aruba

a Hewlett Packard
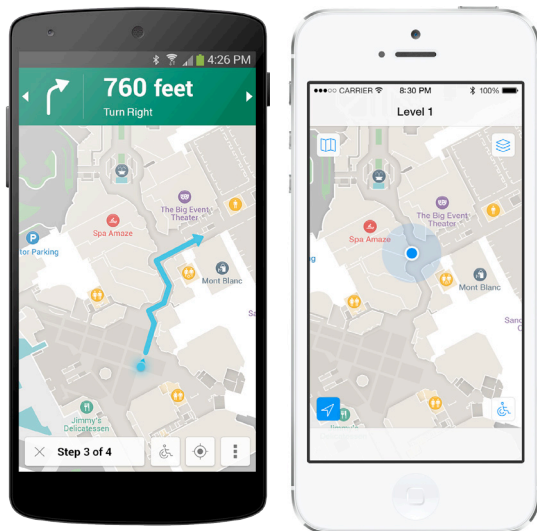Enterprise company

# MERIDIAN MOBILE APP PLATFORM

Build a better mobile app for your venue

Meridian is a mobile-app software platform from Aruba, a Hewlett Packard Enterprise company, that allows public-facing enterprise venues – retailers, hotels, casinos, resorts, airports, hospitals, and convention centers – to create or improve mobile apps that engage visitors on their mobile devices.

These venues can leverage Meridian to deliver location-relevant information such as mapping, turn-by-turn directions, venue-specific information, and proximity-based notifications to mobile-app users during their visits.

The platform's cloud-based Meridian Editor is a software-as-a-service (SaaS) content management system (CMS) that houses a location's Meridian-powered app content. It offers an easy way for venues to create a complete app from scratch with its AppMaker features.

Alternatively, venues that already have a mobile app can use the Meridian software development kits (SDKs) to integrate navigation and proximity notification capabilities. Meridian supports the creation of apps for iOS and Android devices for both types of deployments (white-label and SDK).



**Meridian-powered mobile apps work on both iOS and Android devices.**

## KEY FEATURES OF THE MERIDIAN PLATFORM

- **Meridian Editor** – Cloud-based content management system that serves as the online hub for Meridian-powered tools.
- **AppMaker** – A module in the Meridian Editor that lets you build a mobile app for your venue.
- **Mapping and self-guided wayfinding** – Meridian feature that lets venues incorporate location-specific mapping and turn-by-turn directions into their Meridian-powered mobile app.
- **SDKs** – Tools to add mapping and wayfinding (NavKit), indoor positioning on a map (BluDotKit), and proximity-based notifications (CampaignKit) to an existing app built by a third-party developer.
- **Aruba Location Services** – Products that connect to sources of mobile device positioning data, such as Aruba Beacons powered by Bluetooth Low Energy (BLE), that make a Meridian app location-aware.
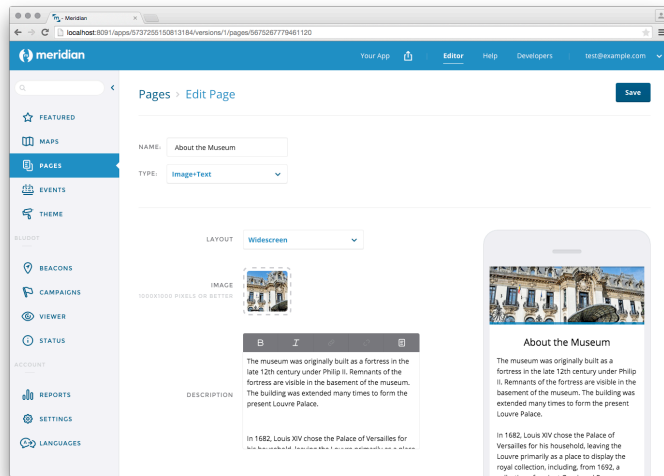
## THE MERIDIAN EDITOR

The Meridian Editor lets venues create, update and access all Meridian-powered content and functionality within their mobile app. This gives venues hands-on control over content, plus the ability to preview edits and make quick updates in real-time.

Additionally, the Meridian Editor houses content for both SDK and AppMaker app deployments and has a companion app called AppViewer that allows venues to view their content on a device before their app is formally published.

### Cloud-based content management

A full-featured cloud-based content management system, the Meridian Editor allows venues to build and manage all of their Meridian components through a simple and intuitive web interface.

- Instant, real-time content updates.
- Accessible from any computer with an Internet connection.
- Accessible by multiple users.
- Cloud-based, no need for local software management.
- Supports multiple languages.
- Data resides on the Google[1] App Engine Datastore.

## Simple and easy to use

The Meridian Editor is highly visual with an intuitive user-interface. There's no need to allocate technical resources to create and manage mobile app content and no need to employ a professional user-interface/user-experience designer to create visual layouts and app flows.

- Convenient WYSIWG interface.
- No coding knowledge required.
- Built-in visual app previewer updates as edits are made.
- Best-in-class user-interface/user-experience design.

## MERIDIAN APPMAKER

Within the Meridian Editor, AppMaker offers tools to create an entire mobile app around mapping and wayfinding features. Using a templated framework, venues can quickly and easily create a dazzling mobile app that delivers a variety of venue-specific content.

With Meridian, personnel with little or no technical skills can easily create a custom app. And upon completion, The Aruba professional services team can publish a venue's app to the Apple App Store and Google Play Store.[2]

## Build a mobile app from scratch

Meridian AppMaker lets venues build mobile app pages using a variety of visual format options. You can showcase a variety of information to end-users, such as directories with image and text pages, sorted list pages, events pages, calendar pages, hosted web pages, and more.

This enables your mobile app to become a discovery tool that lets users find a wide range of information about a venue, such as current and upcoming exhibits at a museum or restaurant menus at a resort.

- Create content manually or by auto-pulling from various external sources.
- House a variety of content, including calendar events, third-party web sites and venue directories with standard, customizable app page templates.
- Sort, organize and link pages to one another or to other sections of the app, including placemarks on a map.
- House content for multiple physical locations within one mobile app. Users simply choose from a list of options after launching the app and the appropriate content loads.
- Deliver an app with multiple language support, automatically launching in a preferred language based on the user's device settings.

## Custom branding and design

AppMaker tools include various aesthetic themes and flexible build options that allow venues to incorporate their unique corporate branding while delivering a memorable and productive mobile app experience.

- Graphic-rich feature pages with venue-specific imagery, logo and exclusive content.
- Various themes, colors, and styles for venues to choose from.
- Best-in-class user-interface/user-experience design ensures that content flow is intuitive for mobile app users.

## Incorporate user-relevant data

AppMaker supports a range of content feeds so that, in addition to manually creating app page content, venues have the option to automatically pull relevant business information from a variety of external sources.

Venues can import related pages, placemarks, and events from iCal feeds, XML, RSS, and JSON feeds. For example, clinician directories at a hospital, inventory management systems at a retailer, or FlightStats for up-to-flight information at an airport.

## Incorporate external web pages

The Meridian App Sandbox allows guests to view a venue's external mobile web pages within their Meridian-powered app or a white-label app as if they are part of the app itself. You can also use the REST API to access placemarks, pages, and events from these hosted web pages.

A venue might use these features to make it easy for guests to find and reserve conference rooms at an office, order food and drink from their seat at a stadium, and search the vast archives of a museum's exhibit collection.

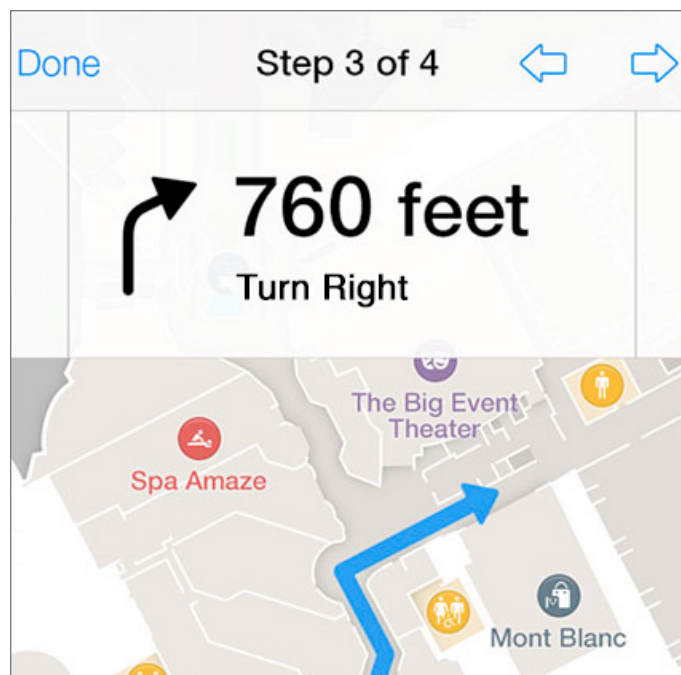### App analytics for smarter venue operations

The Meridian Editor contains a reporting feature that lets venues see how mobile app users interact within their apps. Armed with this information, venues can make better-informed operational decisions about the type of content that guests prefer and respond to.

For example, in a sports stadium, seeing an increase in search queries for the term "water" might lead the stadium operator to install a public drinking fountain, vending machines or concessions that sell bottled water.

- Basic app analytics around page views, visits, app usage, and activity based on a customized range of dates.
- Visibility into popular search queries, wayfinding routes, and commonly accessed sections of the app.

### MAPPING AND SELF-GUIDED WAYFINDING

The Meridian platform offers a simple and elegant way to incorporate a venue's custom maps into a mobile app along with directions to points of interest. Maps and map content are easily created and managed in the Meridian Editor content management system.



### Help guests navigate venues

Finding your way through a venue can be challenging when GPS is unavailable. Meridian mapping and self-guided wayfinding give mobile app users a simple way to search for points of interest and access turn-by-turn directions to them – whether they are inside or outside.

These Meridian capabilities conserve operational resources and, more importantly, keep visitors satisfied by enabling them to instantly find what they are looking for from the comfort and familiarity of their own mobile devices.

- Convert existing floor plans and architectural layouts into vector-based, mobile-app friendly renderings.[3]
- Add searchable placemarks to maps that guests can use to access directions within the venue.
- Create custom routes on maps that define how guests navigate the venue.
- Easily adjust routes and placemark content in real-time when venue layouts change.

### Add content about points of interest

Venues can add relevant, descriptive information about individual points of interest and enable guests to access additional content about them. Mobile app users can access this information using the search feature within the app or directly from a map.

Within a map, visitors simply tap on a placemark title or icon to access additional details about that particular point of interest.

- Various placemark icons – restaurants, restrooms, parking, information desks, and exits – can be used to denote specific points of interest.
- Custom placemark imagery provides a visual image to set the tone or describe a point of interest.
- Customizable keywords help users search for and find specific points of interest and distinguish between multiple placemarks with the same name.
- Formatted text descriptions enable venues to describe individual points of interest within the app.
- Contact information such as phone number, email address, and web site lets users connect directly to the venue from the mobile app.
- Option to link external data sources to placemarks associated by a user ID instead of manual data entry.

## MERIDIAN SOFTWARE DEVELOPMENT KITS

The Meridian SDKs allow venues to integrate Meridian features into their existing mobile apps. This is ideal for venues that have already invested in a mobile app but would like to insert Meridian-powered mapping, wayfinding, and/or proximity-based push notification features into it.

To use the Meridian SDKs, customers must have internal or third-party mobile app development resources.

### Meridian SDK options
- NavKit – Incorporates Meridian mapping and wayfinding.
- BluDotKit – Incorporates location-aware indoor positioning with mapping and wayfinding. Requires Location Services powered by Aruba Beacons.
- CampaignKit – Incorporates proximity-based push notifications that associate actions with specific areas on a map. Requires Location Services powered by Aruba Beacons.
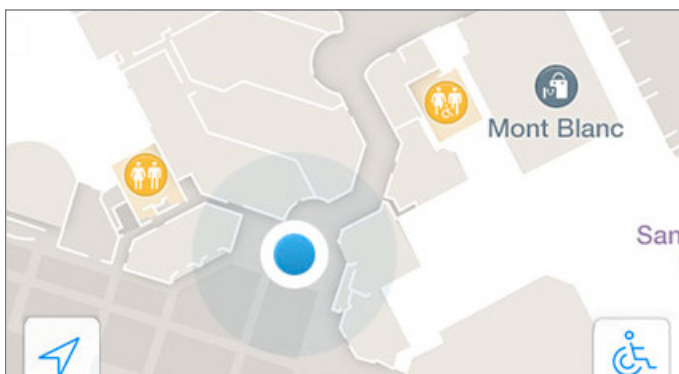
## ARUBA LOCATION SERVICES

Aruba Location Services powered by Aruba Beacons can be added to provide an additional layer of contextual device positioning. This real-time data integrates with Meridian powered mobile-apps to give users access to more granular location-based services and personalized mobile engagement.

### Blue dot wayfinding

Location context enhances the mapping and wayfinding experience by showing a glowing blue dot that indicates a mobile app user's location on a map. It also lets them search for directions from their current location without entering a starting point.

- Simulate a GPS-like wayfinding experience indoors.
- Access turn-by-turn directions from your current location.
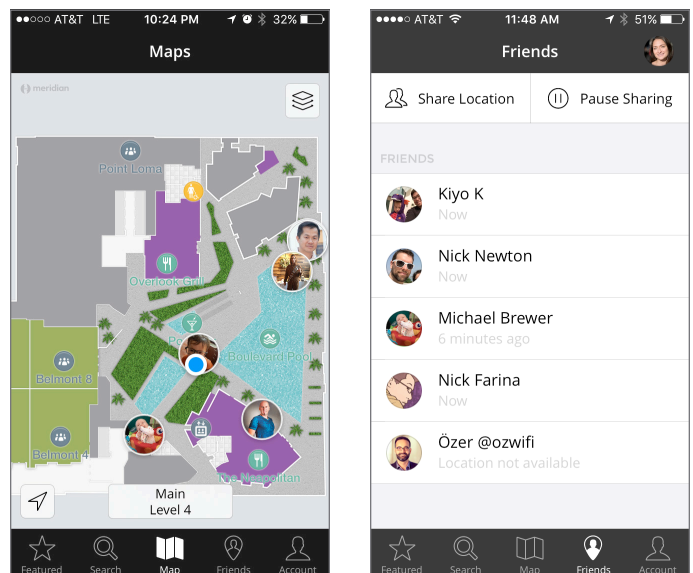- Display a glowing blue dot on a map.



**Users can easily see their current indoor location on a venue's map.**

### Location Sharing

Location sharing technology allows a mobile app user to temporarily share their real-time location with another person using the same app. This technology uses the location information available at a venue that has deployed Aruba Beacons.

Location sharing powers the "Find My Friends" feature now available in AppMaker apps and the Meridian SDK. This feature allows AppMaker app users to find friends or colleagues within a large office or crowded conference event, or even find an associate within a retail environment. Sharing is always two ways (i.e. when sharing is active, both parties share their location with each other at the same time). After each mobile app user creates a location sharing profile, they can then actively share or accept invitations to share their location with another mobile app user. Once shared, a mobile app user can access real time directions to their friend or colleague.
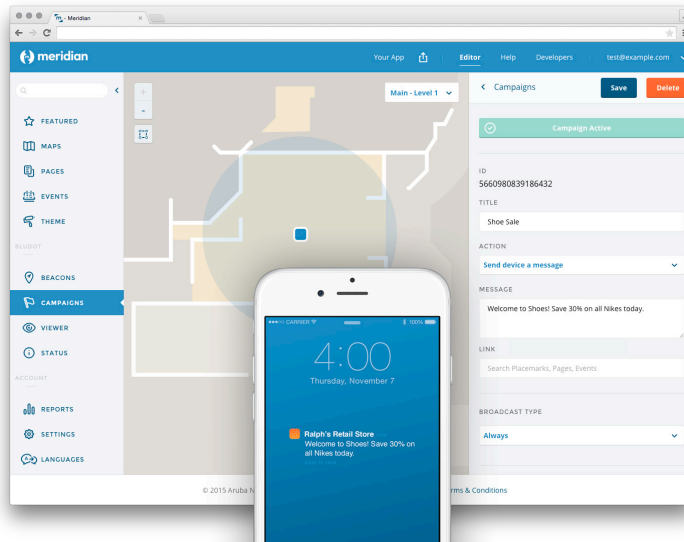


### Location-based customer engagement

The Meridian platform can also use location-context to enable venues to engage visitors with a push-notification message based on where they are on a property, in a way that respects their privacy and preferences. It's simple:

- Within the Meridian Editor, associate proximity-beacons with specific user actions/campaigns.
- Users then download the venue's mobile app.
- Once they have the mobile app, they indicate their personal preferences and opt-in to receive push notifications.

- When users enter a predefined area that you created, the app wakes up and pushes-out relevant content related to that part of the venue.



**Venues can send push-notification messages to users when they enter predefined areas.**

For example, in a hospital, the lobby area can trigger a push-notification that welcomes visitors to the facility and offers directions to a clinical appointment, or a push-notification near the pharmacy to remind hospital customers to pick up their prescription.

Venues can also integrate this information with their existing customer loyalty program databases. This enables venues to deliver personalized messages to visitors based on their engagement history and when they enter a predefined area.

A retail department store, for example, can deliver personalized rewards to customers for their third in-store visit based on preferred product. This can take the form of an in-store shoe promotion or an in-store promotion on outerwear, depending on their engagement history and product preferences.

- Send push-notifications messages to guest mobile devices, even when the app is not actively running.
- Send personalized, location-based messages that tie into existing loyalty program databases.
- Welcome guests with notifications as they enter a venue.
- Create targeted campaigns that trigger when guests are near specific services, departments or points of interest.

- Configure messages to launch the app and direct users to relevant, predefined pages, placemarks or events within the mobile app.
- Determine message frequency by having them always broadcast or only broadcast according to specific marketing schedules.

## SPECIFICATIONS

### Meridian Editor
- Supports multiple users per location or organization.
- Supports multiple venue locations per organization. (automatically loading the closest location to a user's real-time physical location)
- User account integration using OAuth. This allows visitors to login to a third-party account system using a simple browser-like API.
- REST API to access Meridian data (standardized data access methods).
- Sandbox API allows a hosted web page to interact with the Meridian environment and extend the capabilities of a Meridian app beyond the standard feature set.

### Browser requirements
The Meridian Editor works in Chrome and other modern WebKit browsers.

Many modern smartphones use a WebKit browser, however some Meridian Editor features require more computing power than most smartphones have. We strongly recommend using your desktop or laptop to manage content with the Meridian Editor.

### Data importing feeds
- RSS
- XML
- JSON
- iCal (events only)
- FlightStats (events only)

### AppMaker and SDK operating systems
- Objective-C for iOS, supports iOS 7 and up.
- Java for Android, supports API levels 15 and up.

### AppMaker language support

English, simplified Chinese, traditional Chinese, Japanese, Korean, Russian, Portuguese, Spanish, Italian, French, Norwegian, German, Hebrew, and Russian.

### Map file specifications (for conversion)

High-resolution PDFs, JPEG, PNG, TIF and DWG files (files should be to scale and architecturally accurate).

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[2] Requires Aruba white-label professional services.
[3] Requires purchase of the professional services mapping.