**PARTNER SOLUTION OVERVIEW**

# Aruba & HID

## Enabling Location Based Value-Added Services

### CHALLENGES FOR HEALTHCARE

Healthcare facilities are often a complex labyrinth of departments, wings, rooms, restricted access areas and specialized units. Dynamically present throughout the physical space are the patients, visitors, nurses, technicians, facilities staff, physicians, and other users or personnel. A third degree of complexity comes with the mobile assets critical to patient care and key to the clinical and operational workflows. Examples include beds, infusion pumps, respirators, monitors, WOWs (workstations on wheels), defibrillators, and maintenance carts.

Even if healthcare facilities are designed by the best architects and planners with healthcare facility design expertise, the ability to track and locate things or people in these environments can be challenging. Losing track of patients, personnel or equipment can cause consequences for workflow, wait-times, resource utilization and patient experience. These risks can further compound problems for the organization's reputation, mission, and financial security.

To overcome the challenges of quickly locating mobile healthcare equipment, some providers choose to purchase larger than necessary inventories. However, overspending to attempt an "always available" supply can impact other budgets and inject additional costs for incremental maintenance and storage space. And unfortunately, abundance does not necessarily address the ability to locate those devices or the staff and patients who need them.

### HID

To solve these problems, HID Global, an ASSA ABLOY company, offers an IoT platform which can solve traditional real-time location services (RTLS) challenges, as a single extensible system to transform the healthcare facility experience for staff, patients, and visitors. Conventional RTLS obstacles include expensive, difficult to deploy systems and high ongoing total cost of ownership (TCO). HID's RTLS 2.0 overcomes these challenges by leveraging advanced Bluetooth Low Energy (BLE), use of existing infrastructure and the ease of a secure, cloud hosted scalable platform to address a myriad of healthcare challenges.

HID's solution offers purpose-built BLE devices to enable real-time location services using convenient form factors. See Figure 1. Coupled with HID's Bluzone™ Cloud and third-party applications, HID redefines the IoT experience in healthcare by enabling real-time visibility of clinicians, patients, devices, and electronic visit verification. See Figure 2.

- BEEKs™ BLE Beacons
- Various form factors
- Secure firmware
- Embedded sensors



**Figure 1:** HID Beeks BLE Beacons and Sensors

Using the increased data and analytics can further improve operational efficiencies, clinical accountability, patient throughput and asset management.



**Figure 2:** Bluzone™ Cloud Services

The integration supports use cases that enable new experiences for staff, patients, and visitors such as deterministic wait times and increased patient throughput.

- **Patient experience** – Patient satisfaction increases knowing it's "20 minutes to radiology," versus, "you're in the radiology queue." [1]
- **Decreased need for equipment** – Typically hospitals inventory more mobile assets than needed because those assets can't be located when needed.
- **Increase Patient Throughput** – Visualizing in real-time a patient discharge or admission to the hospital can accelerate cleaning and readiness for the next patient.

- **Increase On-Time Appointment Arrivals** – With the addition of wayfinding, patients can use their mobile phones to navigate hospital maps to facilitate on-time arrivals or to locate other destinations.

Access to historical location data can also enable healthcare facilities to benchmark improvements over time.

The same HID IoTs solution for RTLS is also extensible to other IoT use cases important to Healthcare, Manufacturing, Smart Buildings, Hospitality, and other industries. HID Condition Monitoring offers specialized BEEKs™ sensor beacons that capture and record vibration and temperature.

HID's high-resolution, 3-axis vibration and temperature monitoring solution provides anomaly detection that indicates when rotating machinery has deviated from its normal operating state. Coupled with advanced cloud services, the solution warns before equipment failure occurs by utilizing AI algorithms evaluating sensor data trends. Additionally, this data can be used in the inspections workflow to enable a predictive maintenance strategy that works for your facility. HID's high-bandwidth raw sensor data can also be provided for further analysis by third-party tools.

As with the HID RTLS solution, this sensor data can be sent via Aruba access points or BluFi™ gateways to Bluzone Cloud for the operational analysis of motorized equipment performance and operating behavior. See Figure 3.
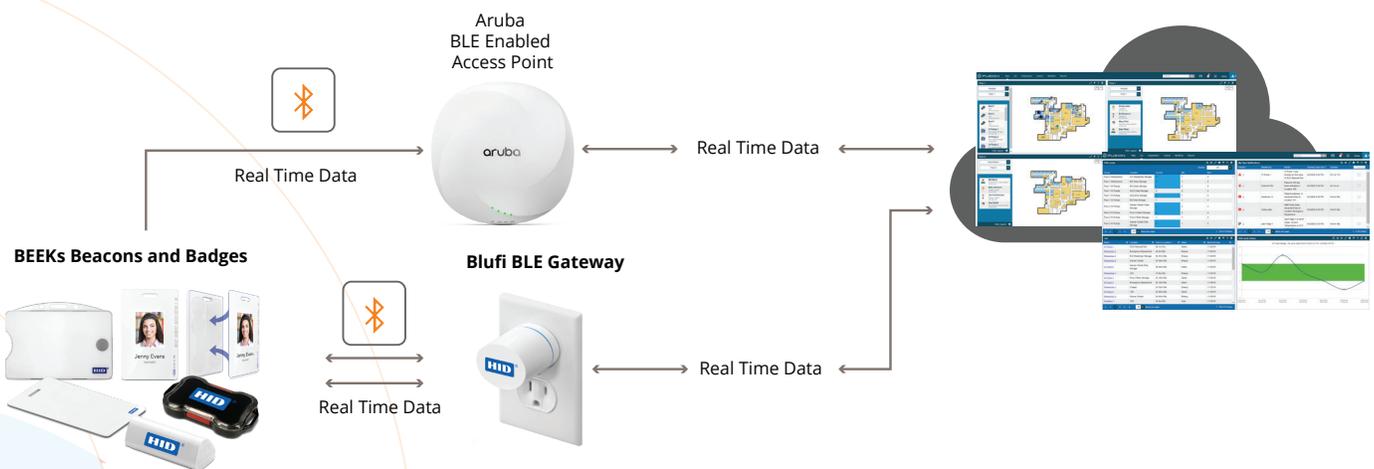


**Figure 3:** Aruba and HID Solution Diagram

[1] https://psychcentral.com/blog/the-psychology-of-waiting-in-lines-8-reasons-that-the-wait-seems-long#1

## ARUBA AND HID BETTER TOGETHER

Aruba and HID have partnered to integrate Aruba 802.11ax (Wi-Fi 6) and 802.11ac (Wi-Fi 5) wireless access points with HID's BLE tags and Bluzone Cloud services. The integration and interoperability of Aruba with HID RTLS solutions helps to reduce cost and complexity by leveraging the existing Aruba wireless infrastructure which supports HID BLE communications directly.

Supplementing IoT data with contextual information from the network enables applications to become cognizant – or "hyper-aware" – of, and responsive to, the environment containing occupants, assets, their service needs, security, and safety.

These are the tools necessary for optimizing physical space and gaining the insights for improving workflows, patient experiences and increasing safety for patients, visitors, and employees.

A cost effective and secure way to deploy Location Based Services (LBS) and Real-Time Location Services (RTLS) within closed environments is by leveraging the existing Aruba Wi-Fi network infrastructure. This has the benefit of amortizing one capital investment across multiple services.

Leveraging the Aruba Wi-Fi network for HID solutions also eliminates incremental installation and maintenance costs of overlay networks supporting dedicated beacons and gateways. Cybersecurity posture is improved for the customer deployment as Aruba enables security policies and network visibility to extend edge to cloud security across the venue.

Aruba Wi-Fi access points support a broad range of LBS & RTLS services through integrated Wi-Fi 6, Bluetooth Low Energy, 802.15.4 radios and other IoT device interfaces, making Aruba AP's an ideal platform for IoT and location-based use cases.

- Increases the ROI of your infrastructure investment by enabling indoor location and tracking use cases.
- Lowers implementation and maintenance costs by leveraging the existing Aruba Wi-Fi infrastructure.
- Certified interoperability means worry free deployment and support.

## CERTIFIED INTEROPERABILITY

We've taken the guesswork out of deploying joint solutions by certifying the interoperability of HID's platform with Aruba's wireless infrastructure.

This allows joint deployments to be setup faster and simplifies maintenance of the completed solution.

## SUMMARY

HID's solution when integrated with Aruba Wi-Fi 5 and Wi-Fi 6 access point delivers valuable location services, supporting a multitude of indoor positioning-related use-cases in healthcare.

Highly scalable, these solutions solve accuracy and availability issues beyond the capabilities of GPS.

To learn more about Aruba solutions, please visit https://www.arubanetworks.com/solutions/

For more information on HID's solutions, please visit https://www.hidglobal.com/solutions/internet-of-things/identification-technologies/location-services-in-healthcare

## DEPEND ON HID

HID Global is an American manufacturer of secure identity products. The company is an independent brand of Assa Abloy, a Swedish door and access control conglomerate.

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