



aruba

a Hewlett Packard
Enterprise company

Aruba Meridian

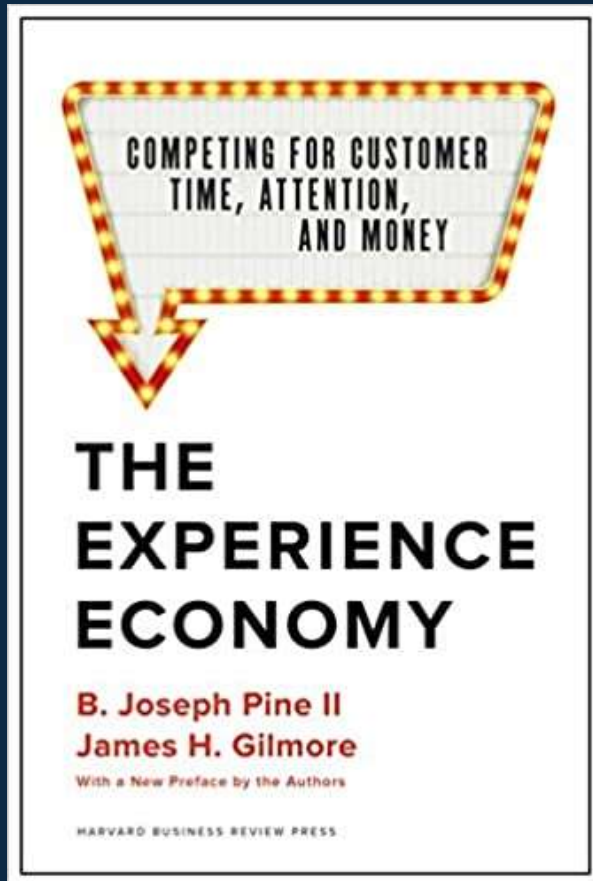
Aruba Location Based Services –
get your network do more!

Sriharsha Narasimhan
CTO, Aruba India

Differentiate value of your products and services

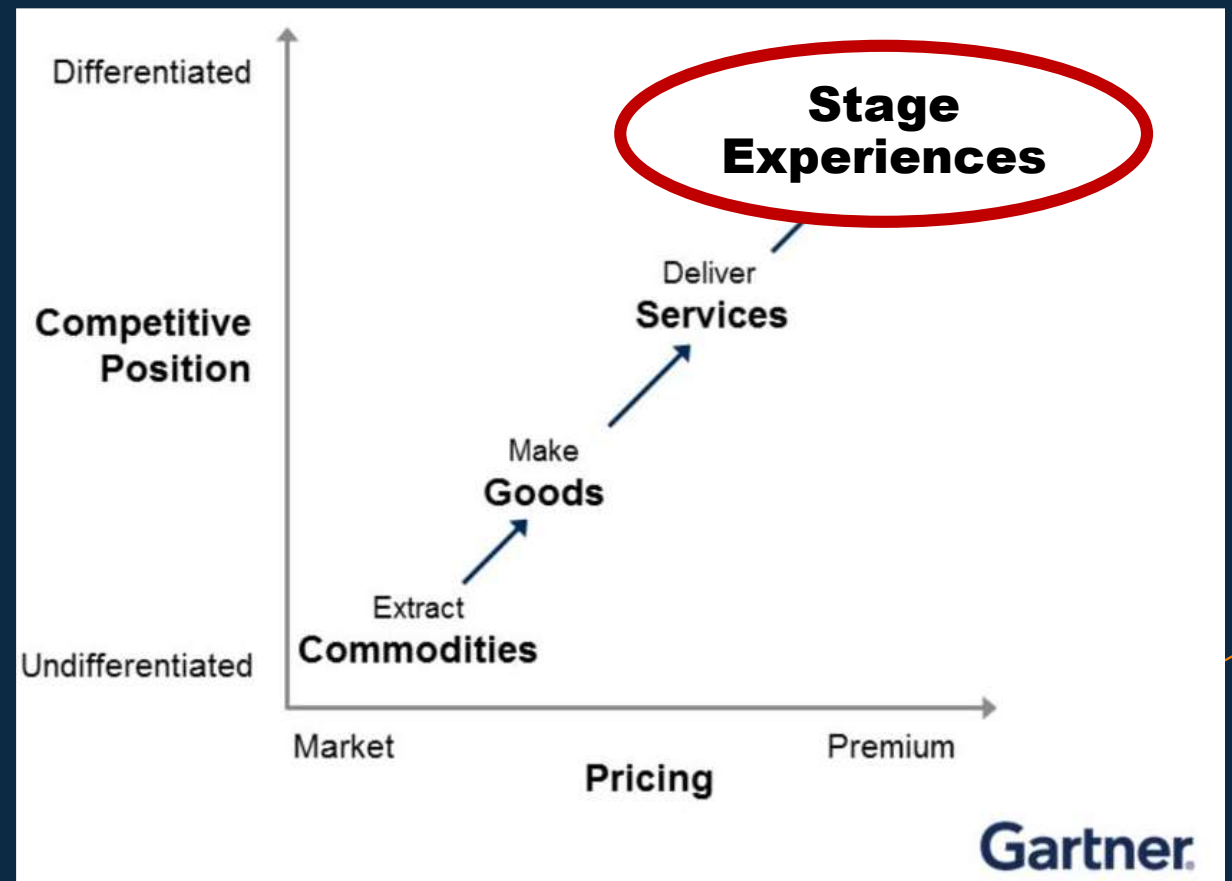
Deliver Personalized Experiences – Extend influence with UI, UX, CX, MX, ...

The Experience Economy



Pine & Gilmore, 1998

The Progression of Value Economics

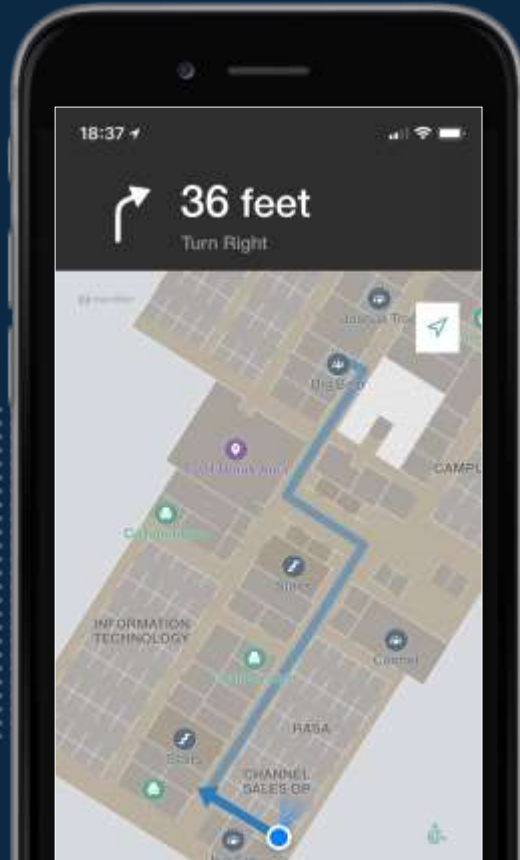


Source: Gartner, (370396) Leadership Vision For 2019 Application Leader



Need for indoor based location services

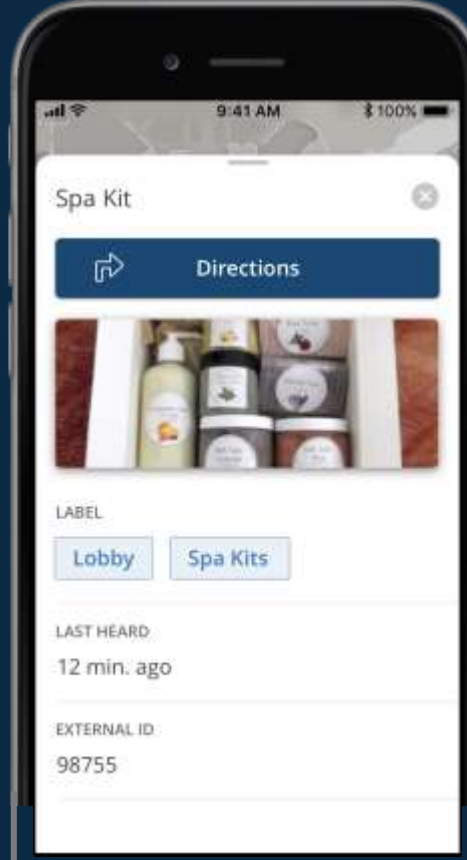
Use cases to stage indoor experiences



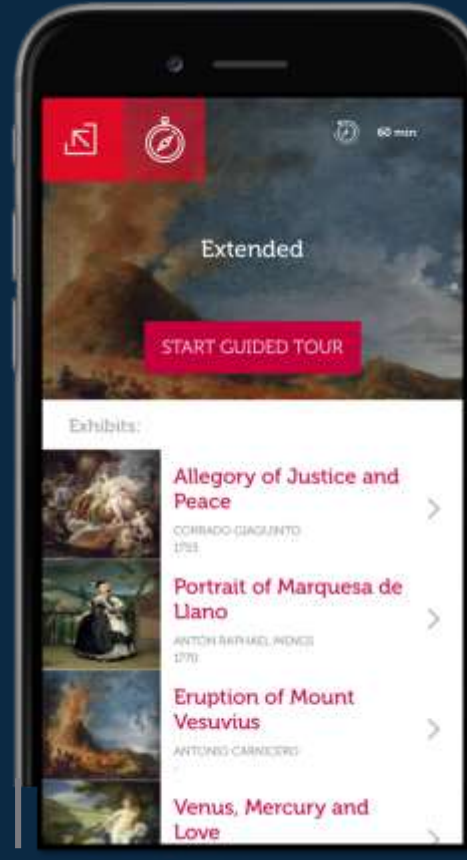
Navigating indoor



Locating people / resources



Track valuable assets



Curate guest experience



Integrate complex experiences / workflows



What Do Location Services Mean For You?

1

PRESENCE of people & things on the move

- Powered by motion detection & computer vision
- Aims to record 100% of the activity
- Targeted by Aruba ecosystem partners

2

INTENTION to connect & spend time

- Powered by Wi-Fi connectivity
- On average, ~60% of the activity is recorded
- Target for Aruba Location Engine (ALE)

3

INTEREST in brand & the space

- Powered by web and mobile app stats
- On average, ~40% of activity is recorded
- Target for Aruba Location Engine (ALE)

4

INTERACTING and SENSING

- Powered Aruba Beacons, Tags and APs
- Acting as a bridge between mobile and IoT
- Discover nearby places, people and things

aruba meridian



Mobile devices take the center stage for many of the use cases



Indoors & Outdoors



Evolution of Meridian Apps



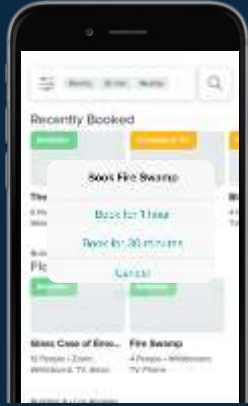
AppMaker
Mobile app development



Maps
Mapping and routing engine



Blue Dot
Locate people & places indoors



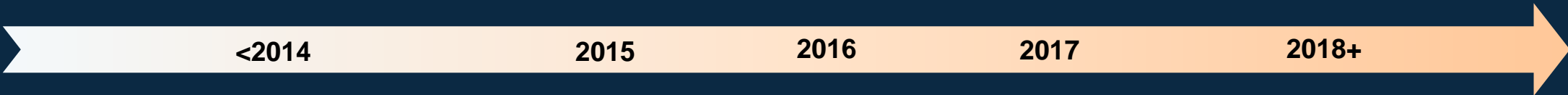
Campaigns
Proximity-based triggers



Asset Tracking
Locate things indoors



Apps and Developer Tools for Smart Spaces



<2014

2015

2016

2017

2018+

Drivers

Visitor and fan engagement
Patient and student experience

Drivers

Staff and employee productivity
Optimizing real-estate utilization

Drivers

OT and IT convergence
Workplace as a differentiator



Evolution of Meridian Apps



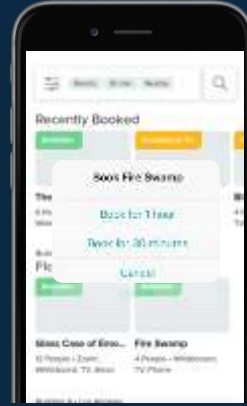
AppMaker
Mobile app development



Maps
Mapping and routing engine



Blue Dot
Locate people & places indoors



Campaigns
Proximity-based triggers



Asset Tracking
Locate things indoors



Apps and Developer Tools for Smart Spaces

2020

Drivers

- Autonomous Workplaces
- Contact Tracing & Social Distancing
- Touchless Experiences



Infrastructure



300/500 series 11ac/ax indoor and outdoor Aruba APs with BLE radios and wall, ceiling, wall-jack, desktop mount options



Battery (4-year) and USB-powered Aruba Beacons Aruba Tags (4-year), with optional snap-on / zip-strap mount kits

Location Ready Access Points, Beacons and Tags

Controller-based or controllerless WLAN design with secure policy controls enable:

- Asset tracking with BLE-powered Aruba Tags
- Management of battery-powered Aruba Beacons
- BLE beaconing for 3rd party or Aruba Meridian SDK integrated to iOS/Android mobile apps.

Software as a Service



Meridian software licenses:

- Mobile app content management
- Mapping engine for indoors and outdoors with south- and north-bound APIs
- Proximity-based triggers with BLE
- Real-time location with BLE / GPS
- Zone-based asset tracking, extending to ecosystem partners

Via Meridian, developers gain access to:

- Streaming APIs for Meridian asset tracking
- South- and north-bound mapping engine APIs on Aruba Meridian
- Aruba Meridian mobile and web SDKs for end-user applications

Get Started with Mobile App Development Using Meridian AppMaker

Simple to use editor on Meridian
to publish basic content for text and multimedia

Import feeds (JSON, XML) and post events
with multiple theme and language support

Publication to iTunes and Google Play
is part of the subscription service



Indoor Maps for Hard to Navigate Environments

Mobile friendly design as vector graphics

with self-service updates or via team Meridian

Route editor across floors and buildings

with preferred & non-accessible definitions

Web SDK

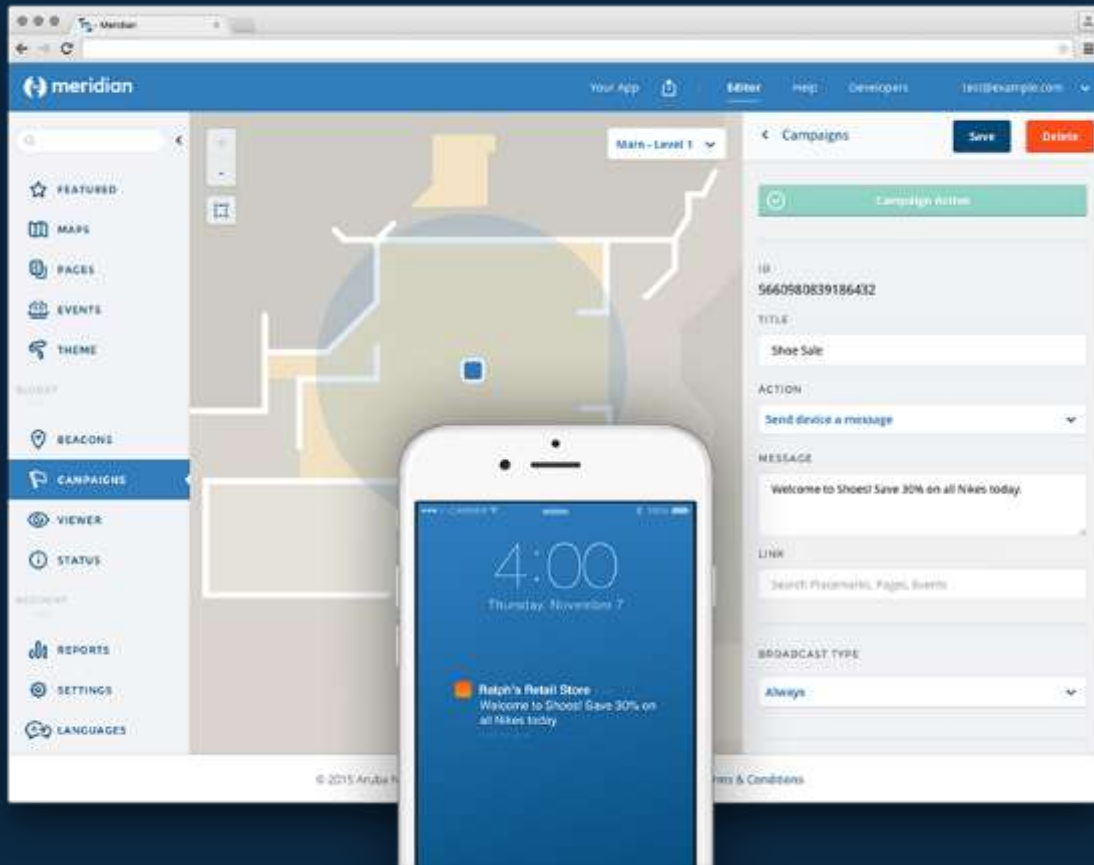
for placemarks and asset tracking

Developer ready placemarks and maps APIs

available to improve user experience in real-time



Going Beyond Push – Using Campaigns to Measure Engagement in Micro-Spaces



Location-based messaging & analytics
initiated by multiple beacons in a campaign

Campaign messaging customized
per zone, time-of-day, user profile and more

Each zone defined per campaign
within 0, 3, 20m radius

Action for each trigger can be a webhook
allowing third-party IoT devices to activate



Improving the User Experience with a Glowing Blue Dot

3m/10ft of accuracy, 3s of latency
with BLE beacons deployed every 10m/30ft

Help users discover amenities and services
that are closest to where they are

Allow users to share their location
with options to pause or delete at any time



Asset Tracking for Par Level Management and Improved Staff Efficiency

Use Aruba WLAN to track
Aruba Tags (3-4 year battery life) with BLE

Presence and duration analytics
with zone entry and exit notifications

5m/15ft of accuracy and 2-min latency
with Aruba APs deployed every 15m/50ft



Multi-Tenancy for Beacons with Meridian Maps

Map Hierarchy

Parent
e.g. Asset Tracking map

Child 1
e.g. Visitor map

Child 2
e.g. Workplace map

Content

Proximity and blue dot experience, asset tracking, maps, placemarks and routes unique to parent maps

Proximity and blue dot experience, maps, placemarks and routes unique to this first child location

Proximity and blue dot experience, maps, placemarks and routes unique to this second child location

Apps

Apps for operations

Apps for guests

Apps for workplace productivity





Working with Meridian

Your Network is already Location Ready!

Enable location with three easy steps:

1. Get Started with Meridian Access & Maps
2. Enable Location Services
3. Deploy Beacons

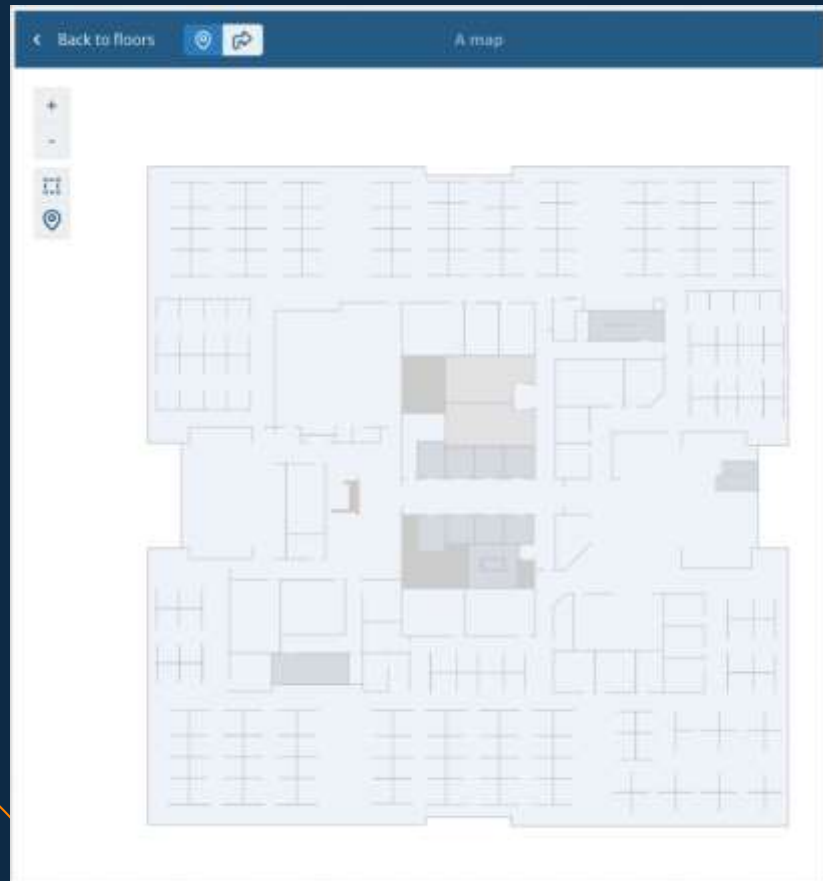


<http://docs.meridianapps.com/article/603-enable-an-aruba-ap-for-location-services>

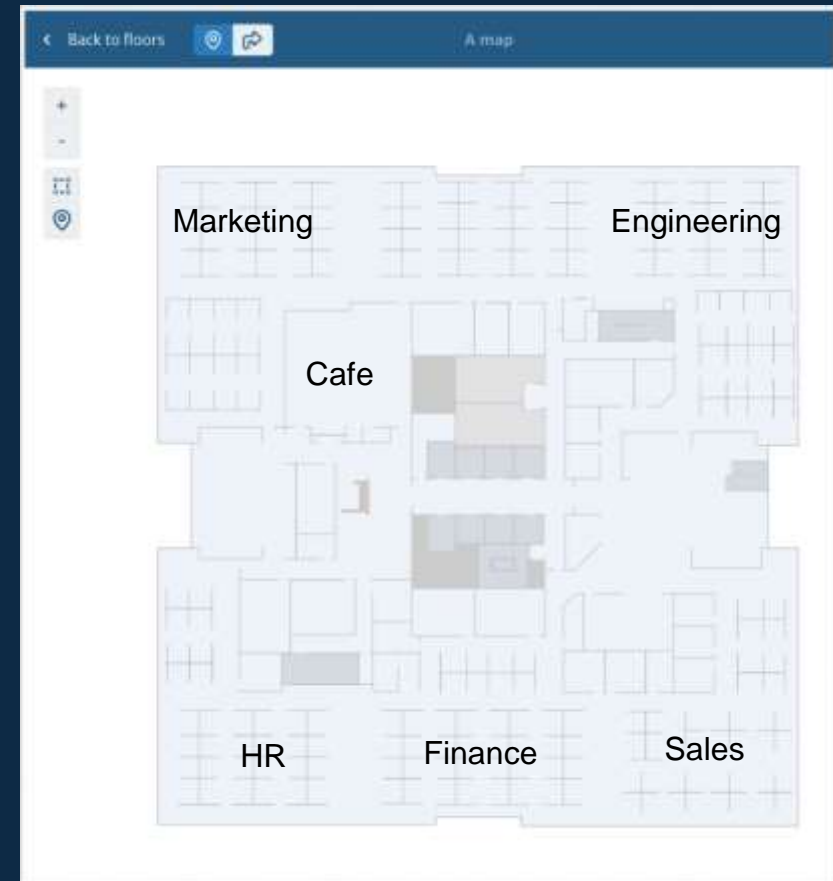


Adding and managing floor(s)

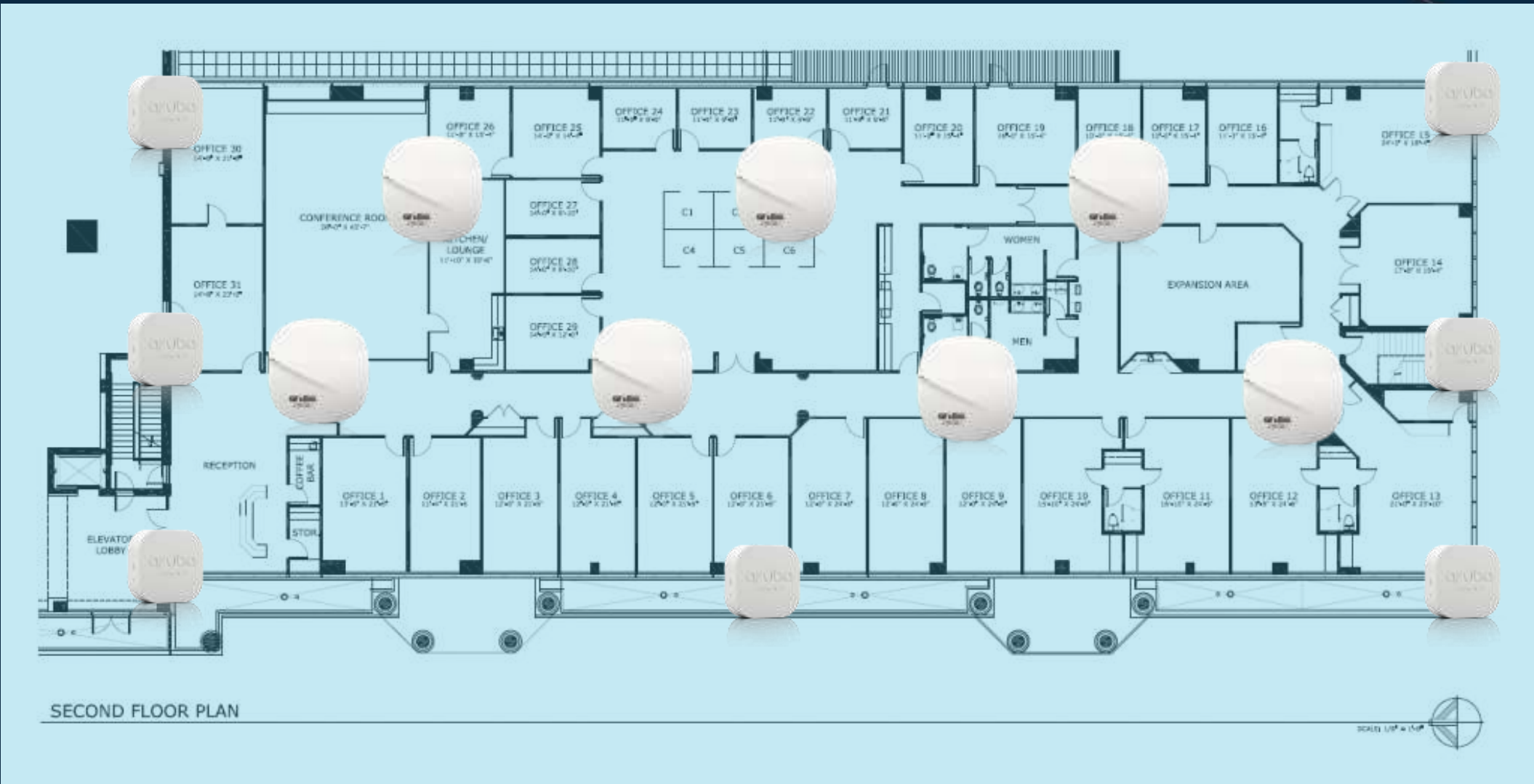
Add floor



Add Place Marks

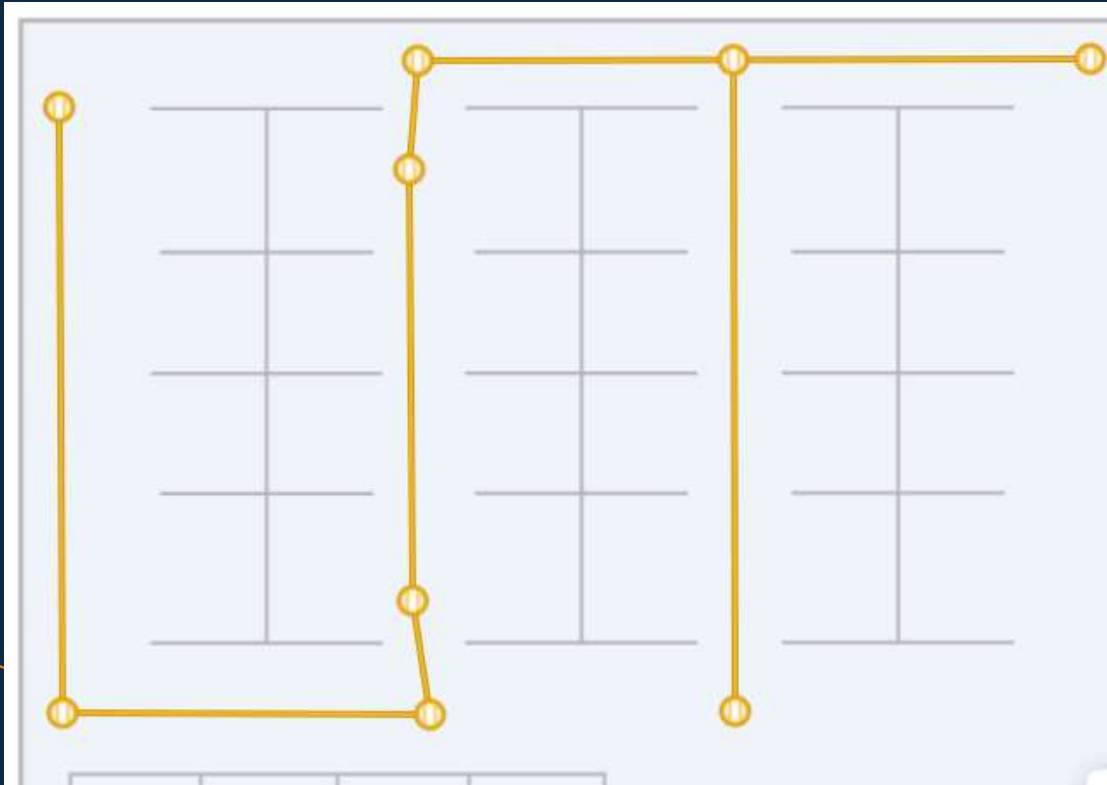


Representative Deployment

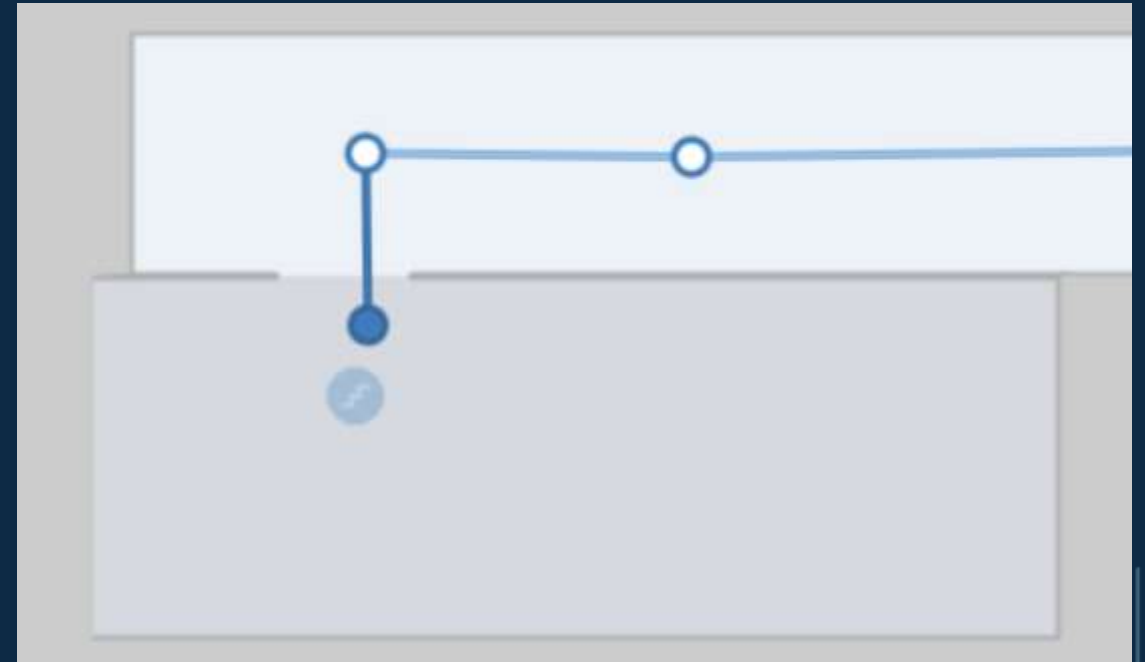


Adding and managing floor(s)

Add Routes



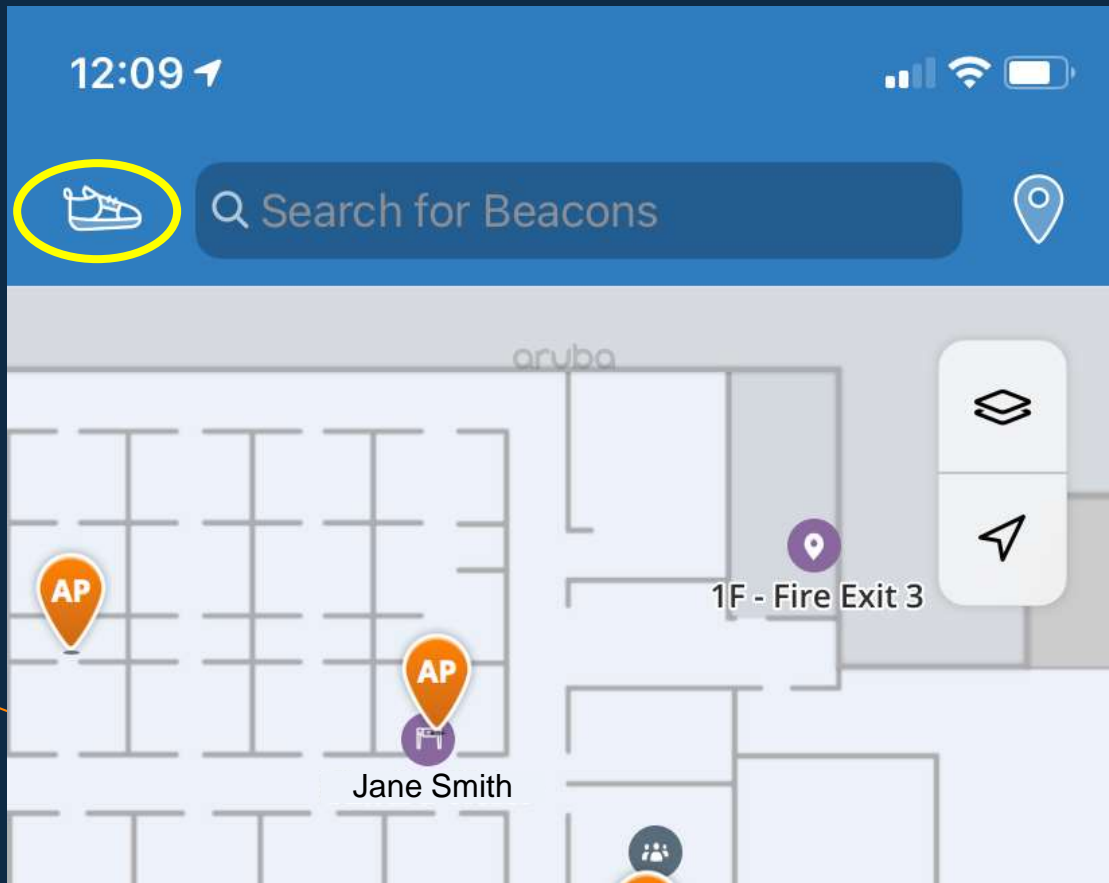
Transition between floors



Elevators | Escalators | Stairs

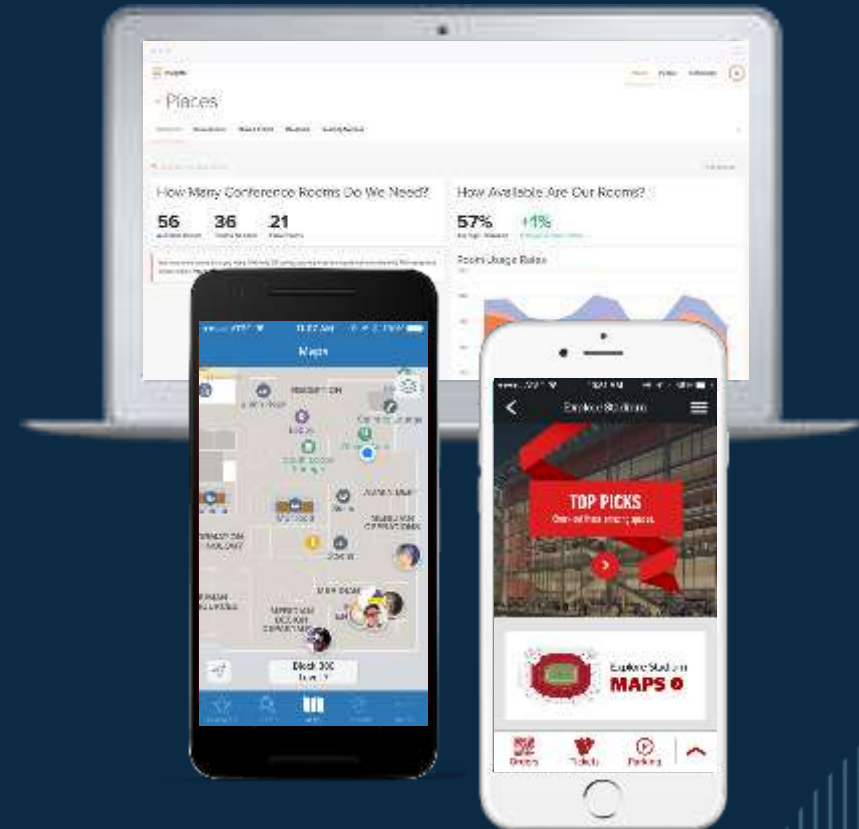
Train Meridian and heading into production

Train Meridian



Meridian Beacon app for Apple iOS

Ready to navigate



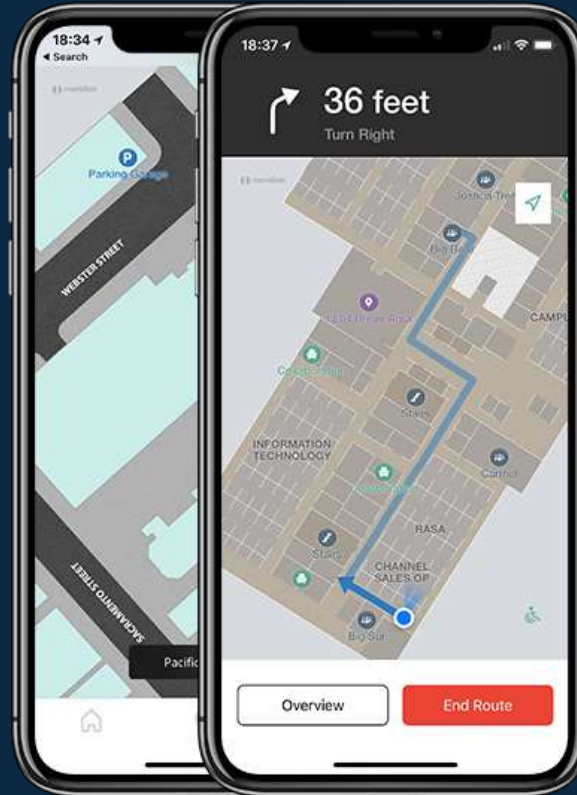


Meridian in action

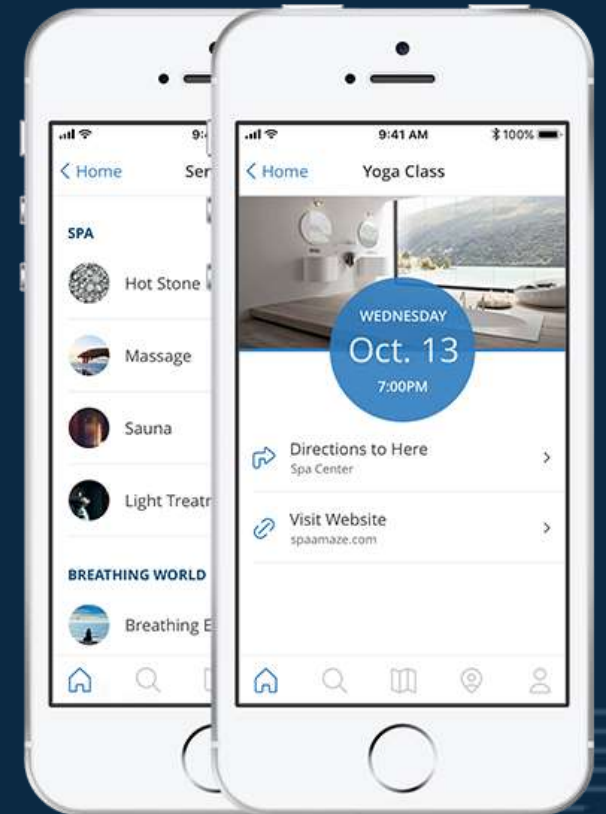
Meridian in Action



Multi location workplaces



Unified blue dot navigation and GPS navigation indoor / outdoor



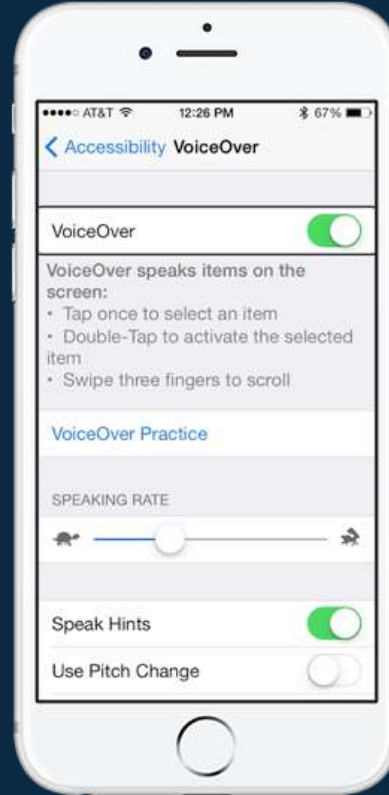
Integrate content and calendar for events



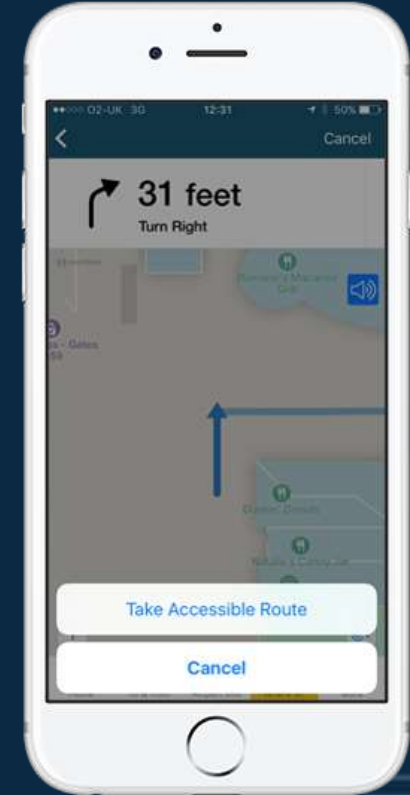
Meridian in Action



Multi language support



Voice Assist with iOS and Android



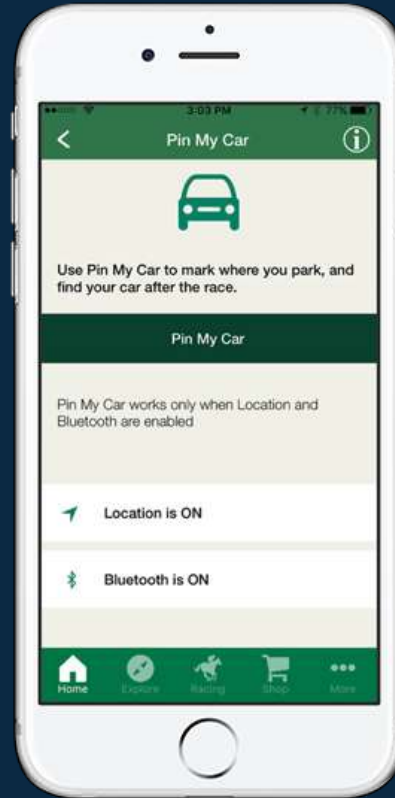
ADA Suitable route and navigation



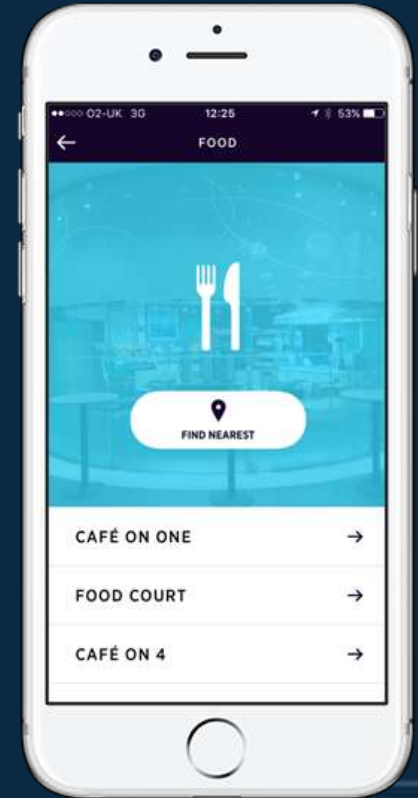
Meridian in Action



Creative point of interest marking for large venues



Drop a pin to mark point of interest or car location



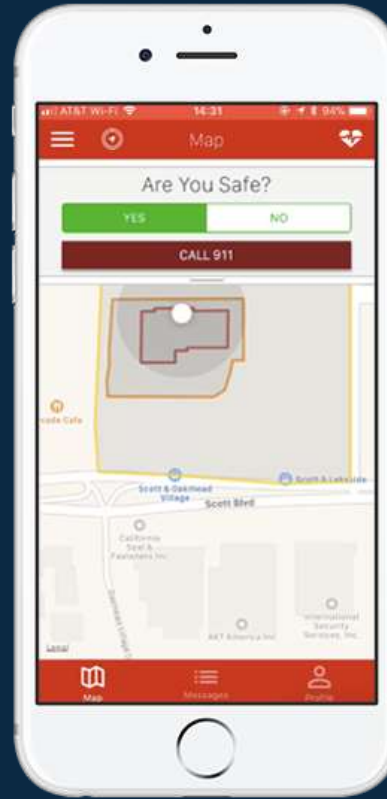
Discover near-by services



Meridian in Action



Engage with guests in Executive Briefing Center



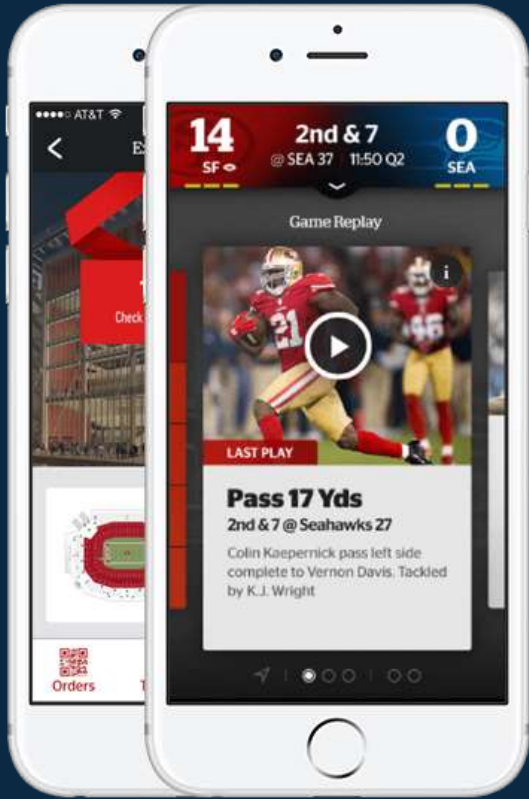
Handle Emergencies, locate people, and manage evacuation



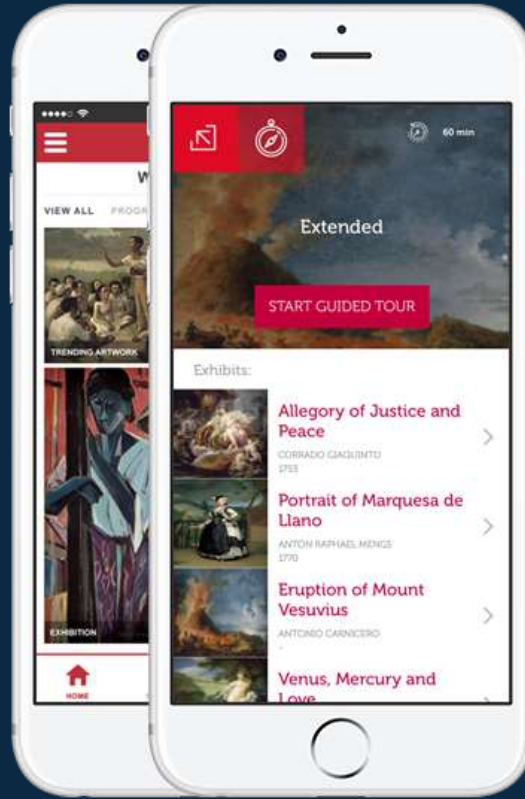
Hospital app for easing patient management



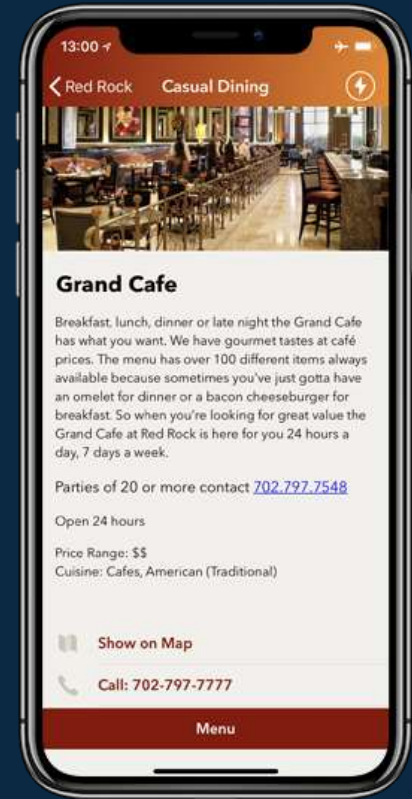
Meridian in Action



Engage with
guests in
stadiums / event
venues



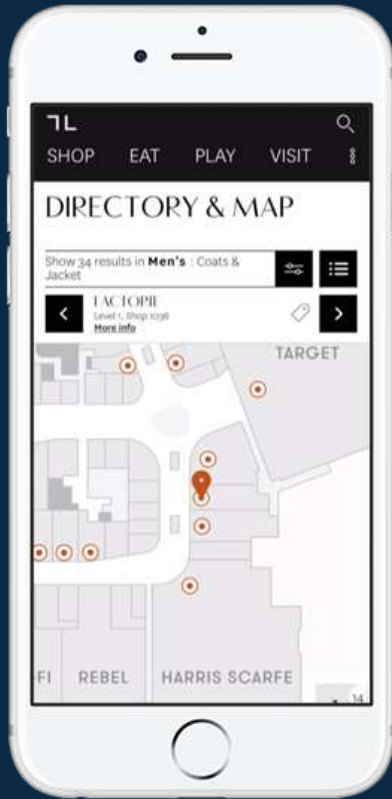
Engage with
guests in
Museums



Engage with
guests in
Hospitality
(Hotels/resorts)



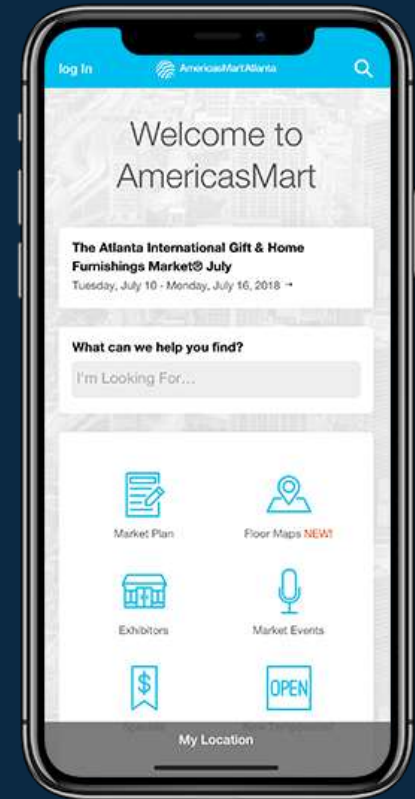
Meridian in Action



Shopping Mall App



Airport Apps



Online-to-offline retail experiences



Aruba Location Services Toolbox

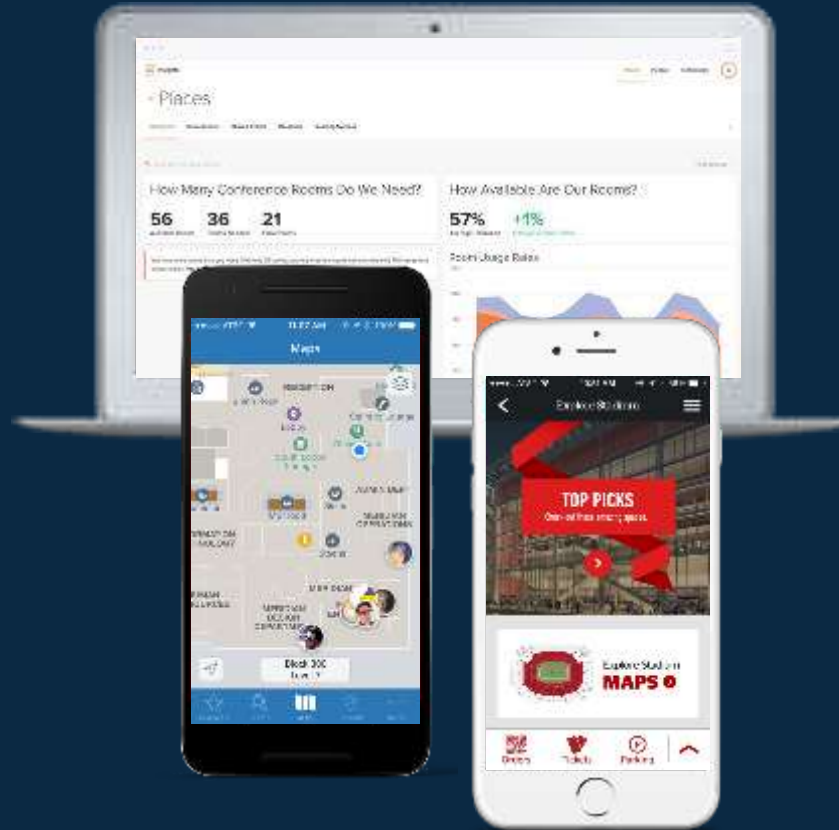
Your Apps

Bridging digital and physical

Location Ready

Wi-Fi 6 APs

*Primary artery
for digital relationship*



Bluetooth Proximity

Providing transformative context





Analyst Perspective



a Hewlett Packard
Enterprise company

Market Leader 15
Years Running¹

Positioned Furthest in
Completeness of Vision

Figure 1. Magic Quadrant for Wired and Wireless LAN Access Infrastructure



¹ Aruba's 15 years of placement includes HPE (Aruba) in the Magic Quadrant for the Wired & Wireless LAN Access Infrastructure from 2015-2020 (6 years), Aruba Networks in the same Magic Quadrant from 2012-2014 (3 years) and in the Magic Quadrant for Wireless LAN Access Infrastructure from 2006-2011 (6 years).

Source: Gartner Magic Quadrant for the Wired and Wireless LAN Access Infrastructure November 2020, Bill Menezes, Christian Canales, Tim Zimmerman, Mike Toussaint ID Number: G00463517

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Aruba #1 In All Uses Cases in 2020 Gartner Critical Capabilities Report

Aruba has received the highest product scores for all Wired and Wireless LAN Access Infrastructure Use Cases in Gartner's Critical Capabilities for Wired and Wireless LAN Access Infrastructure

#1 Unified Wired & WLAN Access

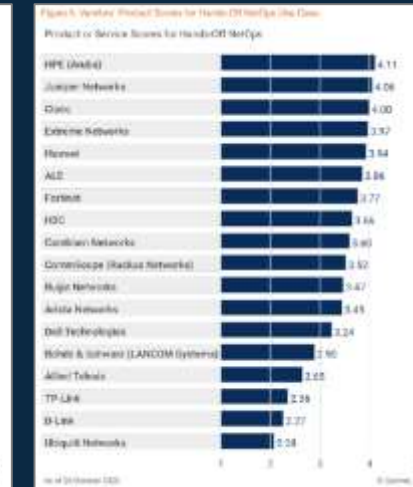
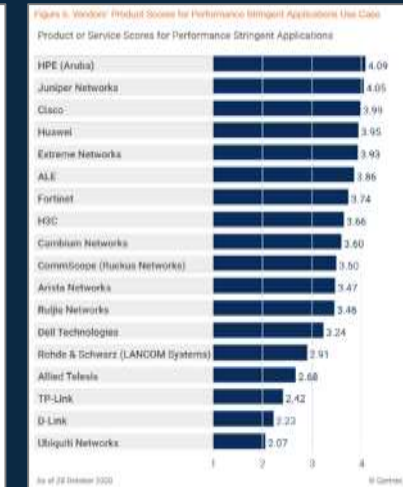
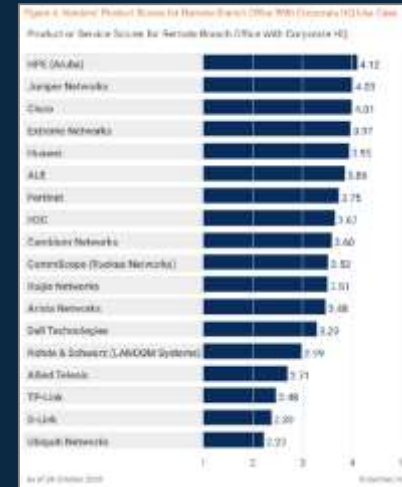
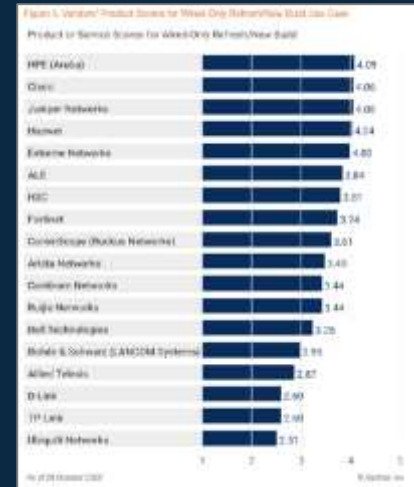
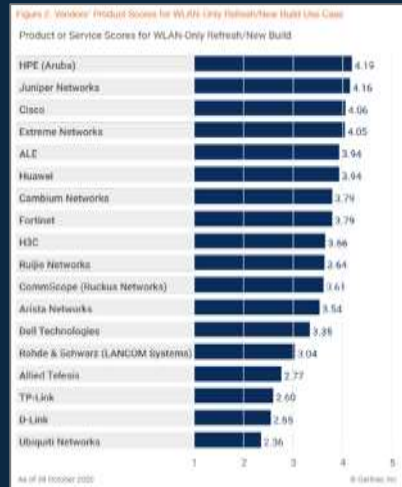
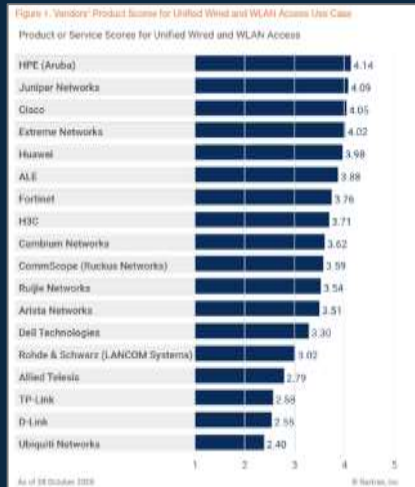
#1 WLAN Only Refresh/New Build

#1 Wired Only Refresh/New Build

#1 Remote Branch Office w/Corp HQ

#1 Performance Stringent Apps

#1 Hands Off NetOps



Gartner Critical Capabilities for Wired and Wireless LAN Infrastructure, Christian Canales, Tim Zimmerman, Bill Menezes, Mike Toussaint, 11 November 2020

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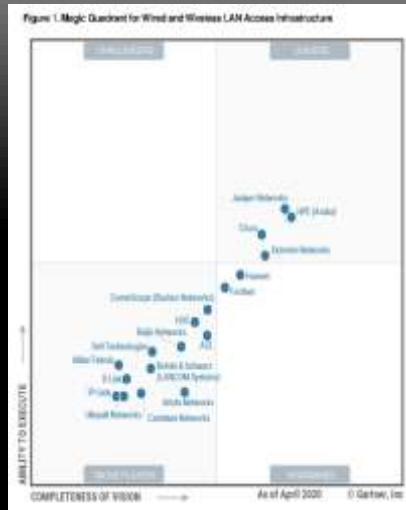
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Analyst Validation Supports Aruba's Position as a Market Leader

Gartner

Magic Quadrant



Market Leader 15 Years Running

Gartner

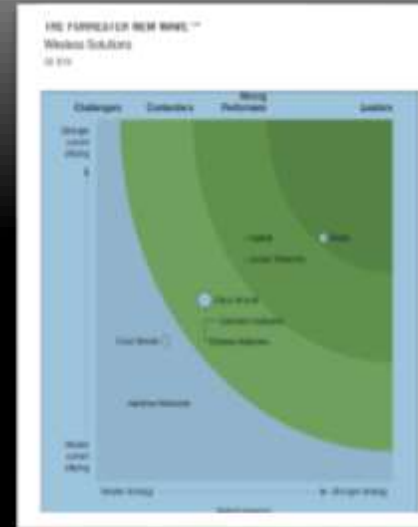
Critical Capabilities



Aruba #1 In All Uses Cases in 2020 Gartner Critical Capabilities Report

FORRESTER

New Wave



The only vendor placed in the Leaders Quadrant

IDC
Analyze the Future

MarketScape



1 of only 2 Leaders

aruba

a Hewlett Packard
Enterprise company

Thank You



sriharsha.narasimhan@hpe.com



@sriharshaz



<https://www.linkedin.com/in/sriharsha-narasimhan/>