

**PARTNER SOLUTION OVERVIEW**

# ARUBA AND HYPROS

Location Services to Optimize Patient & Clinician Workflows

## NETWORK AS AN IOT PLATFORM

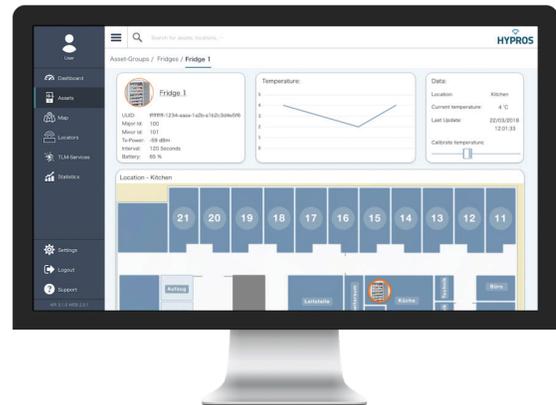
Optimizing clinical workflows is essential to the timely delivery of care, best utilization of clinicians and capital equipment, and maximization of billable hours. Creating a contextually adaptive “connected clinic” that balances throughput speed with the availability of clinicians and diagnostics machines requires accurate location information on position, dwell time, and travel path.

Location data can be obtained by monitoring the movement of smart phones or other Wi-Fi or Bluetooth 5 enabled devices. Similarly, electronic tags affixed to assets or worn by people can also be readily located.

The challenge in clinical settings is that patients wouldn't typically download a locating application, nor do they want their personal mobile phones to be monitored during visits. Clinicians, too, don't want their personal devices monitored, and work rules in many countries prohibit the observation of personnel on breaks or while undertaking personal matters.

Electronic tags could address the issue. Worn by patients and clinicians, tags wirelessly broadcast an ID number that identifies the person. RF tag monitoring infrastructure picks up the ID number and relays it to the workflow management system.

The issue with tags is that they typically require dedicated tag RF infrastructure, which is expensive to deploy and adds a new failure domain. Additionally, patients could inadvertently walk away with the tags, impacting workflow management and life cycle costs. Accordingly, operations teams typically prefer location data to be collected and managed thru a clinic's existing wireless infrastructure, using location devices (such as clipboards and tags affixed to wheelchairs) that will not leave the site.



## WHY ARUBA AND HYPROS

- Reduces costs by using commonly shared Aruba wireless infrastructure for both secure access and workflow optimization
- Works with all BLE-enabled Aruba access points
- Simple set-up, configuration, and diagnostics
- Trouble-free adds, moves, and changes
- Certified interoperability across the product portfolios



Figure 1: HYPROS Dashboard & Example BLE Tag

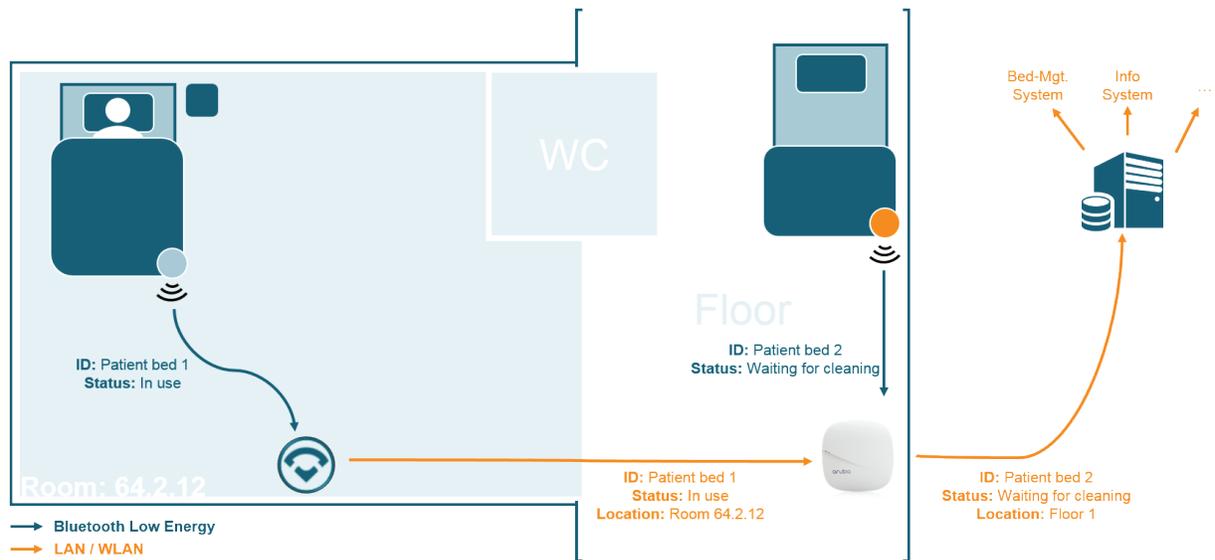


Figure 2: Aruba & HYPROS Bed Workflow Management

### ACCESS POINT AS AN IOT PLATFORM

Aruba's networks have been field-proven in hospital and clinical applications around the world, and provide the reliability, data security, and compliance needed for business-critical services. With the addition of built-in IoT radios, Aruba access points have become platforms that support a broad range of IoT devices and location services.

HYPROS is a German, venture-backed technology company that produces clinical workflow management systems. The HYPROS location application works with BLE-based, location-enabled tags and clipboards, among others, to monitor the movement of patients and clinicians throughout the day. The system can identify bottlenecks, misalignments between actual and needed staffing, time and motion improvements, and patient and equipment scheduling improvements.

The HYPROS system includes three elements:

- HYPROS on-premise and cloud-based Tracking Tracing Infrastructure (HYPROS TTI) database that collects, stores, and processes location data;
- BLE Beacons, available in many form factors, that can be worn as tags, affixed to beds, or attached to clipboards and equipment;
- BLE data collection devices that track the movement of Beacons.

### BETTER TOGETHER

HYPROS and Aruba have partnered to provide location services that can be economically, reliably, and securely deployed over a hospital or clinic's existing Aruba mobility infrastructure. This is achieved by using the Aruba access points' internal BLE radios to collect BLE Beacon data and forward them to HYPROS TTI software for processing.

Aruba access points serve as secure communication platforms between the Beacons and TTI. Dynamic segmentation is maintained through the Aruba switch fabric, helping to protect the location system against attack, and the network against infected devices.

Aruba's 'colorless switch port' concept automatically establishes the correct secure connections with access points regardless of the switch port into which they're connected.

This feature greatly simplifies system deployment, and reduces the chances of miswiring during network updates.

### KEY BENEFITS

Key benefits include:

- Real-time location monitoring without significant investments in new infrastructure;
- Shared location data and asset status via open APIs to optimize time-and-motion, maintenance, and asset storage processes; and
- Data and workflow privacy thru end-to-end security

## CERTIFIED INTEROPERABILITY

Once deployed, the system updates TTI in real-time. Location data are both processed by HYPROS and can be shared with other clinical, operations, and finance applications using open APIs to further automate workflow management.

We've taken the guesswork out of HYPROS deployments by certifying the interoperable operation of the HYPROS products with Aruba infrastructure. Joint deployments go in faster and are easier to maintain.

## SUMMARY

Aruba's secure platform is the ideal way to support HYPROS location services – and deliver the benefits of the connected clinic – in healthcare applications of any size.

Contact your local sales representative to see how together Aruba and HYPROS deliver the most cost-effective workflow management solutions in the industry.

For more information on Aruba infrastructure, please visit:  
<https://www.arubanetworks.com/products/networking/>

For more information on Hypros, please visit:  
<https://hypros.de/en/>