

HOW TO

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# Mobile App Development

Estimating Project Costs and Timeline

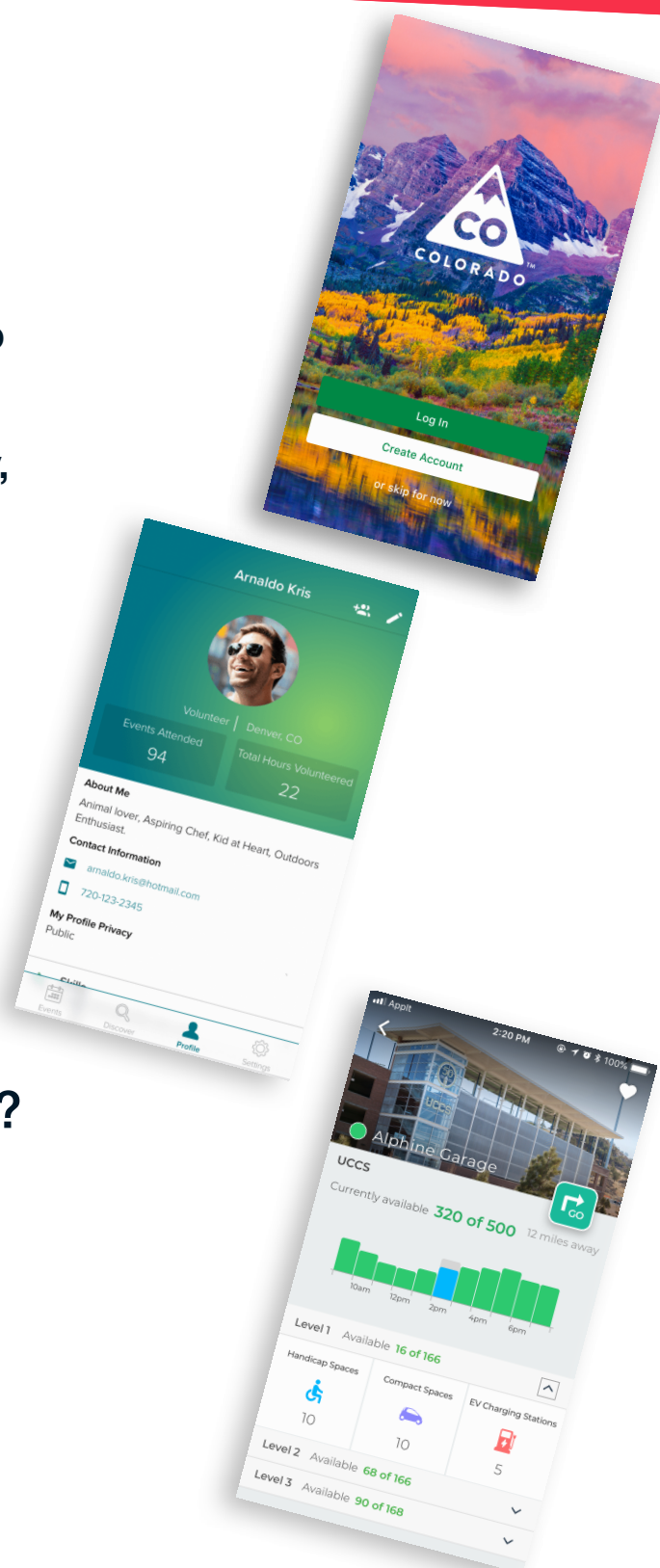
# How to Estimate Mobile Development Costs and Timeline

## INTRODUCTION

The Appit Ventures team delivers high quality, aesthetically pleasing, custom applications. Our skilled designers, engineers, and project managers are here to help you bring your ideas to fruition. When embarking on a process which can seem complicated and lengthy, you'll need an experienced and empathetic team by your side. We bring years of experience to the table and have developed hundreds of custom software applications for a variety of clients from startups to Fortune 500 companies.

## What We'll Cover

- Costs and Timeline
- Picking a Platform: iPhone or Android?
- Getting Started
- The Final Numbers
- Cost Breakdown Worksheet



# Costs and Timeline

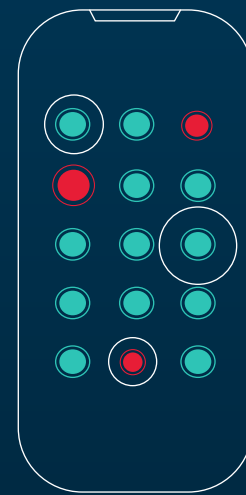
How much does mobile application development cost and how long will it take?

## Great Questions!

These are two of the first questions our prospective clients ask during our initial development discussions. It is challenging to give a simple answer, because there are so many variables that go into developing even just an estimate for development as well as a timeline. To better illustrate this point, consider the following scenario. →

## Here's How We Can Help

Just as a building contractor would need a lot of details to provide an accurate estimate, app developers will have a hard time giving guidance without comprehensive information and details. However, we recognize that building an application is a big project and that you're looking to gather some information on the process before making a final decision. With this in mind, we've written this overview to serve two purposes.



## Consider This Scenario

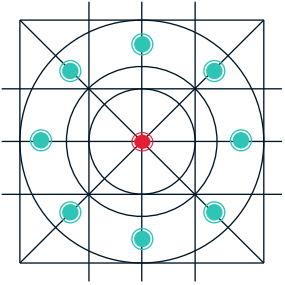
You want to build a new home, so you hire a contractor. If you asked your contractor how much it would cost to build a house, they would have a number of questions for you. Do you have a blueprint? If not, how big is the house? How many floors? How many bedrooms? Will there be a pool or a guesthouse?

- 1** To provide a very rough frame work to assist you with creating an estimate for your project and a timeline. Keep in mind that these estimates are not exact or specific to your project, however, they will help you ballpark an eventual investment.
- 2** **Second,** we are going to walk you through the process we follow internally to provide clients with time and price quotes for their projects.

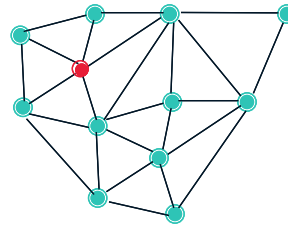
# Costs and Time Estimation

Did you know there are usually 4 separate software applications included with every development project?

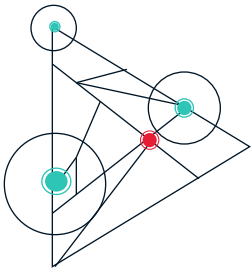
## 1 iPhone



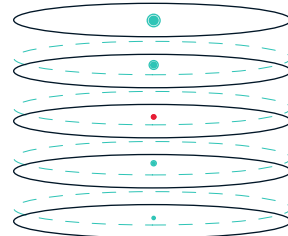
## 3 Customer/Admin Web Application



## 2 Android



## 4 Back-End Database



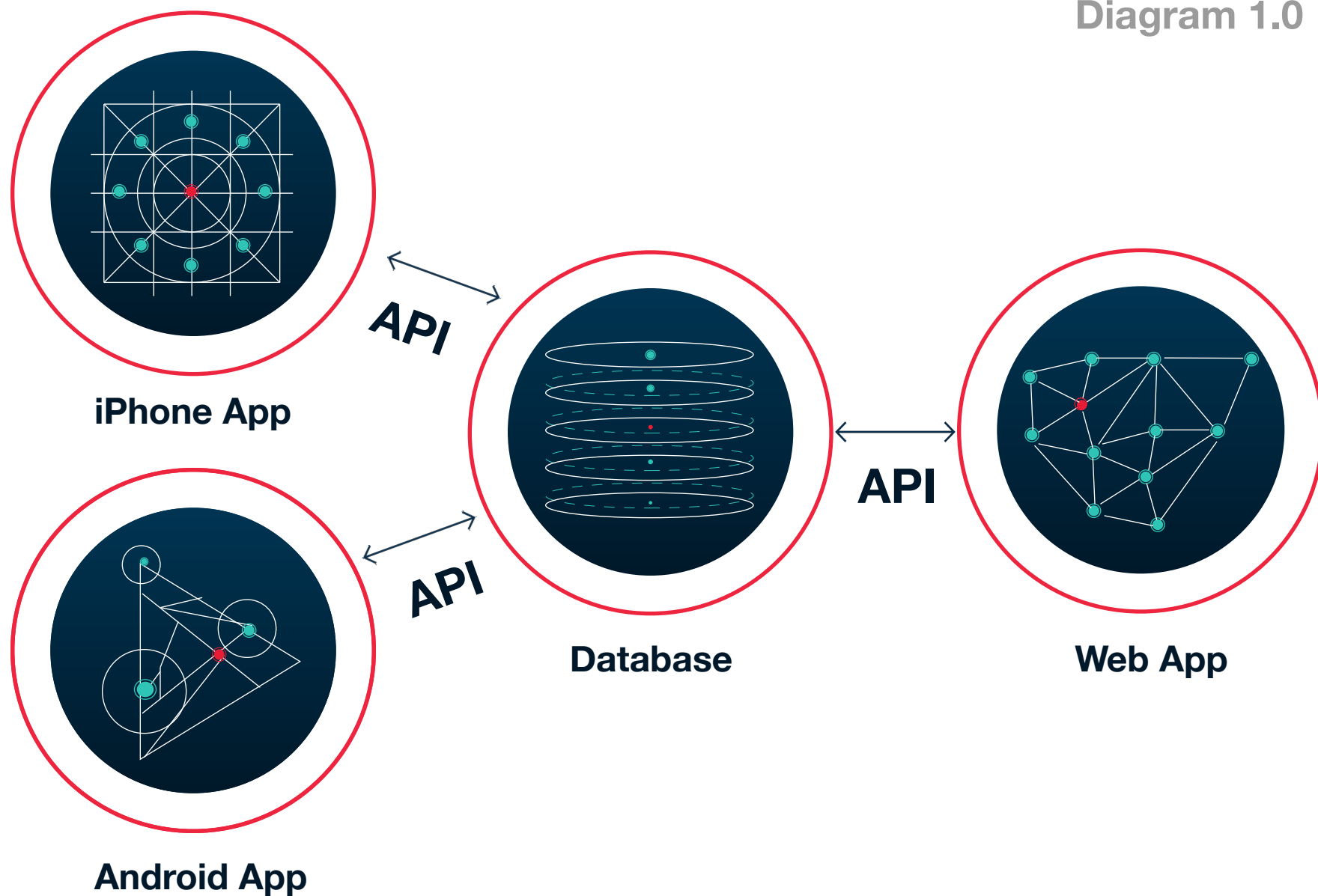
### Questions to Ask Yourself

To get started on putting together a price and time quote, it is important to note that you'll need to ask yourself some questions including, but not limited to:

- Do you need an iPhone app?
- How about an Android app?
- Do you need an “admin portal” (web application) to view analytics or manage users and content inside the app?
- Do you need a database for users to access their content from multiple devices (and to see the same information on every device like Facebook, LinkedIn, Quickbooks, ect.)

# Costs and Time Estimation Cont.

Diagram 1.0



## Rough Cost Estimates

Roughly speaking, we find each software product (iPhone, Android, Web App, and Database), averages between \$10,000 and \$20,000 depending on complexity. Oftentimes our customers start with one application (e.g. iPhone) and the database. In this scenario, and keeping in mind averages, the entire project would likely range between \$20,000 and \$40,000. Conversely, if you need all four products mentioned above, and your app is relatively complex, your project price could be closer to \$80,000.

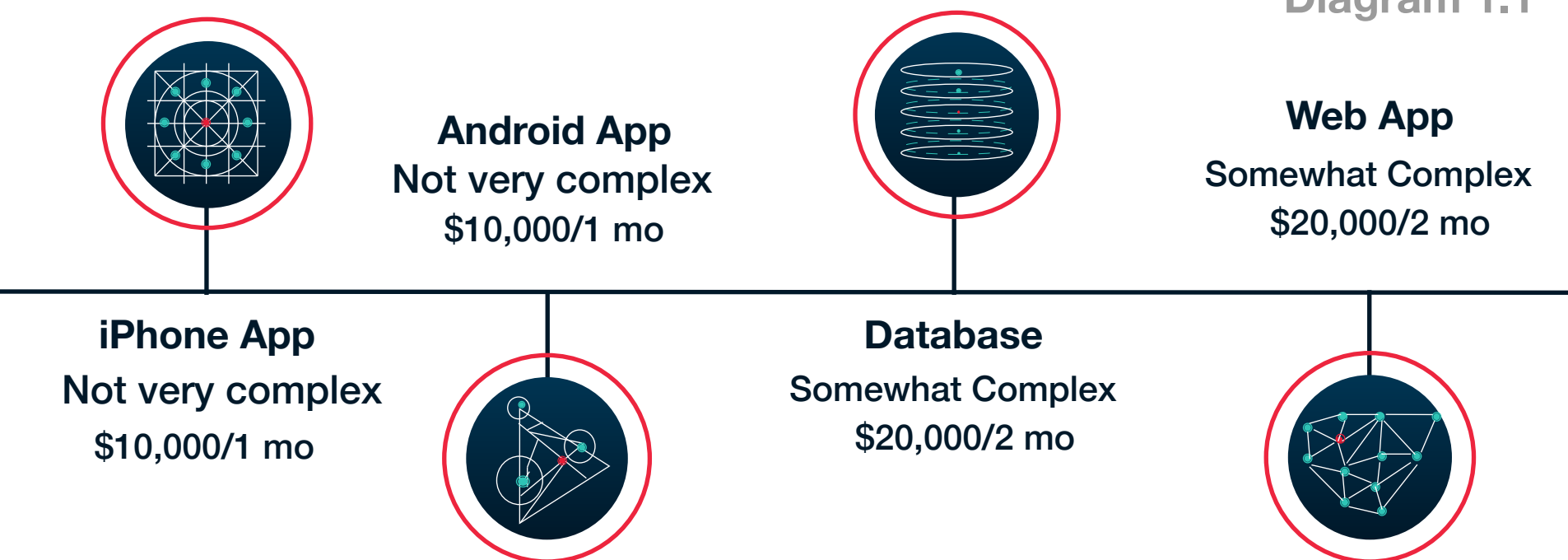
# Costs and Time Estimation Cont.

## Development Timelines

Development timelines can be more difficult to estimate as they vary depending on the complexity of the ideas and features involved. In other words, if the developer has built these components many times in the past, it will be more routine for them to build it out again. On the other hand, if the set of development features is out of the ordinary or new (such as virtual reality or photo recognition software), then the costs have the potential to increase substantially.

We typically find that if you are developing multiple software products to support a mobile platform, each block of \$10,000 in cost roughly equates to one month of development. For example, if you are building a simple iPhone app with a database, you could be looking at \$20,000 in development costs and about two months of work. Therefore, if you believe your project will roughly cost \$80,000, development could take upwards of 6-8 months.

Diagram 1.1



**Estimated Cost: \$60,000**

**Estimated Timeline: 6 months**

Diagram 1.1 is only an example of a common mobile app development scenario that we often see with our clients, but it is not indicative of your project's exact cost or timeline and should only be used as a baseline estimate. Most applications start at about \$40,000. Additional custom features may cost anywhere from \$5,000-\$15,000 depending on complexity. Learn more about pricing and development options on pages 8-15.



# Costs and Timeline Cont.

## The Applt Rapid Development

Our proprietary “Applt Rapid Development Model” empowers us to deliver software faster than any of our competitors. We have multiple offices in multiple time zones across the world. What does this mean for you? While some companies can only work on your project within an 8 hour workday, our developers can complete 16 hours of development work in a single day. As a result, we develop and launch apps in half the time that our competitors can. Ultimately, the speed of development will be determined by dozens of different factors.

### Consider These Items For Your Project

- The programmer’s experience and portfolio of developed projects
- The bandwidth (team power and time) a company has available
- Number of developers working on a single project
- Speed of client communication and turnaround time for project requirements (and client change requests)
- The complexity of the app development project



### Keep in Mind

You don’t have to start developing all of your desired applications simultaneously. Often times, our clients start out by picking one application, iPhone for instance, and the accompanying database for that project. They will use those products as a starting point, and once they determine they are ready to further scale their business, they begin development on the other applications, Android for example.

# iPhone or Android?

So if I'm going to start with one, which one should I go with?

This may be the most common question, and heated debate in the app development industry, but it's critical to consider before kicking off your app development project. Like most questions, it's also challenging to answer, and the answer will ultimately depend on your specific business goals and requirements. We asked our past clients, tech consultants, and developers for their opinions, and they agreed that these are the critical factors to consider before deciding to develop an app for the iPhone, Android, or both.

- **Who is your audience?**
- **What is your timeline?**
- **What are your feature requirements (vs. feature wishlist items)**
- **What is your budget for maintaining your application?**
- **What are your target revenue goals?**

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## Check Out These Statistics

Android's global market share is projected to reach **87% in 2022.**

Leftronic

In the U.S. the market leader remains Google Android with a reported **51.1% market share in June 2019.**

Leftronic

Yearly app downloads in 2022 are expected to reach around **258 billion.**

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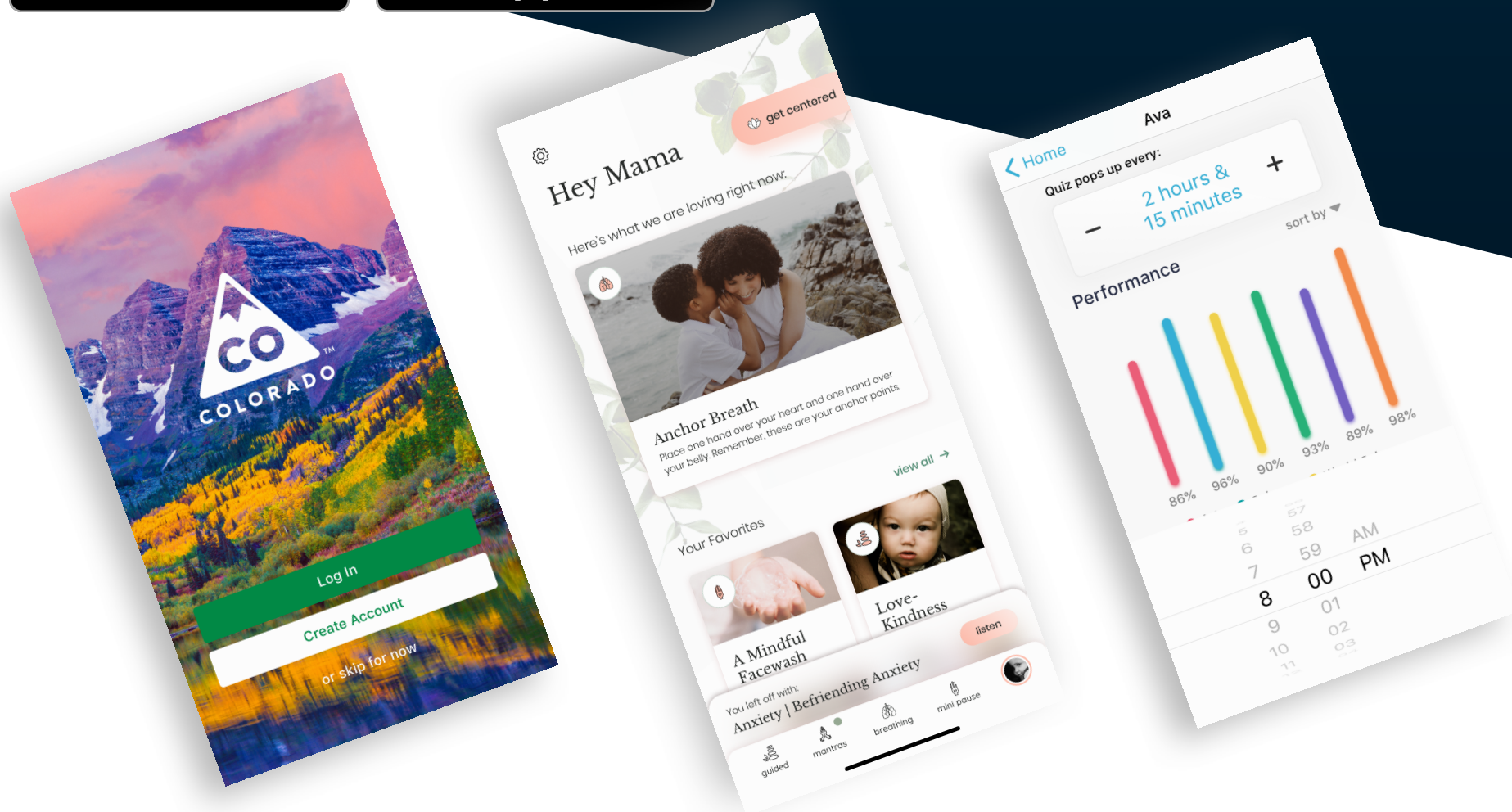


# iPhone or Android?

## What can we infer from all of this?

Looking strictly at the total number of users and global market share, Android seems like a pretty good place to start your app development project. However, dozens of studies have been done and show time and time again that iPhone users spend the most on applications and in-app purchases. In fact, it's actually been reported that in the 3rd quarter of 2019, Apple's iOS apps generated \$14.2 billion in revenue, whereas Android apps only generated \$7.7 billion in the Google Play Store (TechAhead, 2019).

When it comes to the question of which platform to start with, iPhone or Android, we suggest that you conduct some thorough analysis and research into your core customer base. That way, you will have a sense of what products they use most often. For example, if you are building an app for a fleet of truck drivers and they all use Android, then begin with Android.



# Getting Started

## How to Create Your Own Estimate.

Now that we have provided you with a quick crash course on the products you will likely need to include in your platform, you can run the numbers for your required products against the cost structure and the potential development timeline in Diagram 1.1.

### Question #1

**How many products? (iPhone, Android, Web & Database)**

e.g) 4

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### Question #2

**On average, will the products be simple or complex?**

e.g) simple

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If the products are simple, multiple each product by \$10,000. If the products tend to be more complex, multiply each by \$20,000. Remember, this exercise is simply to help you create a very rough estimate for development costs and should not be taken as the final cost structure.

**Total rough development cost:**

e.g) \$40,000

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**Divide the amount of development costs by \$10,000.**

e.g) 4 months

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This is roughly how many months your app could take to develop.

# Getting Started

## The Process of Writing Technical Requirements

Feeling motivated to dive even deeper into your potential development costs? Give your future developer a head start on estimating your development costs by listing each feature that you think should be included in your software. What does that entail? It means that it would be a good idea to begin writing your own basic requirements document.

### Epic Story vs. User Story

#### Epic Story

An Epic is a high-level story that acts as initial descriptions for desired application behaviors that are to be created.

#### User Story

A User Story is a more specific story that describes the exact interactions with the product needed to produce the result described by the Epic that they are a direct derivative of.

## 4 Steps to Writing Your Stories

- 1** Write an Epic for each of your major features. As a general rule of thumb, one Epic will be focused on one specific screen in the app and it will encompass every feature in that screen.
- 2** Write User Stories for each of your Epics, describing every feature or action that can happen in an Epic.

# Getting Started

- 3** Refine until you are sure that each Epic and User Story includes everything you want it to. Look for areas where you have missed details, make sure User Stories are well organized into their respective Epics, and create appendices to refer to when it's necessary to provide more information.
- 4** Once your document of technical requirements is complete, send it over to your app developer. They will ask you some clarifying questions, and possibly edit the document to add some technical details where they are needed. Once you are happy with the finished document, your chosen developer and designer can start building wireframes for your application.

## Examples

<b>Epic</b>	<b>"Admins can update school info."</b>
<b>User Story</b>	<p>"As an Admin, I can enter the start and end dates for the current semester."</p> <p>"As an Admin, I can update the start and end dates for the current semester."</p> <p>"As an Admin, I can enter the dates of all school closures for the current semester."</p>

## What Now?

Now that you have a good list of features that you would like to include in your software, check out our simple list of the most common features that our customers ask to include in their software. Use this guide as an opportunity to put together a slightly more accurate quote for your development project.



# Getting Started

## Classify Your Features

Classify every feature on your list by the difficulty level you think it will be to build it. Keep in mind that you will probably over/under estimate some features. As a rule of thumb, in order to get the most conservative number, go with the higher level of difficulty, especially if you are not sure. To give you an idea of the amount of time it takes to build a feature, consider this: easy features take 5 hours, medium features take 10 hours, and hard features take 20 hours (or more).

### Example

Feature	Level of Difficulty
User Registration	Medium-Hard
User Login	Medium
Image Upload	Easy-Medium
Push notifications	Medium
Bluetooth Interactions	Medium
Image Recognition	Hard

## Sketch Your Features

Once you have determined which features you will want in your application, sketch out every screen of your application and what you think it should look like. We've included several sketches on the next page. Your sketches don't need to look quite as polished as these; the purpose of this is to help you ensure that you have mocked up all potential features for you application.

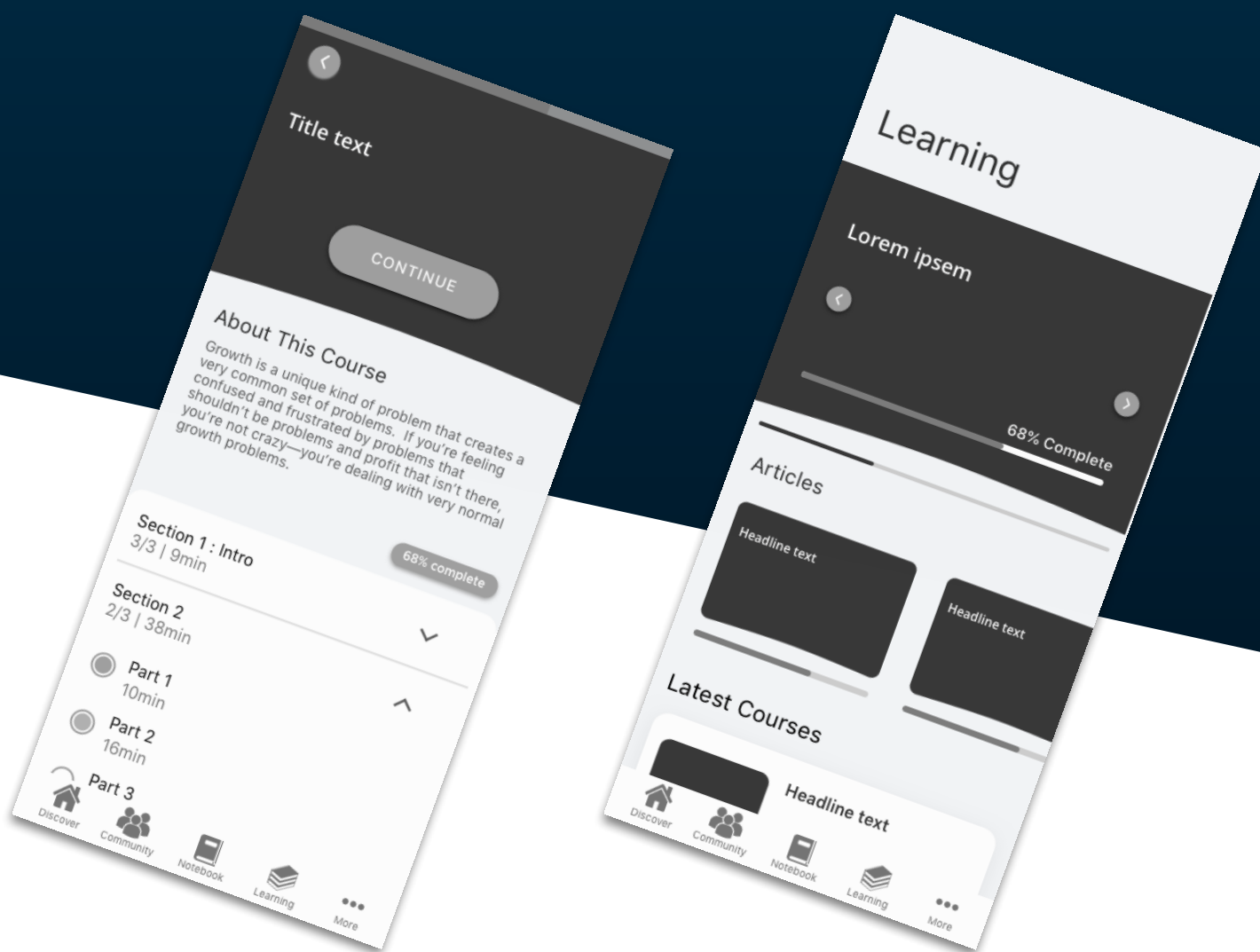


# Getting Started

## Your Features Continued

Once you have finished your sketches of every screen inside your application (don't forget the web application if you know you want one) check to make sure that you have correctly captured the details of all features. Also, confirm that you haven't missed any features. If you have, go back to your list and see what you need to add in to make it complete.

### Example



## Keep in Mind

You don't have to be a UX/UI designer to create sketches of your app features. Some of the best sketches our clients have given us start on pen and paper. Don't worry about how it looks in this phase, but prioritize capturing every feature you need. Your design and development team will be able to bring this to life in a wireframe prototype early on in your project.



# The Final Numbers

## Start Tallying Your Data

At this point, go ahead and tally up the hours for each product in your mobile platform. Now, whatever it is, go ahead and **double that number**. Why you might ask? We can safely assume that there are several if not dozens of features you might not have considered in your initial list, such as; security software to keep your applications safe from hackers, or maybe the forgot password feature, integrated analytics for tracking, ect.

Additionally, you will need to add hours to the total to account for graphic design and project management. It is safe to assume that 30 hours of design is necessary for each software application that is consumer-facing, and about 40 hours of project mangement being the minimum necessary for delivering an application.

Once you have a rough estimate for the amount of time required for your project, consider the following information that should give you a bit of insight into the costs depending on the developer you chose to hire.

## Picking a Developer

### Freelancers

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~ \$80-\$120/hour

Affordable, but offer less control of your technology.

### Boutique Mobile Development

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~\$100-\$200/hour

Priced in the middle and provide reliable, stable, high-quality software.

### Large Development Companies

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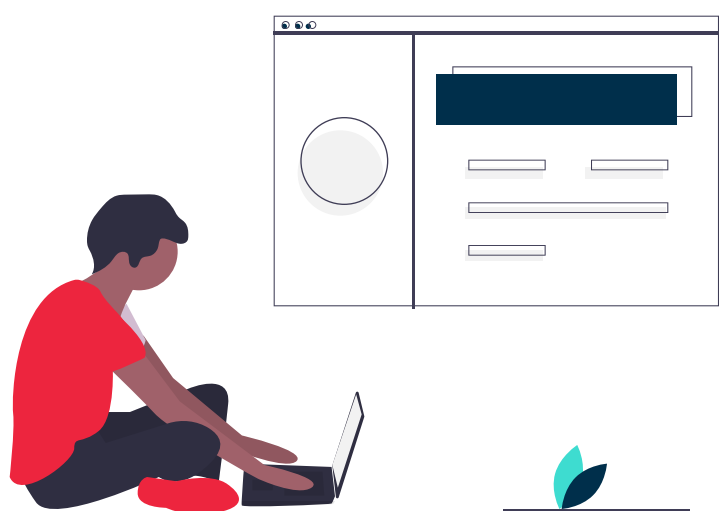
~150-\$300/hour

The most expensive option, but offer skill, quality, and often additional services.

# The Final Numbers

## Freelance Development

Freelancers will run you \$80-\$120 per hour. The benefit of this option is that freelancers tend to be more affordable, but the downside is that you often don't have total control of your technology. This means that if anything happens to a developer, it will put you and your company at risk, potentially costing you time, money, and loss of intellectual property.



Futhermore, each of the software platforms we discussed earlier requires different code languages. It's imperative to find a freelancer that knows how to write all 4-5 languages - if they don't have that knowledge, they might be learning on your time and money or might be using less common languages that many developers don't know.

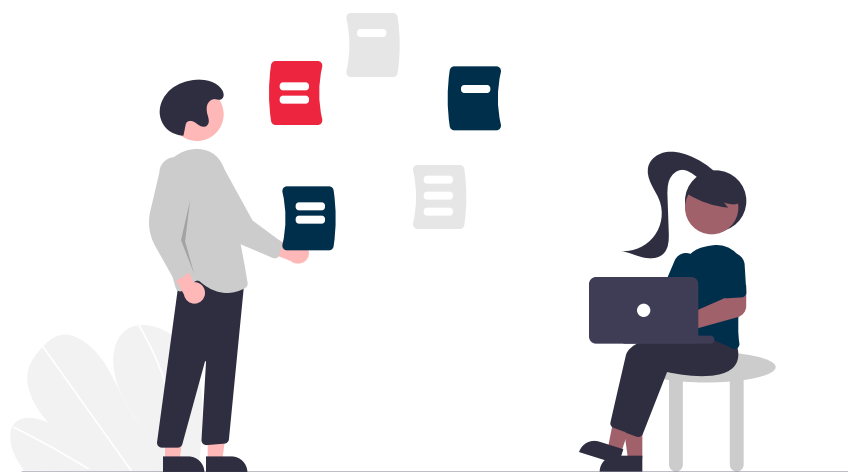
**All of these factors mean that when working with a freelancer, you could get locked into working with that specific developer for a long period of time, and the process could end up being more costly in the long run.**

# The Final Numbers

## Boutique Mobile Development

Companies such as AppIt Ventures typically run between \$100-\$200 per hour. The benefit afforded with this option is that they often provide more reliable, stable, and high-quality software products. Another benefit is that companies, especially those with nearshore, offshore, and onshore staffing capabilities have the bandwidth to scale (up or down) the time that we devote to your project, depending on the work you need done and your timeline.

Furthermore, we have skilled experts in every area concerned with application development, from developers to project managers, and graphic designers. This means that you will receive a tremendous amount of attention and support throughout the entire development process.



**We write all of our applications in the most common languages, so when your company grows to the point of bringing these services in-house, the transition will be seamless.**

# The Final Numbers

## Freelance vs. Boutique vs. Large Company Development

### Large Development Companies

Large development companies will usually run between \$150 and \$200 per hour. While you will get the skill and quality offered by smaller mobile app development companies, you will most likely end up paying substantially more in the end. In addition, these companies usually take on larger projects with a more significant workload, and might not take on projects below a minimum budget of \$100,000. As you can imagine, if they do take on smaller projects, they may not provide the same level of service to a small client that they would to a larger client.

### Your Cost Breakdown Worksheet

We have provided you with a worksheet in order to calculate the number of hours required for your project, including development, project management, and graphic design hours (don't forget to double all of the development hours). Once you have a total number of hours, multiple them by average rates for each of the different types of development companies in order to get a rough cost estimate for your project.

### Get a Free Quote For Your Project

Overall, these exercises will be the best way to get a rough idea of the time and money required to bring your product to life. To get a real price quote for your project, contact our team today and we would be happy to review your requirements and any preliminary work you've done to give you an accurate idea of the time and financial involvement of developing your application.

**Contact Us** email: [sales@appitventures.com](mailto:sales@appitventures.com) or call 303.325.2607



# Cost Breakdown Worksheet

Product Name \_\_\_\_\_

Software Platforms \_\_\_\_\_

List of Features	Complexity	Hours

Total Hours Required \_\_\_\_\_

Freelancer (avg. hourly rate of \$100) x total hours = \_\_\_\_\_

Boutique (avg. hourly rate of \$150) x total hours = \_\_\_\_\_

Large Company (avg. hourly rate of \$225) x total hours = \_\_\_\_\_

