

Smarter
technology
for all

Lenovo

ThinkIoT in action

'Back to Work'
Commercial IoT Solutions Guide

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Make sense of Commercial IoT

Many businesses have seen the value of IoT in proof of concept stages. However, deploying at scale presents new challenges.

Individual applications, gateways and smart devices are installed differently and may be distributed across an organization's physical locations. Plus, every Thing needs to be maintained, patched and updated – sometimes even replaced.

88% of enterprises believe IoT is significant

or transformational to their business

(IoT Signals Report, 2019)

However, more than 30% of IoT Projects fail in the POC Stage

(<https://venturebeat.com/2019/07/30/microsoft-30-of-iot-projects-fail-in-the-proof-of-concept-stage/>)

Three Principles of Lenovo Commercial IoT

Every solution we deliver is based on a framework with three key cornerstones.



Validate

We work with trusted partners, which are fundamental to our turn-key ThinkIoT solutions. We test every solution to the highest standards, with up to 140 different checkpoints for serviceability, reliability, security and scalability. We have certified the best IoT solutions among thousands of options to give you confidence in rolling them out.



Deploy

We draw on our global expertise to deploy solutions where they are needed, rapidly and with minimal site disruption.



Manage

We provide monitoring, maintenance and support for managing every IoT solution throughout its lifecycle. When you work with Lenovo, you can rely on a high quality, end-to-end solution that ensures you stay productive.



Focus on business outcomes

Lenovo provides organizations with functional and reliable end-to-end IoT solutions, helping to make sense of scale and driving ongoing agility. We can fully implement and manage these IoT solutions, so you can focus on the outcomes that matter to your business, such as:

- safely returning to work
- transforming smart workplaces
- reopening business or stores
- reinventing the shopping experience

Collaborating with our Partners

We draw on our practical experience of more than 35 years and work with our industry-leading partners, based on the success of their existing deployments. Our customers can expect convenient delivery and management for every solution, providing functional and effective technology to help realize business outcomes.

RELOGIX

L SQUARED
DIGITAL SIGNAGE

inpixon Indoor
Intelligence

VIPER
IMAGING

CX
APP

openpath

88% of people surveyed expect their employers to deploy technology safety measures within their workplaces*.

ThinkIoT Back to Work Solutions and the New Normal

As businesses begin to reopen their doors, the benefits of smart workspace management are clearer than ever.

In response to COVID-19, we have introduced a set of trusted, turn-key solutions that can be integrated to provide a safe and seamless return to work, and can be rapidly deployed at scale.

Step 1: Controlling who gets into sites

Identify potentially sick people before they enter the building.
Control site access to limit the risk from sick or quarantined people.

Step 2: Managing behaviors within the space

Ensure new policies are highly visible to reduce risks and help people feel safe. Manage occupancy and distancing inside building.

Step 3: Responding to incidents at sites

Identify and sanitize worksites or impacted areas after incidents.
Notify at-risk employees and visitors after potential exposure.

*Lenovo Return to Work Survey, June 2020

Controlling who gets into sites

Touchless Building Access

Seamlessly unlock entrances to the workspace

Open up the workspace without even having to touch a button.

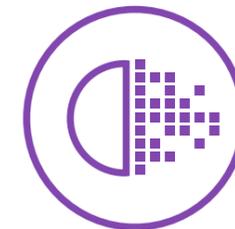
This solution provides touchless access to offices or worksites when integrated with automatic door openers. Use your phone, smartwatch, or touch-free gestures to control the doors in your workspaces.

This solution offers easy cloud management, integrating with legacy access control systems and IoT solutions.



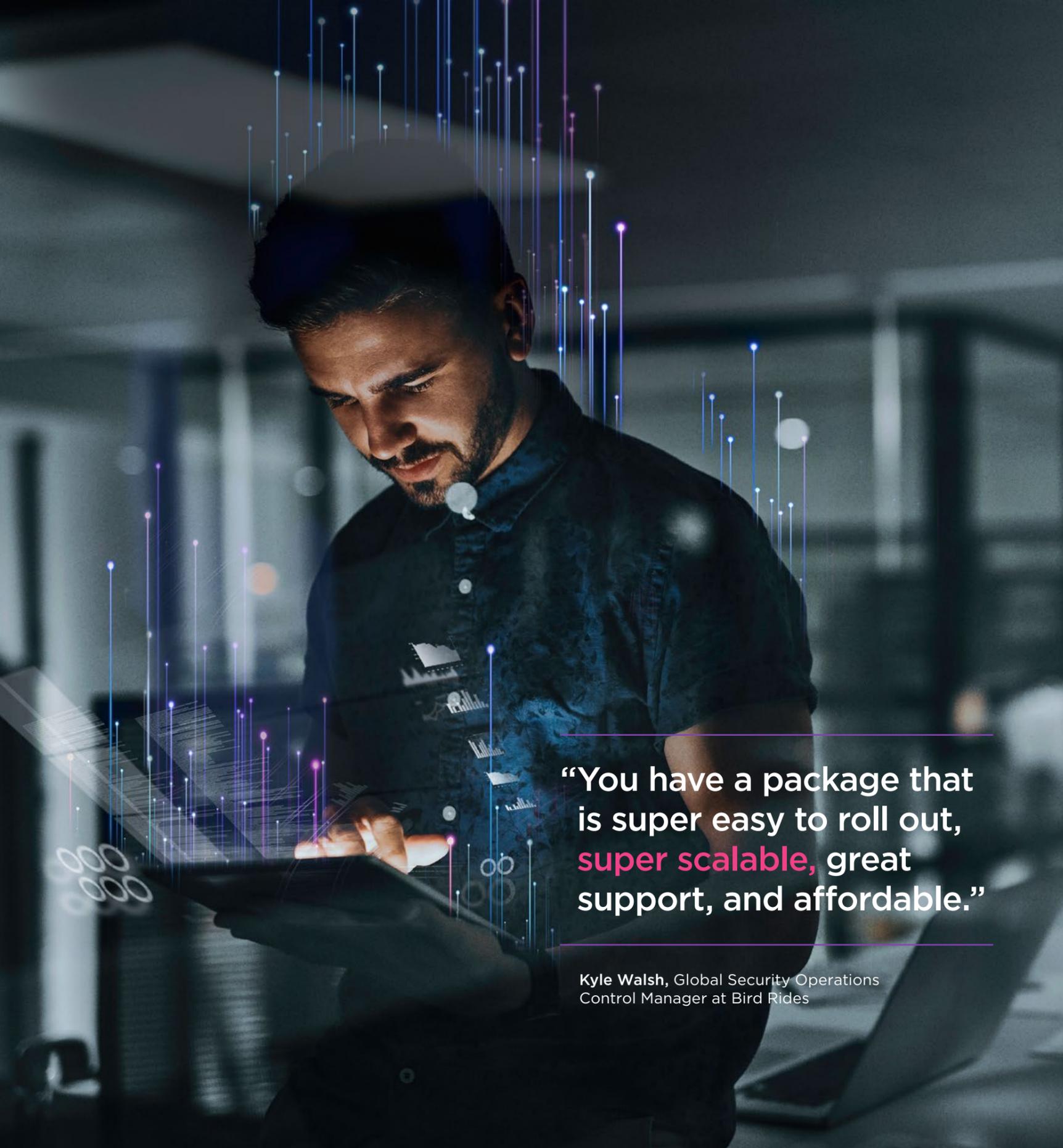
Back to work

- Hands-free access reduces touch points around the workplace
- Set protocols for who is permitted to enter specific areas
- Easily update access permissions from the cloud
- Quickly respond to incidents of infection, or policy changes



New normal transformation

- Enhance employee experience with frictionless access
- Easily assign and manage visitor permissions
- Reduce administrative overheads by automating access



“You have a package that is super easy to roll out, super scalable, great support, and affordable.”

Kyle Walsh, Global Security Operations
Control Manager at Bird Rides

Limit the risk of returning to work

People returning to the workspace want to feel safe and limit their risk of infection.

Give them peace of mind by using intelligent access control. Sick and quarantined people can be denied entry to the site, simply revoke their permissions using a cloud management platform.

Meanwhile, touchless access reduces contact with high-traffic surfaces such as door handles when installed with existing automatic door openers.

This practical technology reduces the risk of illnesses even from people who are not currently displaying symptoms.

Manage access to the building quickly and responsively, depending on the latest public health guidance or decisions based on local data.

Monitor building occupancy and make dynamic adjustments to ensure that areas don't become overpopulated.

Remotely control access for workers and visitors, limiting unnecessary contact and making guests feel more comfortable in your workspace.

Touchless Building Access in action, by Lenovo and Openpath

This solution relies on individual user devices, cloud management, access reader and local smart hubs to co-ordinate access permissions.

Activate touchless access by waving a hand in front of the sensor, which will authenticate user permission by sending a Bluetooth Low Energy (BLE) authorization request.

Alternatively, unlock doors directly from a phone, using the dedicated app. The app ensures security by using multi-factor authentication, with end-to-end encryption.

These touchless access devices operate on BLE, Wi-Fi and cellular to keep the doors working even if the Internet is down.

- Patented “Triple-lock” technology authenticates securely with mobile phone
- Designed to integrate with existing infrastructure and legacy systems
- Cloud-based access administration and management



How Touchless Building Access benefits business

- **Mitigate the risk and cost of spreading viruses**
A controlled environment helps to limit the risk of infection
- **Reduce IT management costs per building**
No servers and associated software, network management
- **Save on admin costs**
Property managers and security managers can save time with remote management for workers and visitors
- **Reduce CAPEX upfront**
No servers, networking, badges, or printing (for new builds)

Installing your solution...

Touchless Building Access hardware requires an upfront purchase, while software is provided as a scalable SaaS model.

For more information on pricing and set up, contact your sales representative.

Controlling who gets into sites

Elevated Temperature Screening

Identify potentially sick people

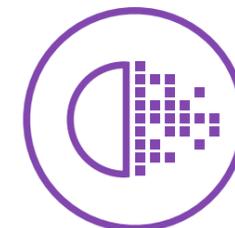
Help prevent the spread of COVID-19 by screening employees and visitors as they enter the site.

This thermal screening solution uses FDA-cleared thermal cameras to identify people displaying an elevated body temperature. Higher than normal bodily temperatures can indicate fever and, in these cases, people may be refused access to the workspace, advised to return home and self-quarantine.



Back to work

- Check visitors for fever at the door to comply with COVID-19 guidelines
- Identify individuals requiring further testing by medical professionals
- Reduce the risk of viral transmission on-site



New normal transformation

- Screen for seasonal flu and other common illnesses
- Integrate other systems to provide enhanced data analytics
- Minimize sick days and maximize productivity by catching illness early



Identify potential illness

Whether this thermal imaging solution is used for office spaces, hospitals, universities, retail or other work sites, it can help to prevent the spread of viruses at key entry points. Easy-to-use, quick, non-contact devices provide a reliable indication of body temperature for anyone seeking access.

This solution provides automated scanning for greater efficiency and non-contact screening.

Once scanned, people can move through the work environment with confidence, feeling reassured that the risk of exposure to illness has been reduced at point of entry.

49% say they feel safer

with temperature screenings in place.



Elevated Temperature Screening in action by Lenovo and Viper

This solution relies on a combination of Lenovo components, advanced thermal cameras, installation equipment and management software.

Deploy Elevated Temperature Screening at the main entrance to any site to provide automated screening for entry.

Once inside a dedicated, environmentally controlled screening area, visitors will be directed to a kiosk, with clear markers for where to stand and guidance provided to achieve the most accurate results by scanning the ear duct. The system will analyze and compare the data against preconfigured parameter and trigger an alert if warranted.

Lenovo has partnered with thermal industry expert Viper Imaging, to provide best in class automated kiosks leveraging FLIR cameras, Lenovo PC, and LCD Screens.

Visitors are given a clear result, which can be combined with local security and HR systems to facilitate intelligent management of people on-site.

- Built by experts with over 20 years' experience in thermal imaging
- Follows US FDA guidelines
- Configurations for: standalone systems and integrated systems across multiple entries



How Elevated Temperature Screening benefits business

- **Safely continue generating revenue**
Balance the cost opportunity of re-opening business against potential revenue
- **Limit operational risks**
Avoid localized infections causing site shutdown, limit the cost of enhanced cleaning
- **Liability cost of not testing**
Demonstrate measures taken to reduce the risk of infection and limit potential legal costs

Installing your solution...

Elevated Temperature Screening hardware requires an upfront purchase, while software is purchased per system on an annual license. This solution can be integrated with existing badge access control systems by your own systems integrator.

For more information on pricing and set up, contact your sales representative.

Managing behaviors within the space

Digital Signage

Communicate information and policies clearly

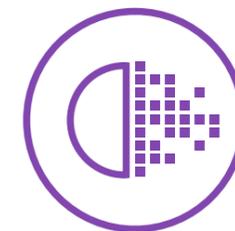
Digital signage provides the opportunity to rapidly update information, ensuring consistency of messaging across multiple sites, or even displaying targeted information to specific audiences.

Easily communicate with employees, promote products to customers, or showcase work on campus. Cutting down on time-consuming and expensive printing, Digital Signage is a sustainable solution that can be delivered in high-definition, tailored to individual audiences.



Back to work

- Communicate the latest COVID-19 policies quickly throughout the enterprise policies are highly visible in buildings
- Ensure information is broadcast and visible to employees and visitors
- Prioritize important content using displays and employee screensavers



New normal transformation

- Simplify communications across different locations, on a global scale
- Manage content from a single dashboard to ensure consistent messaging
- Improve employee engagement by keeping them up-to-date with information



“McMaster University is one of the largest universities in Canada, with a student enrollment of over **29,000 students and **7,800 staff** occupying **377 acres**. L Squared provided a cloud-based Digital Signage network to cover 20 buildings on campus, providing emergency messaging on Digital Signage screens as well as computers used on campus.”**

Keep people aware and informed

Traditional signage is not able to respond quickly enough to reflect the fast-moving requirements of reducing risk of COVID-19 in the workplace.

At a time when acting on the latest guidance is of vital importance, workspaces need to ensure they can provide people with the right information, at the right time and in the right place. Effectively communicate new guidelines and safety protocols to your workforce, ensuring messaging consistency across the enterprise. Alternatively, targeted messaging allows for information to be communicated at a local level.

High definition, animated content creates more engaging communications, allowing important information to be broadcast quickly and with high visibility.

Digital Signage in action, by Lenovo and L Squared

Create digital communications, then upload to a cloud enabled content management system. All screens can be managed from one central console, which controls devices across multiple sites.

Screens in public areas, desktop monitors and other displays can be updated with HD content including videos, images and app feeds.

Combine this solution with data provided by other IoT deployments to create more effective management of people moving through workspaces and allow for more targeted messaging.



How Digital Signage benefits business

- **Immediate, clear communication**
Reduce time and effort to push communications across the portfolio
- **Save money on print media**
Dropped recurring costs to franchisees by 30% and reduced downtime

Installing your solution...

Digital Signage requires an initial purchase of display technology, these devices can be operated using Software as a Service, which is billed on an annual basis.

For more information on pricing and set up, contact your sales representative.

Managing behaviors within the space

Safe Workspace Monitoring

Get a clear view of how people are using the workspace

Workspace analytics solutions help management to understand how people are engaging with their environment.

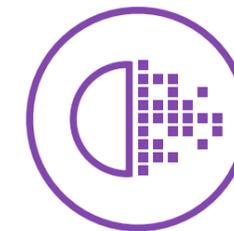
Make sense of corporate real estate using visualizations and performance algorithms that optimize how space is used. Information can range across multiple sites, scaling down to a granular level, even individual seats.

Collecting this data helps to uncover evolving workplace requirements and can inform decisions about how the workspace is designed. Drive informed real estate decisions to save money while balancing employee experience and the need for flexibility.



Back to work

- Regulate use of floors, sections and individual seats
- Monitor clusters of people and movement on site
- Ensure people are complying with distancing guidelines
- Designate areas for targeted deep cleans



New normal transformation

- Review detailed analytics to develop practical workspace plans
- Ensure that available space is optimally utilized
- Develop corporate strategy based on data-driven insights



“Relogix gives workplace managers the ability to provide employees with **choice** AND evolve and optimize the workplace.”

Mark Gilbreath, CEO, Founder LiquidSpace

Observe areas for risk mitigation

Check that social distancing protocols are observed by monitoring clustering.

Consider occupancy data at an overall site level, movement in common spaces, conference room usage, all the way down to individual seats.

Drawing on this information allows employers to limit the risk of infection, helping to take care of their employees. Meanwhile employees can feel safer in the knowledge that effective management tools are being used to limit the risk of becoming infected.

88% say it's important for their companies

to deploy technology safety measures within workplaces.

Safe Workspace Monitoring in action, by Lenovo and Relogix

A seamless, independent network allows for detailed occupancy analytics by measuring the space and not the people.

Low profile, high quality sensors can be attached to desks or ceilings to collect data in close to real-time. These battery-powered devices wirelessly deliver data to the analytics platform, providing an accurate analysis of how people are using the workspace.

Sensors passively track heat and motion with dual IR/PIR technology using intelligent algorithms to distinguish between objects and activities.

When installed properly data accuracy is 99%.

- Proven solution with over 20M sqft measured in over 30 F500 companies



How Safe Workspace Monitoring benefits business

- **Minimize liability when returning to work**
Limit the risk of viral infection by monitoring recommended protocols
- **Automate analytics for more reliable results**
Improved accuracy and efficiency compared to manual monitoring
- **Leverage insights for future strategy**
Support short-term and long-term capital planning based on occupancy and utilization data

Installing your solution...

Safe Workspace Monitoring requires purchase of sensors and the analytics platform, available as Software as a Service.

For more information on pricing and set up, contact your sales representative.

Responding to incidents at sites

On-premise Contact Tracing

Support incident response with data

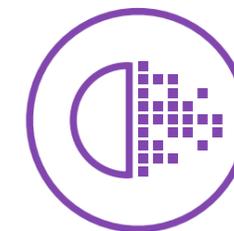
Enable a focused response in the event of an incident with on-premise contact tracing, using Wi-Fi network to track the location of devices from employees and visitors.

This solution visualizes data such as people flow, dwell trends, crowding, and more by capturing location data while maintaining privacy.



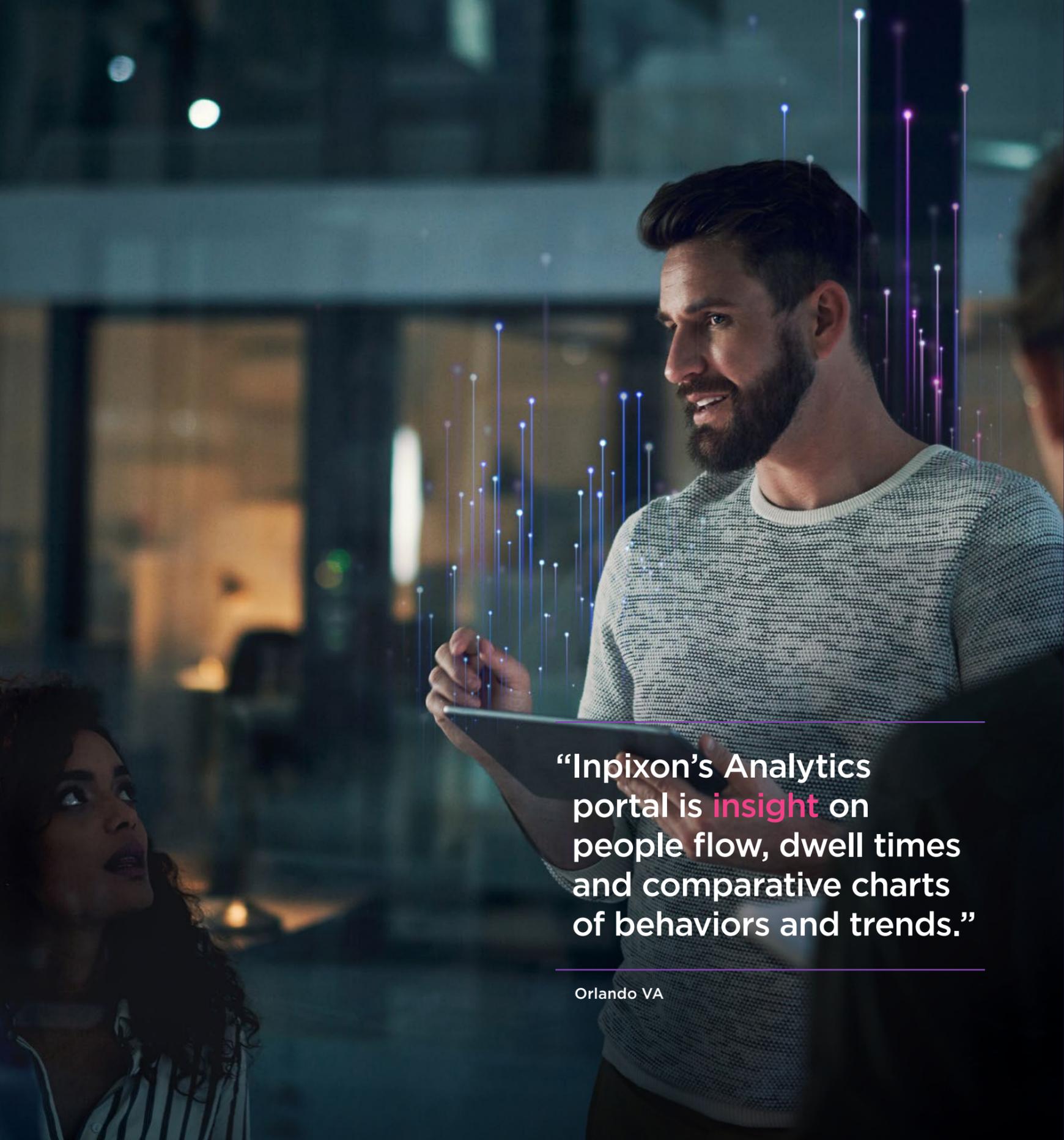
Back to work

- Monitor workplace zone health based on data from visitor and employee devices
- Identify areas where infected individuals previously visited
- Notify individuals of exposure risk even if people did not meet



New normal transformation

- Capture data to visualize people flow, heat maps, and dwell trends
- Leverage data to gain actionable insights for workplace strategy
- Improve employee and visitor experience using data to identify improvement opportunities



“Inpixon’s Analytics portal is **insight** on people flow, dwell times and comparative charts of behaviors and trends.”

Orlando VA

Identify potential risk of infection

Using intelligent analytics tools, employers can take steps to reduce infection as workplaces begin to reopen.

This solution provides a clear understanding of people are following through a given area, in the past and present by passively following devices. The device data can be leveraged to determine risk of COVID-19 when data is decoded. Personal identifiable information is abstracted by design.

Whether it’s being used in office space, retail or other public spaces, this solution makes it possible to have a targeted response when a positive case is reported and who may be at heightened risk of exposure. Use data analytics to estimate the extent of transmission and automate reports for sanitation teams to clean areas of high traffic.

Help employees and visitors feel safe, knowing that intelligent decisions are being made to trace sources of infection.

63% are confident for technology solutions

to quickly identify and respond to COVID-19 incidents within the workplace.

On-premise Contact Tracing in action, by Lenovo and Inpixon

This software solution connects people's smart devices via existing Wi-Fi access points on a premises, or via BLE and cellular networks. Data is collected and stored in the cloud.

Passive tracing means that no phone app is required.

Configure drill-down metrics and trend analysis variables within the platform, offering answers to questions such as, 'Which areas of the floor should be prioritized for cleaning,' or 'Which common space reflects crowding and should be closed'.

Maintain privacy by having only designated HR or security team able to decode data.



How On-premise Contact Tracing benefits business

- **Save costs on sanitation procedures**
Targeted cleaning of priority areas saves time and expense
- **Optimize use of workspaces**
Balance the need to send certain employees home
- **Mitigate the costs and risk of infection**
Protect employees from becoming ill and maintain productivity

Installing your solution...

This solution is purchased on a **Software as a Service basis**, using existing Wi-Fi networks and access points, transmitting data via API.

For more information on pricing and set up, contact your sales representative.

Why now?

The use of IoT in commercial applications is rapidly evolving. Data is more and more valuable than ever for businesses seeking to mine new insights that generate efficiencies, enhance productivity and save costs overall. Within just a few years, IoT can provide a healthy ROI.

Working with IoT enables organizations to deliver more agility and intelligent decision making at scale. Powerful AI technologies are driving changes in data analysis and automation. Meanwhile the 5G network is coming online throughout the world, ushering in a new era of enhanced connectivity between devices.

As network connectivity continues to improve and a new generation of workers emerges equipped with the technical skills needed to manage the devices and interpret data, the IoT transformation will continue to pick up speed.

Its potential is enormous, but organizations will reap the most benefit by being at the forefront of transformation, rather than trying to keep up with the competition. That's why it's important to consider IoT now and to work with trusted partners, developing an ecosystem that drives competitive advantage and reliable digital maturity.

Why Lenovo?

Lenovo has spent 35 years supporting businesses as they leverage technology at scale. We help businesses operationalize IoT by combining our smart solutions with practical experience of supporting 10's of millions of devices across the world every day.

Proven solutions you can trust

Every solution is tested end-to-end with the highest standards of reliability, security, scalability and serviceability.

140 different checkpoints

Global deployment at speed

We work to implement IoT solutions rapidly and consistently, allowing you to focus on outcomes.

We optimize large solution roll-outs with global supply chain expertise.

20,000 engineers across more than 170 countries

400+ part centers

Uniform management across the globe

We monitor and maintain multiple IoT solutions across multiple platforms, with our proprietary IoT Management Platform optimizing their health and availability across the enterprise.

We provide uniformed management covering all time zones, giving you flexibility to scale as needed, with continuous visibility and control of your IoT environment.

“For the past decade IoT solutions have promised great results, but haven’t delivered. Our purpose is simple – to overcome the logistical challenges of IoT systems to make them practical at scale.”

John Gordon, Lenovo’s President,
Commercial Internet of Things

Get in touch

For more information on how Lenovo can help you realize the full value of IoT and accelerate your digital transformation, contact us at www.lenovo.com/IoT