

# Rigado's Edge Infrastructure Enhances IoT Connectivity In Smart Buildings

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# Rigado's Edge Infrastructure Enhances IoT Connectivity In Smart Buildings

This report forms one in a series providing corporate facility managers and technology executives with comprehensive coverage of vendors and new value propositions. This report analyses Rigado's edge infrastructure solution that helps firms simplify the capture and processing of building-level IoT data from sensors through its Bluetooth low energy edge gateways and software platform. Our analysis finds Rigado's solution will meet the needs of corporate facility managers looking to bring data from Bluetooth sensors and IoT devices into their cloud-hosted smart building software. Rigado's solution will also provide value to a broad range of smart building partners stepping up their IoT connectivity and data capture capabilities, including facilities services firms and smart building software vendors.

## TABLE OF CONTENTS

<b>Rigado's Edge Infrastructure Simplifies The Capture Of Smart Building IoT Data .....</b>	<b>3</b>
Rigado Provides Edge IoT Infrastructure To Building Operators And Software Vendors	
Rigado's Edge Gateway Brings IoT Data From Smart Buildings To The Cloud	
Edge Infrastructure Is Playing A Growing Role In Building IoT Ecosystems	
Rigado's Solution Will Provide Value To Smart Building Partners Stepping Up Their IoT Capabilities	

## TABLE OF FIGURES

<b>Figure 1. Facility Managers' Interest In Improving Data Availability From Building Technology By Sector .....</b>	<b>6</b>
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## ORGANIZATIONS MENTIONED

AB InBev, Accruent, AWS, CBRE, Cradlepoint, EnOcean, Haltian, HELLA, IBM, ISS, Kontakt.io, Mauser, Microsoft, Minew, Mitie, Onset, Prologis, Queensland Government, Radius Networks, Rigado, Rivetry, Ruuvi, Steelcase, WeissBerger

# Rigado's Edge Infrastructure Simplifies The Capture Of Smart Building IoT Data

This report analyses Rigado's edge infrastructure solution that helps firms simplify the capture and processing of building-level IoT data from sensors through its edge gateways and software platform. To learn more about the business and technology offering, Verdantix spoke with Kevin Tate, Chief Marketing Officer at Rigado. This report also draws on our broader research into IoT technologies for the smart building sector (see [Verdantix Buyer's Guide: Smart Building IoT Platforms \(2020\)](#)). Smart building software vendors and building managers should use this report to gain a better understanding of Rigado's edge infrastructure solution.

## Rigado Provides Edge IoT Infrastructure To Building Operators And Software Vendors

Headquartered in Portland, Oregon, Rigado provides edge IoT infrastructure for the built environment. The vendor:

- **Has offices across China, Europe and North America.**  
Founded in 2010, Rigado has employees working out of offices in London, Portland, and Shenzhen. In 2016, Rigado merged with Portland-based software firm Rivetry, which specialized in IoT product development. Following the merger, Rigado combined its expertise in manufacturing Bluetooth Low Energy (BLE) devices with Rivetry's expertise in IoT applications, allowing Rigado to focus on Bluetooth and wireless solutions for the commercial IoT market.
- **Provides edge-as-a-service infrastructure for smart buildings.**  
Rigado's heritage is in designing and manufacturing BLE devices for a wide range of applications from fitness wearables to smart home devices. From 2017, the vendor pivoted its strategy to focus on the commercial building market where it saw an opportunity to develop IoT gateways that bring wireless connectivity and edge computing to buildings. Today, Rigado provides an 'Edge-as-a-Service' software and hardware offering, which captures and processes data from devices on the ground, such as BLE sensors and smart equipment, contributing to the operation of smarter buildings.
- **Sells to building occupiers, owners and software vendors.**  
Rigado's target market is building occupiers and technology vendors looking to get data from sensors and automate the control of IoT devices. Building managers and services firms can purchase Rigado's gateways and sensors to feed data into their enterprise applications. For example, CBRE uses Rigado gateways and sensors to power its Host employee experience software application. Location-based technology vendor Radius Networks uses Rigado's gateways within its curbside pickup technology product, which alerts staff on the customer's precise location. For operations management, WeissBeerger, part of the AB InBev group, uses Rigado's gateway system to bring data from wireless sensors on beer taps into its analytics software.
- **Has developed partnerships with technology solution providers.**  
Rigado is building up a network of partners, particularly those with cloud offerings and system integration capabilities. In June 2020, Rigado announced it is partnering with wireless network provider Cradlepoint to offer solutions aimed at helping firms manage a safe return to the workplace. Rigado's Safe Workplace solution portfolio will leverage Cradlepoint's wireless routers to enable connections between Rigado IoT gateways and applications hosted in Microsoft Azure IoT Central.

- **Is expanding its out-of-the-box integration with third-party sensors and smart devices.**  
While Rigado's gateways are compatible with any standard Bluetooth product, the vendor has been expanding the ecosystem of third-party devices that it can integrate with out-of-the-box. Vendors that are already part of Rigado's plug and play ecosystem include sensor providers EnOcean, Haltian (Thingsee IoT sensors), HELLA, Onset, Minew and Ruuvi, and beacon vendor Kontakt.io.
- **Has growing proof points across commercial buildings in Europe and the US.**  
Rigado is building up its footprint in the commercial real estate market, with over 100,000 gateways currently deployed across more than 20,000 locations. Leveraging these gateways has resulted in 5 million devices becoming connected, with notable clients including CBRE, Prologis and Steelcase.
- **Commercializes its edge solution through a subscription model.**  
Buyers typically purchase Rigado gateways and sensors up front as a capital expense, then pay an ongoing subscription fee to cover device connectivity and integration with cloud services alongside ongoing support.

## Rigado's Edge Gateway Brings IoT Data From Smart Buildings To The Cloud

Rigado provides its edge IoT Infrastructure solution to building operators and software vendors to help them bring real-time data from sensors and IoT devices to the cloud. This solution is comprised of:

- **Low-cost gateways that create edge networks in buildings.**  
The core product in Rigado's IoT solution suite is its IoT gateways that provide connectivity between software applications, and Bluetooth-based sensors at the building level. Rigado gateways can also provide ongoing monitoring and management, to ensure the health of sensors and devices in the connected network. The gateways in commercial real estate settings are typically installed by low voltage electricians, exploiting Power over Ethernet (PoE), but also support Wi-Fi and LTE for internet connectivity.
- **Bluetooth-based asset tracking for monitoring equipment.**  
Rigado's gateways also support asset tracking, enabling users to see the location of an asset by zone or its real-time position on a facility map. Firms can deploy miniature BLE radio transmitters (beacons) onto their assets and Rigado's readers will pick up messages from the Bluetooth tags to identify the location of the asset. Real-time asset tracking systems are used in a growing range of facility types such as warehouses, hospitals and retail sites to track high-value equipment and goods.
- **Sensors for condition and occupancy monitoring use cases.**  
Rigado offers its own range of pre-integrated sensors that monitor air quality, humidity and temperature, key factors in occupant wellbeing. Rigado also provides its own brand sensors for monitoring occupancy, which software vendors can use to bring data on space usage into their platforms (see [Verdantix Product Benchmark: Space And Workplace Management Software \(2019\)](#)). Furniture provider Steelcase uses Rigado's gateway infrastructure to collect and transfer data from occupancy sensors to power its Workplace Advisor space management tool.
- **Software to process data locally for the cloud and enable edge computing.**  
Rigado's Edge Connect software, which is deployed on Rigado gateways, provides edge device connectivity, data processing and cloud integration. The software collects data via BLE, wireless mesh or ethernet, and employs remote configuration tools to filter, process and format these datasets. The software delivers this data securely to integrated cloud endpoints. This data can also be delivered to

integrated edge frameworks such as Azure IoT Edge or AWS IoT Greengrass. Local processing can help firms reduce storage, operating, and overall network costs.

- **Management dashboards so users can track the health of connected devices.**

Rigado provides dashboards and analytics for gateway monitoring, providing users ongoing visibility on CPU performance, device connection health and storage capacity. It helps users to gain visibility into potential faults with their edge network and devices ahead of time. The Edge Direct module also enables remote updates to be managed and deployed to gateways rapidly, with a tagging system allowing different versions of updates to be rolled-out to different gateways based on factors such as location or use case.

- **A 'Safe Workplace' offering centred on monitoring to support the return to work.**

Like other smart building technology vendors, Rigado has recently adapted its capabilities to develop a 'Safe Workplace' solution to help customers manage workspaces as staff return. This offering brings together occupancy and people counting sensors, as well as workplace ID badges, to provide facility managers data on staff presence via Rigado gateways. The solution also collects data for contact tracing from smartphones and uses automatic digital signage to indicate whether a desk, room or toilet is available, occupied/reserved or in need of attention, a common COVID-19 management use case (see [Verdantix Responding To The COVID-19 Crisis In Real Estate And Facilities Management](#)).

## Edge Infrastructure Is Playing A Growing Role In Building IoT Ecosystems

With the IoT technology trend gaining momentum across the built environment, commercial buildings are producing growing volumes of data from sensors and smart equipment. To get value from this data, building operators require a new ecosystem of IoT data management and connectivity tools to capture, structure and analyse the data (see [Verdantix Market Overview: Identifying The Tangible Opportunities From The IoT In Buildings](#)). Rigado, and the growing marketplace of IoT edge infrastructure vendors, are tapping into the opportunity to:

- **Ease the transfer of building-level smart building data to the cloud.**

As buildings produce growing volumes of data from IoT devices, facilities managers face growing challenges in collating this data from a broadening range of sources. According to our 2019 interviews with 304 corporate real estate and facility managers, improving connectivity and data availability from buildings is a key factor influencing their strategies over the next three years (see [Verdantix Global Corporate Survey 2019: Smart Building Technology Budgets, Priorities & Preferences](#)). In our survey, the healthcare sector was particularly engaged, reflecting the range of high-value use cases for monitoring buildings, such as asset and patient tracking, energy efficiency and smart maintenance (see Figure 1). Sensor hub vendors can play a role in helping firms to centralize IoT data for processing in cloud-hosted platforms.

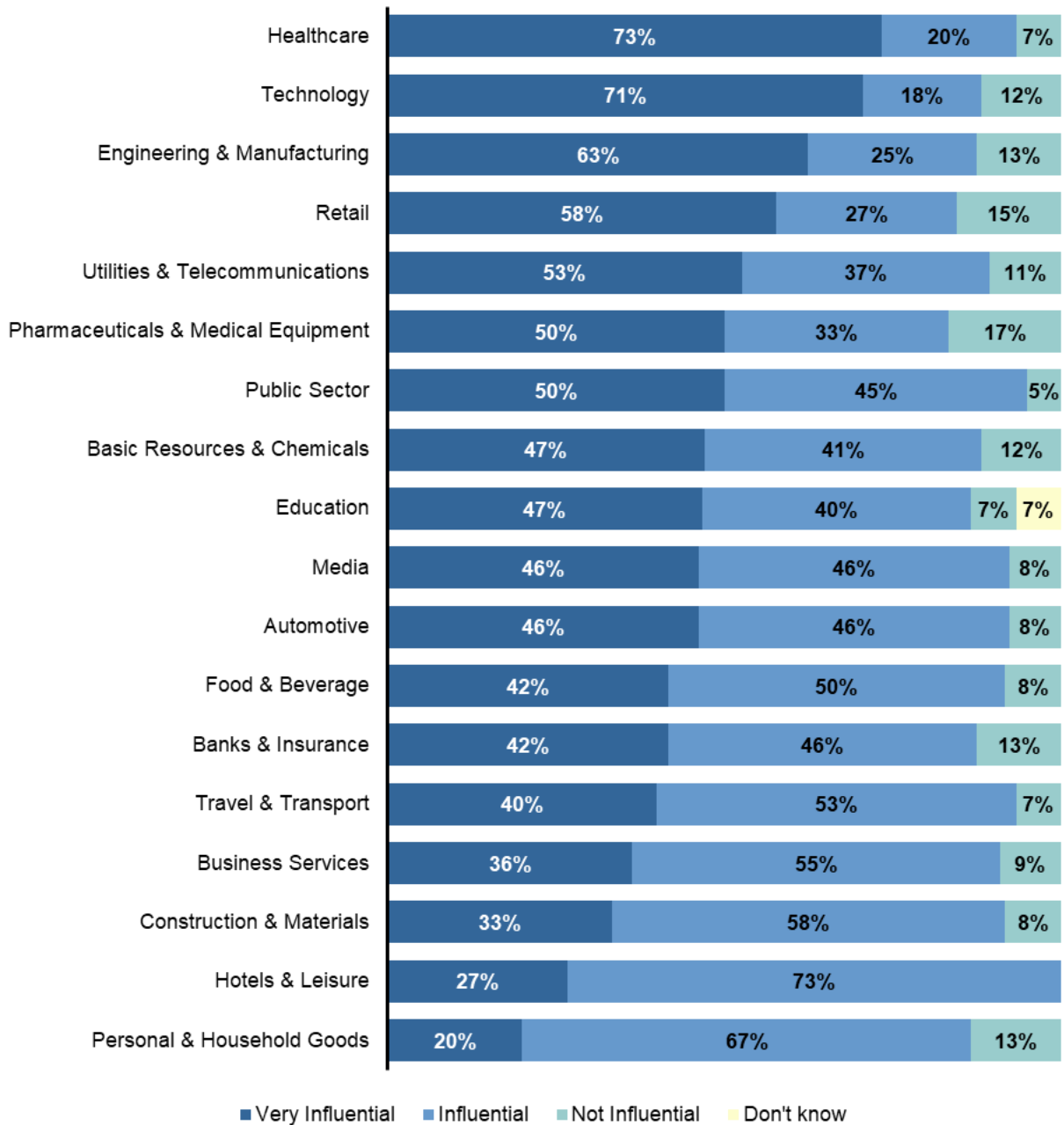
- **Enable fast deployments of IoT sensors at scale.**

Case study data from Rigado shows customers can deploy its edge infrastructure in days or weeks, given the availability of out-of-the-box integrations for its gateways and sensors. It offers an even faster speed-to-value proposition for its 'Presto' kit in partnership with Azure, which allows users to test a package of eight sensors and a gateway within just a few minutes. For some buyers, time-to-implement is a key purchase criterion when selecting a new smart building solution. For example, the Queensland Government stated Rigado's implementation speed was a key factor driving it to choose Rigado technology for a space monitoring deployment. Packaging and recycling firm Mauser selected Rigado to track the location of thousands of re-usable storage containers, also citing the technology's ease and speed of deployment.

FIGURE 1

### Facility Managers' Interest In Improving Data Availability From Building Technology By Sector

“How influential will improving connectivity and data availability from smart building technologies be in shaping your firm's real estate strategy over the next three years?”



Note: Data labels are rounded to zero decimal places.

Source: Verdantix Global Corporate Survey 2019: Smart Building Technology Budgets, Priorities & Preferences

N=304

- **Simplify IoT deployments for systems integrators.**

Systems integrators deploying IoT platforms at client sites frequently purchase generic, programmable gateways to provide connectivity between sensors and a software platform. These generic gateways require the integrator to create and manage the edge software which allows communication between the field and platform layers in the IoT ecosystem, that can be time-consuming. The Rigado Cascade solution offers this connectivity out-of-the-box, foregoing the process of writing software that allows sensors to communicate with gateways.

## **Rigado's Solution Will Provide Value To Smart Building Partners Stepping Up Their IoT Capabilities**

Rigado's edge IoT infrastructure solution eases the transfer of building-level smart building data to the cloud and simplifies the deployment of sensors in buildings. Verdantix finds that Rigado's offering will provide value to:

- **Facilities management service providers building out demand-led services.**

In recent years, service providers have been starting to build out demand-led services that optimize their deployment of labour based on building or asset usage. For example, ISS has deployed sensors and IBM's Watson IoT platform to optimize its cleaning and maintenance services at client sites. Mitie is rolling out remote building monitoring capabilities to 3,500 sites in the UK (see [Verdantix Mitie Deploys Accruent's IoT Platform To Deliver Smarter Facilities Management Services](#)). Facilities management services firms looking to use sensor data to inform their service delivery should review Rigado's package of sensors and edge infrastructure services. CBRE already uses Rigado sensors and devices to collect environmental and physical data for its room booking capabilities, which can be delivered to different locations via CBRE's Host office application.

- **Software vendors and systems integrators expanding their IoT data capture capabilities.**

While some smart building software vendors manufacture their own IoT gateways, the majority of software vendors will partner with IoT hub vendors that meet their clients' requirements. IWMS vendors and systems integration partners that are building up their IoT capabilities should further explore Rigado to bring in data from sensors from different manufacturers (see [Verdantix Integrated Workplace Management Systems Buyer's Guide 2020](#)). Rigado enables these vendors to forego the need to invest to develop and maintain their own sensor hubs.

- **Sensor vendors looking to broaden their IoT solutions for buildings.**

Rigado's role in the smart building IoT ecosystem — between devices collecting data and the software ingesting it — makes it a versatile partner for vendors in both categories who have invested in BLE as the primary means of device communications. Rigado already has in place several partnerships with sensor manufacturers such as Kontakt.io (asset tracking) and Ruuvi (environment monitoring). Other bluetooth-based sensor manufacturers looking to power their IoT hardware with edge infrastructure should review the Rigado set of offerings.



## VERDANTIX CAPABILITIES

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Through our research activities and independent brand positioning we provide clients with:

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- Executive summits, roundtables and webinars
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Focuses on wearable devices for vital signs monitoring, location tracking and musculoskeletal enhancement. Includes analysis of virtual reality and augmented reality deployed on HMDs and smartphones.

## WHY VERDANTIX?

Verdantix is an independent research and consulting firm with a focus on innovative technologies that optimize business operations. We have expertise in environment, health, safety, quality, operational risk, as well as smart building technologies.

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