

SOLUTION OVERVIEW

LOCATION-BASED ANALYTICS DRIVE BUSINESS OUTCOMES FOR RETAILERS AND PUBLIC VENUES

MICROSOFT AZURE & ARUBA ALE

The power of the Internet of Things (IoT) comes from extracting and mining process, business, and customer data locked inside devices, machines, and infrastructure. The results can boost productivity, lower costs, and uncover new business opportunities.

Focus groups and consultants can take you only so far in understanding cross-channel buying behavior, shifting brand loyalty, and emerging preferences and trends. What's needed is direct observation of in situ customer behavior. IoT can help by aggregating contextual data on location, users, devices, and applications that can be mined for valuable business insights.

Microsoft and Aruba have teamed to leverage Azure IoT capabilities and Aruba's Analytics and Location Engine to gather, harvest, and analyze real-time contextual information. The solution quickly identifies behavioral changes and trends leveraging Wi-Fi network infrastructure already in use.

ARUBA: TAILORED FOR A MOBILE WORLD

A world leader in high-speed Wi-Fi networks, Aruba powers retailers, hoteliers, convention centers, airports, and other large public venues worldwide. With solutions spanning from SMB to the world's largest businesses, Aruba delivers an unparalleled guest wireless experience with fast onboarding, PCI-compliant secure access, and high performance multimedia support.

WHY AZURE AND ALE

- **Deeper insights:** from machine learning and streaming analytics based on location, user, device, and application
- **Faster bring-up:** Azure Web services can be implemented in just minutes, and updated just as quickly
- **Lower CAPEX:** leverages existing Aruba Wi-Fi network
- **Flexible architecture:** monitors traffic patterns, showrooming, marketing programs, space utilization
- **Enterprise-class security:** protects confidentiality
- **Massively scalable:** supports deployments of virtually any size

Aruba's Analytics & Location Engine (ALE) software extracts context from virtually any Aruba Wi-Fi network, and makes it accessible via APIs. Extracted context includes:

- **Location:** Identifies the x/y position of passers-by and connected customers. Frequency, recency, dwell times, travel paths, and entry/exit routes can all be monitored;
- **Devices & URLs:** Identifies the type, model, and OS of devices on the network, and the URLs being surfed, i.e., to flag showrooming or responsiveness to promotions;
- **Geofences:** Allows virtual borders to be created and triggered when entered or exited. Allows areas of special interest to be defined and observed.



MICROSOFT AZURE: THE CLOUD ON YOUR TERMS

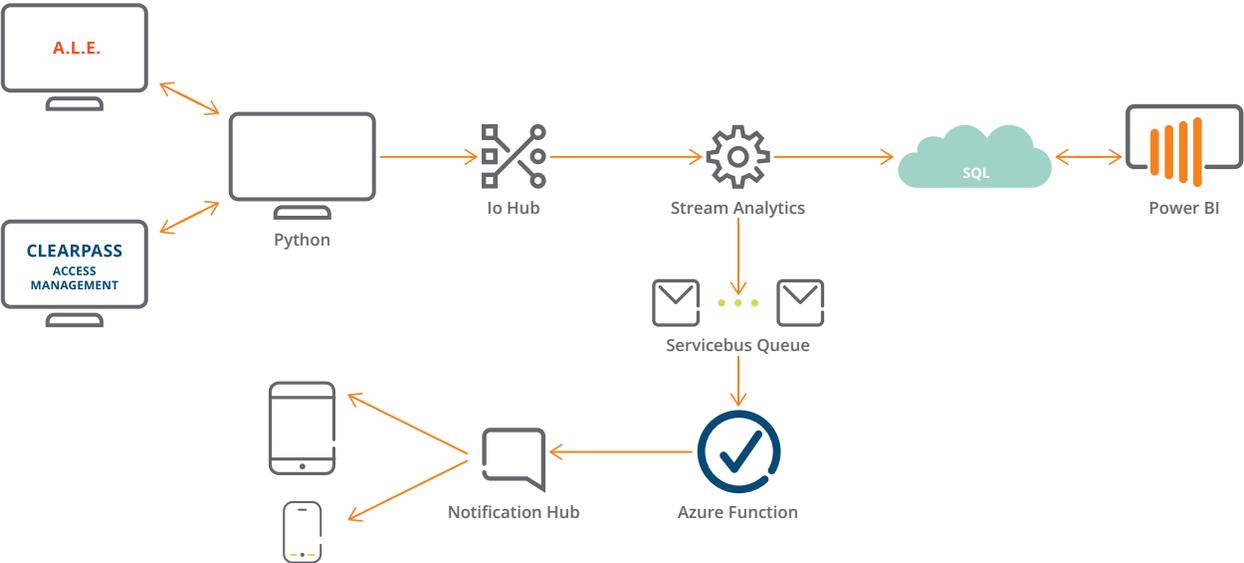
Microsoft's Azure software as a service, platform as a service, and infrastructure as a service cloud platform is used by thousands of companies to build, deploy, and manage applications and services. Microsoft Azure processes IoT device data, finds patterns, and takes action via cloud-to-device messages.

A drag-and-drop interface enables customers to quickly implement and change solutions, create new dashboards, and extend services - including new data sources - as needs change.

THE POWER OF PRESENCE

Combining ALE's contextual data with Azure Machine Learning opens new ways to optimize real estate usage, spot trends, implement targeted marketing programs, and understand customer behavior.

Frequency, recency, dwell time, walk-by vs. walk-in rates, traffic patterns, showrooming - all can be monitored and addressed with the joint solution. ALE geofence triggers are processed by Azure Stream Analytics, which works in concert with Azure IoT Hub to push highly targeted notifications on entry and/or exit from the geofenced area.



THE VALUE OF BEING PRESENT

Presence can show when a room or area is occupied, how many people are walking by versus walking in, and the recency, frequency, and timing of visits. This type of contextual information can serve a broad range of applications:

Customer service: managers can be alerted when the associate-to-customer ratio falls below minimum thresholds, increasing conversion and lowering abandonment rates;

Marketing: monitoring surfed urls and notifying associates when customers are showrooming can increase conversion rates and let customers walk home with the deal they wanted;

HVAC and lighting: lighting and temperature can be adjusted based on occupancy instead of time schedules, saving energy;

Maintenance: cleaning services and equipment replacement can be determined by actual wear instead of a fixed schedule, lowering costs and ensuring that the most heavily trafficed areas are addressed first.

Lease rates: pricing can be fixed or set to a sliding scale based on actual traffic;

Social: determine which social media sites get the most hits by time, day, and location to better target ad spending;

Public safety: direct first responders to known occupied areas, monitor the location of guards on tour, and trigger alerts when out-of-bounds areas are entered.

NEXT STEPS

To find out more about how ALE and Azure can help your business, please contact an HPE salesperson or authorized reseller near you.