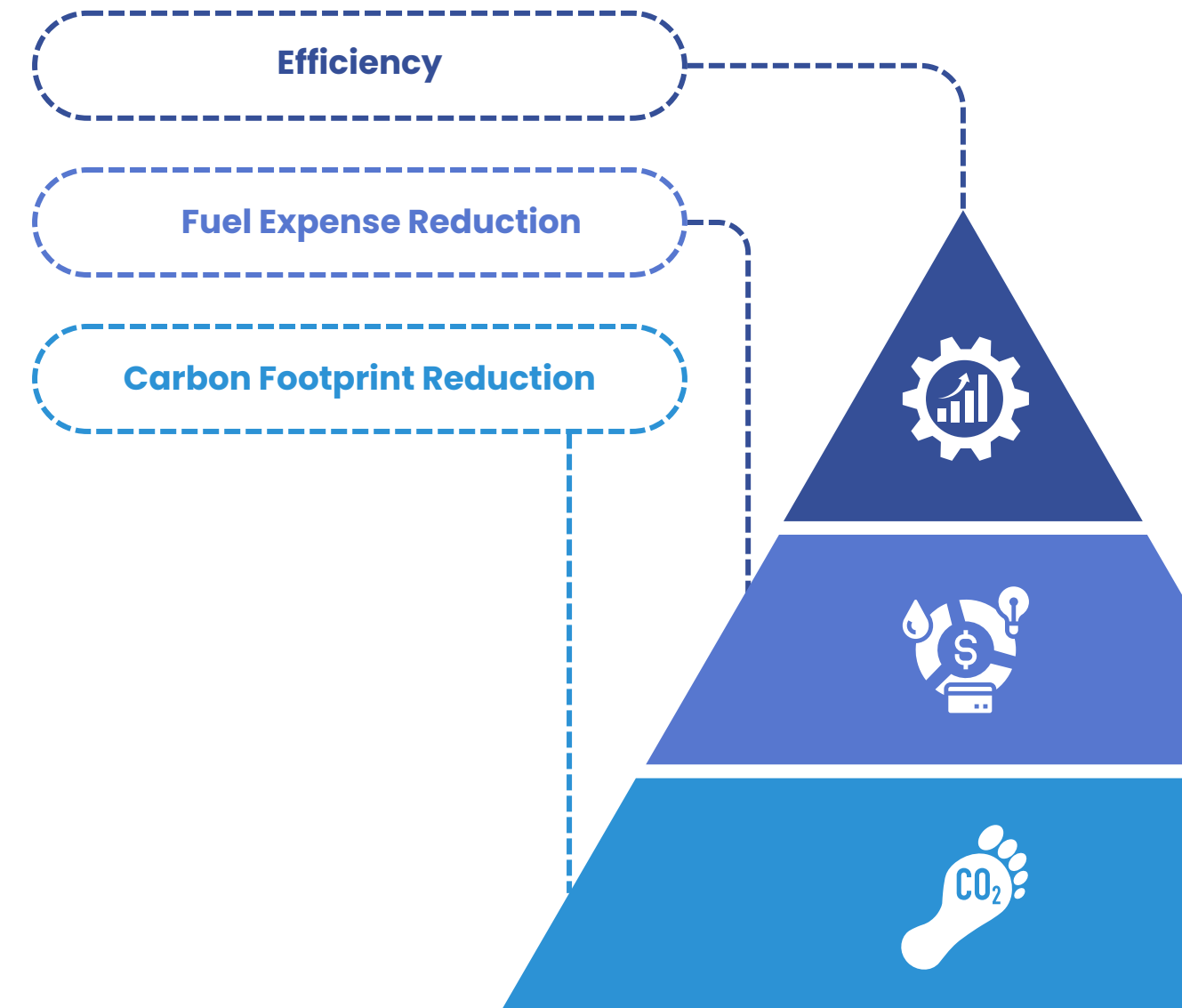
SUSTAINABILITY IN WASTE MANAGEMENT

Assessing critical factors

			
Diversion Waste Analytics	Cost per Ton of Waste	Waste Collection Frequency	Waste Generation Rate

HyperNym's waste management solution is a multifaceted approach to addressing the environmental and operational challenges associated with waste collection and disposal.

It utilizes bin level sensors and waste fleet tracking and management to achieve several key objectives:



Overarching sustainability challenges in the environment

01

Health Impact

Poor air quality can lead to respiratory and cardiovascular diseases, exacerbate pre-existing health conditions, and have significant health and economic consequences.

02

Volatile Organic Compounds

These are emitted by various sources, including paints, solvents, and motor vehicles, and can contribute to the formation of ground-level ozone and indoor air pollution.

03

Particulate Matter

Fine particulate matter (PM2.5 and PM10) consists of tiny particles suspended in the air that can penetrate deep into the respiratory system, causing respiratory and cardiovascular problems.

04

Industrial Emissions

Industrial facilities release a variety of pollutants, including heavy metals like lead and mercury, which can be harmful to both human health and the environment.

05

Greenhouse Gas Emissions

While greenhouse gases like carbon dioxide (CO2) primarily contribute to climate change, other gases such as methane (CH4) and nitrous oxide (N2O) are potent contributors

06


Emissions from Transportation

Vehicle exhaust emissions, including those from cars, trucks, and other forms of transportation, are a major source of air pollutants that contribute to poor air quality.




SUSTAINABILITY IN ENVIRONMENT


Assessing critical factors




Air Quality Index (AQI)



PM Concentrations



Nitrogen Dioxide (NO₂)



Sulfur Dioxide (SO₂)

Smart Environment Management is a critical facet of HyperNym's IoT-enabled sustainability platform, focusing on monitoring and improving the quality of our urban spaces. This area plays a pivotal role in creating cleaner, healthier, and safer environments for communities and ecosystems.



- **Air Quality Monitoring:** HyperNym's platform continuously tracks various pollutants, vital for environment and health, including PM, VOCs, NOx, and SO2, addressing issues like smog, acid rain, and respiratory problems.
- **Real-time Data:** It provides immediate air quality insights, aiding informed decisions for outdoor activities and pollution-sensitive operations.
- **Environmental Challenges:** Collected data supports understanding and addressing localized pollution sources.
- **Harmful Gas Tracking:** Beyond traditional pollutants, it tracks greenhouse gases like CO2 and CH4 for climate change mitigation.

ABOUT **HYPERNYM**

HyperNym is committed to collaborating with global stakeholders to share our IoT-enabled sustainability platform and contribute to the fight against climate change. Our dedication to sustainable practices and innovative solutions aligns with the objectives of COP28, and we look forward to being a part of the global effort to create a more sustainable and resilient world for future generations.



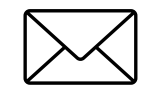


Embrace the power of connected technologies to drive positive change for a greener, more efficient world. Act now to shape a sustainable future with IoT innovations

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