



# CITY GUIDE

iOS & Android

# OVERVIEW

Savvy travelers are becoming more and more dependent on their smartphones and mobile devices while traveling. It is estimated that 85% of leisure travelers make use of their smartphone while travelling abroad.

Cities all over the world are looking for a new way to offer tourists and people who are not familiar with the city useful information for a more pleasant stay. Mobiversal welcomes the opportunity to build a world-class mobile app that would give tourists easy access to a list of things: events, places to visit, restaurants, hotels, shops, tourist routes, maps, ATMs, public transportation, medical institutions, free Wi-Fi hotspots, and many other points of interest throughout a city.

Mobiversal builds mobile applications that improve the urban experience, connect people, and make cities more fun, fair, vibrant, and sustainable places. Nearly 1,000,000 citizens in 3 cities are already benefiting from the city guide apps we've built.

# ABOUT MOBIVERSAL

Mobiversal is a mobile app development company working with startups and established brands, like Forbes, to create unique mobile experiences. Since its beginning in 2011, Mobiversal has been focused solely on developing iOS and Android apps. The company was ranked among Europe's "Top Mobile App Developers" (Clutch.co) and has turned ideas into apps for over 60 clients from more than 15 countries.

We work together with our clients to build compelling apps that provide lasting excitement and value to their customers. Our understanding of mobile and web based technology empowers us to bring a level of expertise to your company like no one else. We know how to build products that can scale to your business' needs, regardless if you're a startup or an established company.

# OUR PROCESS



## **Discovery**

We work with clients to understand their business and we merge their initial concept with everything the Mobiversal team knows about mobile. We'll assess the possible challenges and identify the ways to overcome them.



## **Features & Architecture**

We establish what features go into the product and how they will work together. Here, we're drafting a skeletal framework for the app in the form of wireframes.



## **Design**

When it comes to first impressions, it's all about design. We'll put our passion for good design to work and based on approved wireframes we'll design all screens.



## **Development**

The development process is broken down into sprints based on feature sets. Our agile-based development process will allow you to regularly review and assess what we're building.



## **Quality Assurance**

Our Quality Assurance team will test the app after each development sprint and once all major functionality is implemented, we'll prepare a Beta Build.



## **Launch**

After passing the Beta Build through a final round of QA and refinements, we'll have in our hands a Release Candidate Build. We can either submit the app to the App Stores or provide you with everything you need to do it yourself.



## **Maintenance**

We provide our clients with a 3 months bug fixing period, free of charge, and maintenance packages that cover everything from small updates all the way to whole new versions.

# APPROACH TO MEET REQUIREMENTS

**The app will have 3 main components: the mobile apps, the backend and the administration area.** The admin will manage all the points of interest (POIs), the map tour guide, the parking places and the public transportation information. In addition, the app will have an Events section that will be manageable by the admin, who will create another type of account -- the event organizer's account. Organizers will be able to import their Facebook events

## Mobile app design

1. Identity. App icon using the symbols of the city, splash screen
2. Design of the mobile iOS & Android apps
3. App Store and Google Play graphic images

## **Mobile app design**

The backend is the database and code "invisible" to the user -- that is, code that runs on the server for storing and retrieving the data used by the apps. The backend consists of an API, a set of network calls used for connecting the mobile clients with the database.

1. Architecture and structure
2. API documentation and coding
3. Setup hosting (live & dev)

## **Admin area**

The admin should be able to control in the admin area everything the mobile apps display.

1. Manage points of interest. The POIs belong to a certain category or subcategory and depending on that, they will have certain details like: name, image, description, phone number, Facebook page, website, email address, audio guide.
  - 1.1. Manage category/subcategory filtering. If enabled, the admin will manage the additional fields that represent filters for each category/subcategory.
2. Manage events. The events might be added manually by the admin or by the organizers.

3. Manage tourist trails. The admin can build tourist trails, a trail will have a tour drawing on the map and will have a list of POIs that can be visited during the tour.
4. Manage public transportation. The admin can choose to edit the transportation info text + the phone numbers and the costs for buying transportation tickets.
5. Manage public parking. The admin can choose to edit the public parking info text + the phone numbers and costs for buying parking tickets.
6. Manage organisers. The admin will have the possibility to add and remove event organizer accounts.

## **Mobile apps**

The mobile apps will have online and offline working modes and multi-language support. The main screen will display only the categories and subcategories of the app, clicking them will list the points of interest. Each POI will have its details screen. Also from the main screen the user can access the search feature, feedback, the terms and conditions and the settings of the app.

### **1. Main screen**

- 1.1. List of categories and subcategories. What to visit, restaurants, hotels and hostels, shopping, tourist info, parking places, ATMs, hospitals & pharmacies, car service, wifi spots.
- 1.2. Buttons for settings, feedback, about, terms and conditions screens

### **2. Points of interest**

- 2.1. List of POIs. Will list the name, address, distance from current location and image (if present).
- 2.2. POIs on the map. Will show the POIs on the map, pin from the map will display the name, address, image and distance from current location if clicked.
- 2.3. Filtering system. Because ATMs, for example, can belong to different banks.

### **3. POI details**

- 3.1. Gallery of images
- 3.2. Address, distance from current location and directions
- 3.3. About POI text
- 3.4. Phone number, website address, email address, facebook page

## **4. Events**

- 4.1. Today's events
- 4.2. Event sub-categories: theatre, concerts, parties, movies, festivals, exhibitions, sports and others.
- 4.3. Users might subscribe to event categories and receive notifications when a new event is added.
- 4.4. Event details will have all the POI details and some information regarding the event, like: date and time, duration and the possibility to add to calendar.

## **5. Tourist trails**

- 5.1. The list of tourist trails will look similar to the list of POIs and will present the name of the trail and the duration
- 5.2. Tourist trail details. A map with points of interest and the road to be followed take the most part of the screen, while the rest will be a gallery of images for each POI. Each POI might optionally have audio guide.
- 5.3. If the POI details screen is opened from the trail, the user will be able to control the audio guide from there

## **6. Public transportation**

- 6.1. Public transportation informations
- 6.2. List of trams
- 6.3. List of buses
- 6.4. List of metro
- 6.5. Buying tickets solution

## **7. Parking places**

## **8. Search**

- 8.1. Keyword and category search attributes
- 8.2. Search results. Search results in the list or on the map

## **9. Settings**

- 9.1. Change language
- 9.2. Change online/offline mode
- 9.3. Enable/disable push notifications

## **10. About app, Terms and conditions**

## **11. Feedback. User can send a feedback with title, message and his email address**

# TECHNICAL SOLUTION

We are using RUP (Rational Unified Process), so that the application modules can be developed in parallel. The diagram in the “timeline and costs” section describes the overlapping of the development for these modules.

Technologies proposed for the development:

## 1. Backend and Database

We have selected a Javascript-based stack to implement the backend, based on NodeJS, ExpressJS and SailsJS. As opposed to more traditional technologies, Javascript is a newer one but growing quickly on the server-side, and we selected it because of its stellar performance and better scalability. The database storing employee location data will be implemented as a NoSQL database, as that data grows quickly and a traditional SQL database will not provide support for the needed scalability. The database system will be MongoDB as it has extended support for location processing (spatial indexing), and additionally it integrates smoothly with NodeJS.

## 2. Admin Area and Website (web client)

We are using AngularJS 2.0, a modern Javascript-based framework to implement the website. The main screen will display real-time locations of all the employees using Google Maps.

The admin area will have a simpler UI and functionality and will be implemented using a template based on Bootstrap 3.0.

Both the website and the admin area will run on all major current browsers: Chrome, Firefox, Internet Explorer.

## 3. Mobile app

The mobile client application will run on all phones with Android 4.0 or newer that include Google services. It will be developed using the native development tools provided by Google and will use Google Maps for some features (directions to destination). The app will run in portrait mode and will have a common layout and look-and-feel across all form factors (phones and tablets).

During the development phase we propose at least the following:

- Each week we are delivering demo files (images, web-pages or mobile demo builds)
- Each week we must have a general sync meeting to discuss:
  - last week's progress based on the demo provided
  - next week plans
  - other items regarding that period

Tools used by Mobiversal:

- JIRA for issue ticketing and project management
- Email and Google Drive for sharing documentation, specifications and content
- Fabric by Twitter for crash reports (Crashlytics), beta distributions (Beta) and analytics (Answers)

## TIMELINE AND COSTS

Before starting the actual designing and coding, we will need to build a full functional requirements documents. This document will contain everything the system will be able to do with higher level of details, because it will be the way to check and compare everything needed to be done. The designer, software architect, software developer, QA team, product owner, and project manager will know exactly what to build and what to expect from the system. This part should not take more than 1 week and will require communication between our technical business analyst and the product owner.

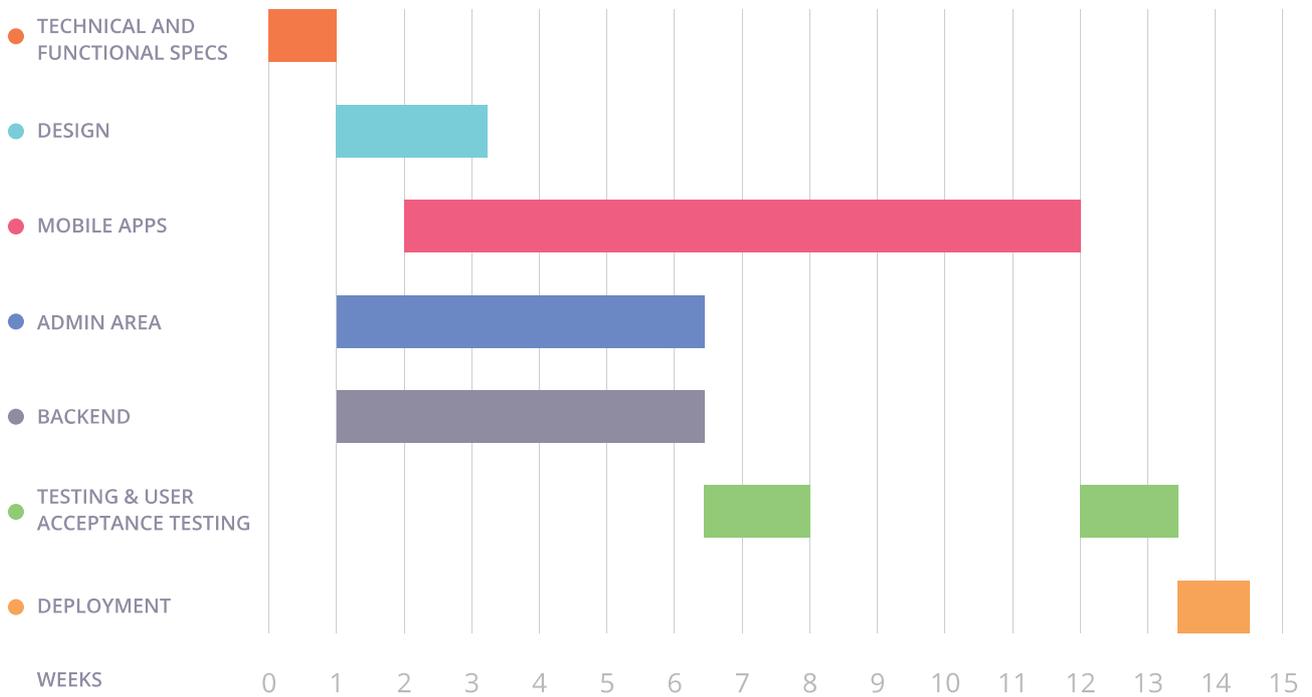
After this scoping week, the designer and the software architect can start working. After having the architecture, the developers will also be able to start developing.

During the development we will have two important milestones: alpha milestone and beta milestone. For the alpha milestone, around 40-60% of the features should be working and for the beta milestone 100% of the features should be working, but with chances of bugs.

After the beta milestone, the apps will be sent for QA testing and fixing found bugs. After fixing this bugs, the apps will be ready for your user acceptance testing. After the user acceptance testing is ready (which means you've tested and found that everything is ok), it starts a warranty period of 3 months.

The total estimated time of development is between 13 and 15 weeks.

# TIMELINE



# COSTS

COMPONENTS	DEVELOPMENT PERIOD
Design work	2 - 3 weeks
Android app	9 - 10 weeks
iPhone app	9 - 10 weeks
Admin area	4 weeks
Backend	4 - 5 weeks
Project management	90 hours
QA Testing	3 weeks
<b>TOTAL</b>	<b>13 - 15 weeks</b>
	<b>TOTAL: \$42,000</b>

# **Do you want to have this project done by Mobiversal or do you have a new challenge for us?**

We love taking ideas and turning them into real apps. Tell us your idea and we'll give you details about costs. Simply click below to tell us more about your project.

**Get a free quote** →