XMARK LABS

Product Preview

December 2021

nosy™

You can't improve
what you don't measure

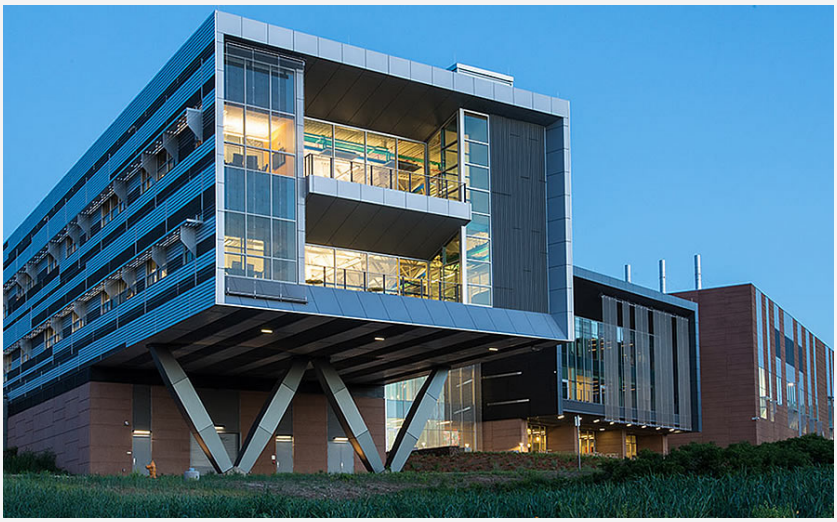
Introduction

Xmark Labs created Nosy™ to measure and improve a building's environmental quality and energy efficiency. We want to help create healthier, safer buildings that are more efficient to maintain and operate.

Nosy is designed for retrofits in commercial buildings of all kinds. It’s particularly useful in mixed-use facilities, such as buildings with laboratory spaces, clean rooms for electronics manufacturing, surgical rooms or medical treatment facilities. Nosy can also track progress towards green objectives after new or renovated facility systems have been put into place, and help with post-construction energy efficiency compliance monitoring.

We all want healthier, safer buildings that cost less to run. But that takes data. You can’t improve what you don’t measure. Until now, measuring the environment in your building has been expensive and complicated.

Nosy makes it easy.



What is Nosy?

Nosy is a smart building platform designed to provide an easy-to-manage and affordable near-real-time view of your entire facility.

The platform includes the Nosy Sensor, the Nosy Gateway, and the Nosy Analysis Platform.

The Nosy Sensor is an advanced, secure, networked building sensor that tracks a range of environmental data like temperature, humidity, indoor air quality (IAQ) and Volatile Organic Chemicals (VOCs). It also tracks energy related metrics like occupancy and light levels.

Nosy sensors are small, easy to install and entirely self-contained. They require no external power and no calibration. A Nosy sensor can run for 6 months or more before its built-in batteries need recharging.

Each Nosy sensor automatically connects to its nearest neighbor using a novel implementation of Bluetooth Mesh. Bluetooth Mesh is designed with stringent security and encryption built in. And that means secure communication with no configuration, and no interference with your existing Wi-Fi network. It also means you never need to worry about Wi-Fi or cellular deadspots. As long as one Nosy sensor is within range of another, everything just works. And that range can be up to 45 yards (~41 meters).

Since Nosy is self-configuring, self-contained and battery powered, installation can be completed by anyone in a matter of minutes. Just power up the sensor, attach it to the wall, and start collecting data.

Data from Nosy sensors is collected and stored by the Nosy Gateway. What happens next is up to you. Data can be sent to a server on your corporate network, or pushed to the cloud for further analysis by the Nosy Analysis Platform.

Total Ease of Use

Every aspect of Nosy has been designed for ease of use

What is Total Ease of Use? We looked at every facet of adding sensors to an existing building and thought about how to make it easier. Nosy is designed from the ground up to be easy and provide peace of mind. And easy also means *savings*. Nosy's total cost of ownership is up to 80% less than the competition.

Let's start with buying. We'll ask you a few simple questions about your building and you'll immediately get a price estimate. No tedious callbacks from salespeople, and no waiting for a quote. Easy, and affordable. And for customers that choose Nosy-as-a-Service, all updates, maintenance and product replacements are automatically included.

Installation? For some sensors, that can get expensive, especially if you need power lines or network upgrades. Not with Nosy. Nosy is battery powered, self-configuring and installable by just about anyone. And maintenance? You'll need to charge your Nosy Sensors every six months or so, but Nosy will let you know when. That's it.

Security? That's easy too. Many IoT devices can be hacked causing all kinds of headaches. Not Nosy. Nosy is built on highly secure Bluetooth Mesh. We deliberately avoid using your existing network to maximize the security of your system and ours.

Integration and data access? Nothing proprietary here. Nosy provides open data and an API for easy integration with other systems. All included. No hidden extras.

Problems Nosy Solves:

01

Too Hard. Too Expensive.

Making existing buildings "smart" is difficult and expensive, costing as much as $7 per square foot!

When you consider purchase, installation and maintenance, the total cost of ownership can be thousands of dollars **per sensor**. It's no surprise that few buildings get retrofits, and even fewer get building-wide sensor networks.

Nosy is easy. Easy to install and easy to use. And that means saving up to 80% of the total cost of ownership of other sensors.

Welcome to easy **and** affordable.

02

Not Enough Data to Make Good Decisions.

Commercial buildings consume 19% of the energy used in the United States. Heating, Ventilation and Air Conditioning systems account for 40% to 60% of that total

But how can you reduce your energy costs without good data from your entire building?

Nosy provides more data, in more detail, more often, and at lower cost than any other sensor platform. Once installed, you'll see data for your entire building in near-real-time.

Let the energy savings begin!

03

Is Your Building Ventilation Effective?

Low airflow rates within buildings allow contaminants to linger, which prolongs exposure and increases a contaminants' impact. Whether you are concerned about occupant productivity, or health issues like COVID-19, you need to know if your building's ventilation is effective.

Nosy will tell you. For your whole building. 24 hours a day.

04

Is Your Smart Building Secure?

Many Internet-of-things (IoT) sensors have significant security flaws. Adding new devices can make you vulnerable to cyberattacks.

But not with Nosy. It's designed from the ground up with security in mind. It's also isolated from your building's network.

Easy, affordable **and** secure. The very definition of peace of mind!

Nosy vs. Others

How does Nosy compare to the competition? Existing building sensors can be expensive and aren't designed for building-wide deployment. But that means you're not getting an accurate picture of your whole building. Nosy provides more data, in more detail, more often, at lower cost than any other sensor platform.

Traditional networked sensors also need a mains power supply, so add $100 or more in cost per sensor for a professional electrician to add extra power outlets, and don't forget about maintenance costs too. Nosy is battery operated and uses Bluetooth Mesh, making installation easy and tool-free with almost no maintenance.

Nosy's Total Ease of Use makes it the obvious choice.

	Nosy	Others
Ease of installation	Less than 3 mins per sensor, no tools required.	May require power, networking, and licensed contractors.
Building-wide monitoring	Absolutely! With a building-wide Nosy network, you will always know what's happening.	It depends. Most are not designed for building-wide deployment.
Secure Networking	Yes! Nosy uses Bluetooth Mesh, with built-in security and encryption.	It depends. Sensors from several major vendors have had big security flaws.
Total Cost of Ownership	Low! Up to 80% lower than the competition. Easy of installation, use & maintenance saves you money.	Can cost thousands of dollars per sensor over the life of the product.

About Xmark Labs

Nosy is a product from Xmark Labs, LLC.

Founded in 2014, Xmark Labs is a product development and consulting company focused on practical tools for Digital Transformation. Xmark has delivered projects for organizations such as 3Flow, AT&T, IEEE, Hilti, National Renewable Energy Laboratory and WakeMed.

The company is headquarted in Barrington, Rhode Island.

Contact Us

For more information, please contact:

Nicholas Napp
nick@xmarklabs.com
+1.401.200.3331

REFERENCES CITED

[1] Rawal, Gunjan. “Costs, Savings, and ROI for Smart Building Implementation.” Intel, inc., 21 June 2018
[2] “Emerging Technologies.” Energy.gov
[3] “SBIR FY 2020: U.S. DOE Office of Science (SC).” SBIR FY 2020 U.S. DOE Office of Science, 31 Dec. 2020
[4] Low, Jia Jen. “Billions of Industrial IoT Devices Could Be Flawed.” TechHQ, 28 Aug. 2020.
[5]Cobb, Stephen. “Siegeware: When criminals take over your smart building”, We Live Security, February 20, 2019.
[6] Zurier, Steve. “Users of IoT products from three major vendors at risk of DoS attacks, data leaks”,SC Media, Jan 25 2021.
[7] Nadel, Steven. “Reducing COVID-19 Risks in Commercial Buildings without Wasting Energy.” ACEEE.

Product Preview
Nosy
December 2021 r2.3