The Outsourcing Playbook

Introduction

It's not always possible to develop an Android app in house; so you may look to an agency to help you create your app. This agency may call itself a systems integrator, mobile/design studio, consultant, dev shop, freelancer, app developer, or mobile specialist among other names.

We've seen a wide range in the quality of apps built with the help of an agency. Getting it right is not only about finding an agency that fits well with your organization and its goals, but also building the appropriate skills and culture in your own organization. This playbook will help you do that with its advice, questions to ask, and tips for selecting and working with an agency to build a high quality Android app.

This playbook has also been written as a companion to Secrets to App Success on Google Play. In that guide, you'll find best practices and Google tools that will help you and your agency improve the quality of your app, grow a valuable audience, increase user engagement and retention, and earn more revenue on Google Play.

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Section 1

Prepare to engage with an agency

In this section

A common theme we've found with all successful agency app developments is that the client set clear goals and expectations before embarking on the project. In this section, we look at what you should do to confirm that using an agency is right for you and prepare your organization to work with an agency.

01	Determine that the agency approach is right for you
02	Understand your internal stakeholder to ensure the right involvement
03	Adopt the right app strategy for you and your users
04	Set a budget that considers the app's long term business value
05	Know how you will measure success

01

Determine that the agency approach is right for you

Understand the importance of the app to your business and your own organizational culture, focus, and experience. Use this knowledge to decide whether you should build the application yourself or partner with a development agency.

Why it's important:

Your app will represent your brand, business, or organization in the mobile world, and it has the potential to significantly enhance your activities. The decision about the right approach, one that delivers the best possible app at an acceptable cost and in a timely manner, should be based on a clear understanding of your needs and capabilities.

Questions to ask yourself:

- How well do we understand the mobile app space?

- Do we want to retain complete ownership and control of the application development?

- Could physically separating the development and business teams hamper communications, affecting app quality and alignment with business needs?

- Do we have the time and resources to recruit and build our own development team and implement its supporting infrastructure?

- Will an agency or freelancer be better placed to create a compelling app?

Bonus Tip:

Consider using an agency to create the first version of your app while you build up a team of your own: then take over support, maintenance, and future development.

02

Understand your internal stakeholders to ensure the right involvement

Understand who in your organization has a stake in the app, how they should be involved in specifying the requirements and executing the development project, and how you should manage and communicate project updates with them. Once this is done, brief your stakeholders so that they understand your expectations of them and their respective teams from the start of the project.

Why it's important:

Good stakeholder planning will ensure that your organization shares common goals for the app development and maximizes the likelihood of a quality, on time, on budget outcome.

How to do it:

- Identify all the people with an interest in the business case. In a startup or small company, one individual may fulfil more than one stakeholder role.

- Determine the insight they can provide and/or their area of interest.

- Work with each person or department to define their role and reporting requirements.

- Consider employing an agency to help you capture requirements and strategic needs from stakeholders. They'll have significant experience from previous projects that can contribute to your success. They often offer an 'Exploration phase' service.

Typical roles and their interest in the project you should look for include:

Role	Insight provided and selected areas of interest
Chief Executive Officer (CEO)	Business case, ROI, investment, resource impact, opportunity cost, quality
Chief Technology Officer (CTO)	Platforms strategy, backend systems integration, technological overhead and debt, maintenance, resourcing.
Chief Marketing Officer (CMO)	Promotion strategy, budget, brand representation, app quality (brand building), opportunities for building customer insights
Chief Financial Officer (CFO)	Initial cost, maintenance and ongoing costs, preferred supplier policies, supplier onboarding.
Project Office	Project tracking, management and reporting, cross project (resource) impact, risk management, project support, dependency management.
Legal	NDA, contract - development and support, ownership of IP, code access and ownership, risk and dispute management, account (e.g. Google Play) ownership, holding of the app's keystore and passwords, legal/regulatory compliance, privacy, Play Store distribution agreement and content policy.

Questions to ask yourself:

- Have I identified all my stakeholders? There may be roles not mentioned above (for example, those handling User Acceptance testing or User Experience).

- Have I defined the role for each stakeholder and do they understand what it is?

- Do I have relevant reporting metrics for consideration for each stakeholder?

- Do I have an appropriate project director and workable escalation if there are disagreements between stakeholders?

- Would a design sprint help clarify requirements with stakeholders at this early stage?

- Have I clearly articulated the business problems I'm trying to solve?

Bonus tip:

Using a tool such as Pixate to rapidly prototype, you can generate stakeholder consensus around what you want to create before writing any code.

03

Adopt the right app strategy for you and your users
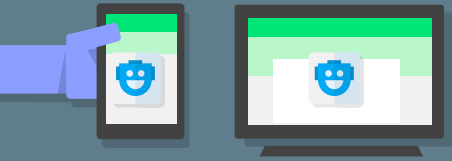
Consider taking a unified web and app approach to your offering to maximize its accessibility to your users and potential users.

Why it's important:

Users will search for your service through the web as well as through app stores. We advise against having a native app only approach, and encourage a cross platform strategy that includes the web. You should do this after fully understanding the relative benefits and costs of native and web development.

If a native app only strategy is taken, there is a risk that when you refer a user via a website to download your app they:

- may not have the space on their device.

- be concerned about bandwidth needed to download the application.

- may not wish to crowd their smartphone with yet another app.

- may not want the deferred gratification that downloading an application will involve.

In these scenarios you would simply lose the customer. The web has a low barrier to entry for users — they just click a link and load the site. This allows you to offer the content and experiences that the user values instantly. The arrival of progressive web apps and the increasing power of browser-based apps means the gap between mobile apps and the web is closing.

Progressive web apps can install an icon to the homescreen, support push notifications to drive engagement, and can offer offline browsing with service worker. With features such as web Bluetooth, WebGL, WebRTC, and more coming, the gap between native apps and the mobile web will continue to shrink.

Best practices:

- Use material design to create a common experience across your digital properties.

- Implement App Indexing so your app's content appears in search results, driving adoption and re-engagement for free.

- Consider extending your app experience onto Android Wear, Android Auto, or Android TV.

- Co-ordinate your releases on multiple platforms and run a single marketing campaign to gain more impact. Remember Google Play reviews typically take a few hours, while other stores can take significantly longer.

Questions to ask yourself:

- What are my competitors doing?

- What countries do I want to target (and do any of them have limits on data or popular devices that could affect the likelihood of users installing apps)?

Get started:

Build a Great Web Experience

04

Set a budget that considers the app's long term business value

When you're discussing budget, remember the objective is to create a quality app that brings value to your business, not simply on one that meets a feature specification in a given time.

Why it's important:

Building an Android app should be a key and ongoing part of your product or service strategy. Investing in it can build your brand, help acquire new users, or be a key revenue driver.

Price is a core part of any project, however it needs to be balanced against the scope, time to deliver the project, and quality. Ultimately when you're building an app you'll need to find the optimum balance between these competing elements.

Questions to ask yourself:

- How can I build a business case internally for the ROI of the application? This could be in terms of revenue, brand exposure (for example via download numbers), customer retention, or responding to a competitive threat.

- To what degree is my company's investment on an app biased towards a particular platform? Does that investment blend make sense? Does the target demographic and download opportunity reflect my investment?

- Are there additional costs that I have not factored in (such as application marketing and maintenance costs)?

- Does my organization clearly understand the distinction between an app and a high quality app, and what the corresponding impact is on my business?

05
Know how you will measure success

Set goals so you can measure and understand the success of your project and the app. Then create Key Performance Indicators (KPIs): the numbers you'll use to measure your performance.

Why it's important:

You need to understand how you'll measure success to help ensure that your app meets your business objectives. It will also support your reporting to key stakeholders post launch.

How to do it:

If your goal is to increase profitability through in-app purchases, one KPI should be the ratio of transactions per users, so when this ratio goes up, it means you are doing a good job in persuading your users to purchase more frequently. Other goals that can matter might be the user quality rating due to its impact on your brand, as well as download numbers.

If your goal is to show more ads to your users, you might use a KPI related to increasing engagement; if screen views per session goes up,

you can show more ads, which will show you're on the right track. As you engage agencies, ensure you brief them on the metrics that matter to you early on.

Building or implementing an analytics solution into applications allows you to understand user behavior and acquisition performance, enabling a powerful data driven culture. Among other capabilities, this can help you to segment your customer base into meaningful groups, support your marketing activities, empower A/B/n testing and help debugging your application.

It is clearly preferable to find agencies that understand that analytics is a core part of the mobile app development process. You can find more on mobile app analytics fundamentals in the Google Analytics introductory Mobile App Analytics Fundamentals course.

Questions to ask the agency:

■ Do you have the know-how to build or implement an analytics solution from scratch in the app? How do you typically use the data generated to guide application development and testing?

Questions to ask yourself:

■ How can I build an analytics driven culture as part of engagement with the agency and in my own organization?

■ What are the success metrics that matter to my organization?

■ Am I able to share our analytics data in a timely way with the agency?

Bonus tip:

Remember that reporting on the progress of the application after the launch needs to be planned for too: the focus should not just be on its delivery.

Select the right agency

In this section

When you're selecting an agency it's worth understanding how mature and capable they are in key areas. Assessing this capability fit need not be formal (through a Request for Proposal), it can be captured in face-to-face meetings: but it must be done. Understanding how an agency measures up against these elements will help you choose the one that will best meet your requirements to build a great app.

01   Create a list of prospective agencies

02   Select the right app features for a 'Request For Proposal'

03   Look for evidence that the agency takes pride in their product

04   Assess the agency's depth of experience, trustworthiness, and fit

05   Ensure your agency is up to date with the latest on Android

06   Determine whether the agency puts user experience at the heart of design

07   Understand your costs, not just the price quote by the agency

08   Know what you want from the project's contract

01
Create a list of prospective agencies

Draw up a list of agencies you want to approach to make a proposal for your app development.

Why it's important:

If you haven't worked with an agency before, the process of identifying a number of suitable candidates will offer you the opportunity to understand the business landscape and the variety of services and approaches on offer.

How to do it:

- Look for exhibitors at trade shows and network with attendees.

- Ask for recommendations from your business/social networks.

- Contact local developer groups, or attend their meetings to make contacts.

- Consult one of the many websites offering direct access to freelance developers.

- Search using some of the terms agencies use to describe themselves (described above).

Questions to ask yourself:

- Am I looking for a single agency to handle everything?

- How many quotes do I want to get? Each quote will be time consuming to generate, however you'll learn from the different approaches of each bidding agency. This is likely to educate you further on what the right app to build will be and the benefits and risks associated with different approaches.

02

Select the right app features for a 'Request For Proposal'
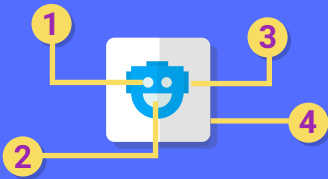
Working from the goals you've set for your project and the related KPIs, select a manageable set of features you want agencies to address in their proposals. Consider developing your evaluation model as part of the Request for Proposal (RFP) process.

It's also worth considering paying for an agency to help with your ideas exploration phase. They can help you scope out the features for the RFP or requirements. By having clarity up front on building the right solution for your business, you can save significant time later.

Why it's important:

By selecting the features that matter for inclusion in a RFP you'll make the process of responding easier for your selected agencies and simplify your evaluation. And by creating your evaluation model at the same time as the RFP, you can validate the relevance of the information requested. It also provides another way to judge the right number of agencies to approach: by understanding how long it will take to evaluate a proposal.

Features to consider:

In addition to any specific requirements, the following are features and guidelines we've found requested in RFPs that result in successful app development:

- A great user experience on phones, tablets, and everything between. See our website section on tablet quality and our blog post Designing for Tablets? We're Here to Help!.

- Follow the Android Design Guidelines. Specifically the sections on Action Bar, Navigation and Pure Android. The article 10 practices to watch out for when building an app for the next billion users also provides good high level guidelines.

- Make sure the app follows the core app quality checklist.

- Make sure the app implements material design.

- Build in licensing protection.

- Build a fully internationalized app even if you're only targeting one country or language initially, as adding this capability later can be costly.

- When it makes sense for your app, take advantage of Android platform features and Google Play Services to delight your users — such as widgets, Google Maps API, notifications, shared intents, live wallpapers, NFC, DayDreams and lockscreen widgets.

- Include the Google Play services, such as leaderboards, that are applicable to your app.

- Look at implementing App invites to encourage users to share your app with people they know.

Questions to ask yourself:

- Am I asking for too much or too little given the likely complexity of my app?

- Am I looking to launch in multiple countries and do I want a single agency to fully localize my assets?

- How are we approaching cross platform development and innovation?

Bonus tip:

Get details about all the latest and greatest Android features from the Secrets to App Success on Google Play.

03

Look for evidence that the agency takes pride in their product

Look for an agency that can show they take a very real pride in their work and are passionate about apps and your success. See if they can offer surprising new insights that deliver extra value and align with your core business case.

Why it's important:

Great apps have always been more about passion and insight that pure technical skill — any agency can acquire technical skill, but they cannot teach themselves to be passionate about what they do. And passionate agencies rarely keep thing to themselves. They and their staff will often be active in local and global developer and expert communities.

Questions to ask the agency:

- Is there anything we've missed from our RFP that would help improve our app or its success?

- Can you provide examples of where you've surprised a client with product insight?

- How active and visible are your developers in the wider developer ecosystem? Do they take part in local developer communities and events, write a blog, or participate as an expert in forums?

Questions to ask yourself:

- Has the agency gone the extra mile to surprise me with insights, such as new market opportunities, app features, or development approaches?

- Is it clear that the agency follows good optimization practices to achieve the highest possible app rating?

- Is my company agile enough to respond to change? What can you do to change your own corporate culture to become more responsive, if an agency does make a great suggestion?

04
Assess the agency's depth of experience, trustworthiness, and fit

Understand the depth of experience within the agency and get a sense of whether you can trust them. Also try to gain an understanding of the culture within the agency and the way they approach their work. See if it aligns with the approaches taken in your organization.

Why it's important:

Even if you only anticipate working with the agency for the development of your app's first version, being able to trust them is critical to a good working relationship and the development of a great app. By understanding the agency's depth of experience you're better able to assess if their proposal is honest and the basis of a trusting relationship. For example, an agency that is honest about not having worked in your business domain before may be preferable to one that claims to have done so but cannot offer any appropriate reference clients.

Sharing a common 'mind set' about the approach to work will also help simplify the relationship with any partner. For example, if your organization tends to take a formal approach to planning, requiring extensive documentation, review, and strict approvals it may be hard to work with an agency that takes a more agile approach.

And if you're looking for a longer term relationship, a supplier with skills and insights in adjacent fields, such as Android Wear or Android TV, may be preferable as they could assist you in expanding your offering.

Best practices:

- Reference customers should ideally be in your business domain.

- Agencies should consider ensuring their developers are trained in Android. They can do this by encouraging their developers to follow the Android Udacity courses and Nano degrees for their developers. Google encourages this to help establish core expertise and a shared approach to Android development.

- Watch out for artificially low estimates where the sales teams has over promised in order to secure the contract. Such quotes will almost certainly fail to reflect the investment needed to create something that is better than a minimum viable product.

Questions to ask the agencies:

■ Who can you offer as reference customers for your work? Who are your biggest customers? What are the apps you develop for these clients?

■ What is the profile of the team you would propose to assign for the app development?

■ Which Android Udacity courses have been completed by each developer on the team?

■ What adjacent technology skills do they have, such as Android Wear, Android TV, Android Auto, or the Internet of Things?

■ Based on what you know about us, do you foresee any risks with the way we will work together? Have you seen similar risks on other projects and how have you addressed them?

Questions to ask yourself:

■ Do I know anyone, directly or indirectly, that has experience of the agency?

■ Are the apps created by the agency for other clients of a high quality, for example getting 4+ ratings on Play store? Will we give the agency scope to provide sufficient input into the design and direction of the product to impact the ratings?

■ Is our company able to be sufficiently open with the agency?

■ Can we adapt our ways of working to fit with the agency?

■ Where might we expect to see a 'clash of cultures', and can we manage this risk?

05
Ensure your agency is up to date with the latest on Android

Confirm that the agency have a good understanding of the latest developments in the Android world.

Why it's important:

The features and capabilities of Android are under continual development. As are related services provided by Google. The difference between a good and a great app can often be the clever use of the latest features, adding to your app's the user appeal and functionality. So it's important to choose an agency that is up to date and can apply the latest enhancements to your app.

How to do it:

Typically the agency and their staff should be tuning into Google's Android channels, which include:

- Android Developers website
- Android Developers newsletter
- Android Developers channel on YouTube
- Android Developers Blog
- @androiddev on Twitter
- +AndroidDevelopers on Google+

06

Determine whether the agency puts user experience at the heart of design
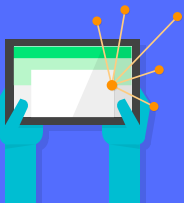
Confirm that the agency has good skills in and processed for both user experience (UX) design and testing.

Why it's important:

Apps with a 4 or 5 star rating are more likely to be downloaded compared to apps with a 3 star rating or lower. So creating a great user experience is central to getting your app adopted. Having a design team that has a great understanding and depth of experience in Android design is key to achieving this.

How to do it:

■ Review other applications the agency has created and look at the star ratings and user reviews.

- Download and test the apps created by the agency.

- Ask the agency to provide a UX mockup on a small part of your app as part of their proposal.

- Ask the agency to explain how they would apply material design to your app.

Questions to ask the agency:

- What Android specific design experience do you have?

- Are you able to ensure compliance to the UX best practice outlined by Google?

- What experience do you have implementing material design in apps?

- What user testing are you planning at each phase?

- How do you use analytics as part of the design process?

Questions to ask yourself:

- Has the agency explained how they will use the material design guidelines in Android to ensure our app is intuitive and 'obvious' to our users and will support our brand?

- Do I need to challenge a 'one size fits all' mobile design approach within my own company?

Bonus tip:

Make sure you're able to evaluate the agency's Android design experience. UX guidelines are different among Android, iOS, and the mobile web.

07

Understand all your costs, not just the price quote by the agency

Get a detailed breakdown of the agency's quote, review it against what you've learnt about them, and assess what costs or risks of costs you need to budget for.

Why it's important:

You may see a considerable range of pricing strategies and prices from agencies. These might include:

- Fixed price/fixed specification approaches, which offer little flexibility.

- Fixed price for an initial discovery phase and indicative costs for later phases, allowing for an evolving specification and offering good flexibility.

- A time plus cost quote offering almost total flexibility in reacting to changes, but with less certainty about overall costs.

Within these strategies you might also see:

- Some parts of the project, usually software development, being completed offshore in countries with lower developer costs.

- A revenue share option with the app built for a reduced (or no) cost in return for a portion of the revenue generated by the app.

You might also want to ask the agency to consider incentives or risk sharing approaches. For example, if the user rating of the application is higher than 4 stars after 1000 downloads you may want to offer them a bonus. The impact of user ratings has very strong correlation with adoption.

At the higher end, the developers will probably have far greater experience and can offer strategic insight as well as deliver an experience that exceeds expectations. They're likely to cover more costs and expose you to a lower risk of unforeseen costs. Typically agencies that are more insightful and capable can charge a higher premium. They can pick and choose their clients and will be in high demand.

At the lower, the developers may have less experience or off-shore part of the project to lower cost countries. Working with these agencies could require a far more detailed specification up front and can offer less flexibility to evolve requirements and respond to user feedback. They may also expect you to pick up a greater portion of the work or related costs and the risks of other costs surfacing might be higher.

Questions to ask agencies:

■ What is your pricing model?

■ What costs do you expect us to cover (such as testing)?

Questions to ask yourself:

■ What do I need to consider — such as revenue, brand exposure (for example via download numbers), customer retention, or responding to a competitive threat — to build a business case for the ROI of the application?

■ Do you want to consider sharing incentives/risks with the agency?

■ If using a fixed price approach, how will I handle change?

■ Does this agency offshore development or work on a strict fixed price basis? Will we therefore need to develop very detailed specifications to achieve the desired outcome? Given what we know about our requirements, is the potential lack of flexibility an issue?

■ If the agency offers a revenue sharing approach and charges little to nothing to build the application, does this model fit your business?

■ Are there additional costs that I have not factored in (such as application marketing and maintenance costs)?

■ What is my negotiation strategy?

■ If the costs of an agency are lower because they offshore much of their development, how much risk will this introduce to the delivery of the application as face to face communication is far more effective? How can I minimize this risk?

- As I assess the costs of each agency how do they relate back to my ROI and the goals I have set for the application?

- Have I included a suitable contingency for additional costs during the project?

08
Know what you want from the project's contract

Determine any contract requirements you want to have in place and provide them to the agency during the selection process. Request details of the agency's contractual requirements.

Where an agency's contractual requirements diverge significantly from yours, for example around IP ownership, consider removing them from the evaluation early. Where the differences are manageable you can determine your compromise position in advance.

Why it's important:

Once you have selected the right agency for your project you will want to conclude contract negotiations as quickly as possible. By stating your contractual requirements early in the selection process and gaining an understanding the agency's requirements, you can assess and plan for the likely effort and risk associated with contract negotiation.

Questions to ask the agency:

■ What are your standard terms and conditions for this type of work?

■ Are there any specific terms and conditions you would apply to this project?

■ Are you willing to start the project while we finalize the contract?

■ What devices will you be testing against and will you provide test reports?

Questions to ask yourself:

■ What are the industry standard terms and conditions for this type of work?

■ Do we have any specific terms we want included in this project?

■ Can we handle the negotiations internally or with our usual legal counsel; do we need to find a specialist negotiator?

■ If we start the project before contract negotiations are finished, will this adversely affect resourcing for the project?

Get your app project underway

In this section

How you prepare for and initiate your project can have a significant impact on its success. Ensuring you have or develop the right skills and approached in your organization, sharing vision and process upfront, and thinking about physical space will all help start the project well. We also look at some of the things to consider when working with multiple agencies.

01   Develop relevant competencies in your organization

02   Brief the agency

03   Find everyone a good home

04   Prepare to work with multiple agencies

01

Develop relevant competencies in your organization

Plan to develop the competencies needed in your own organization to meet your project requirements and obligations.

Why it's important:

Having an app developed for you won't completely offload all tasks. At a bare minimum you'll need to test and accept the finished product and therefore need resources who can perform acceptance testing. But you may also want or need to be involved in aspects of the project from user interface design through to marketing and support of the released app.

Questions to ask the agency:

■ What tasks do you expect us to complete on this project?

■ What skills do we need to complete our assigned tasks?

■ Do you offer or can you recommend training for the roles we'll need to perform on this project?

Questions to ask yourself?

■ Is your marketing department familiar with Google's comprehensive guides regarding the publication and promotion of applications and store listing experiments?

■ Do we have the design and copywriting skills to create a well designed feature graphic, screenshots of our app and a compelling description for the Play store listing?

02
Brief the agency

Bring together all the members of the project team, from the agency and your organization, and brief them on the background and business goals for the app and the planned development process. Consider including key stakeholders too.

Why it's important:

Not all project members will have benefitted from the exchange of information that took place during the selection process. By briefing the entire team at the start of the project, you can share the vision for the app and project. This will help reduce the risk of divergence later in the project, by giving everyone a better insight into the design decisions and business direction of the project.

For this reason, many agencies do this as a standard kick-off practice.

Best practices:

- Be clear and as open as you can with the agency. The more you share and work with them as a partner, the better the outcome.

- Communicate the strategic intention of the application: how it fits into the wider business context.

- Share details of your success measures; for example user ratings, downloads, and others.

- Provide any specification you have developed, even if they are only at a high level.

- Exchange information on company history and culture.

- Define how you would hope to work together, the processes you would like to follow.

- Explain expectation for the timing of key deliverables and milestones.

03
Find everyone a good home

Consider carefully how your team and that of the agency will interact. Look for spaces where the teams can come together, either for the duration of the project or when needed.

Why it's important:

Throughout the project precise and open communications are vital for the exchange of information and decision making needed to create a great app. Your agency may be well versed in optimizing communication between people or group based in different locations, even so the ability to communicate face to face is likely to be beneficial.

However, your team may not be familiar with working with remote teams on this type of project. So bringing them into one space may aid communications.

Best practices:

- Bring the project teams together, If you can, either on your or the agency's premises.

Questions to ask an agency:

- Will your team working on this project have a dedicated project space?

- Would you be willing to move your team to our premises?

- Can you accommodate our project team at your premises?

Questions to ask yourself:

- Is it easy and convenient to travel between our premises and that of the agency?

- Can I provide or obtain a space to bring our project team together?

- Do I have access to meeting spaces? Will I be able to guarantee their availability?

- Have I allowed for the time of relocating my project team or that of the agency?

04
Prepare to work with multiple agencies

You may chose to work with multiple agencies. For example, you might task a new agency to build your app, while an existing agency handles design of the backend systems to support your app. Other uses of multiple agencies include having an additional agency write test scripts, review the code, or perform testing.

Be very clear on the respective roles and interfaces among agencies. Monitor and manage how communications take place, to ensure they foster a culture of trust.

Why it's important:

By ensuring each agency is clear about its role and creating honest and open communications between agencies, you're more likely to align around a common understanding that will benefit the quality of your app.

Questions to ask the agencies:

■ Have you worked with this agency before or used other agencies to perform specific project tasks?

Questions to ask yourself:

■ Am I prepared to undertake any additional management needed to ensure the agencies work well together?

■ Is communication between the agencies good?

■ Are there any signs that an agency is maneuvering for position or attempting to undermine another? How can I be prepared to deal with this if it does happen?

Execute successfully to deliver a great app

In this section

The way in which you execute the development project can have a significant impact on the outcome. It's important to make sure that the good work you've done in preparing your organization, selecting the agency, and getting the project underway is carried through all the way through the project execution.

01	Maintain open communications
02	Make sure the development methodology is well defined and understood
03	Be prepared to deal with change
04	Strive for architectural excellence, supported by rigorous code testing and documentation
05	Test your app with trusted user before rolling out
06	Provide the agency with access to your Google Play Developer Console account

01
Maintain open communications

Communicate with your agency regularly. Be frank and honest, and don't unnecessarily withhold information that could affect the project or app.

Why it's important:

Open and honest communication between the agency and your project team — as well as between the project and your stakeholders — contributes positively to the quality of the app created. Open communications also help create a culture of trust.

It's difficult to over stress the importance of open effective communications, which is why we've placed it first in this section.

Best practices:

- Continue to challenge yourself throughout the project to develop a culture of open communications, reviewing this regularly.

- Encourage ad-hoc communications, ensure key personnel are accessible in person, by phone or email: as far as is practical, operate an open door policy.

- Set up appropriate regular meetings and follow good practices for meeting management: For many projects it can make sense to have daily stand up calls or face-to-face meetings where you can understand how the team is working, have visibility to progress, and gain familiarity with blocking issues.

- Look to improve communications with remote teams by using technologies, such as Google Hangouts.

- Bring remote teams on site for important meetings.

- Maintain continued, effective communication with your project stakeholders throughout the life of the project. This helps ensuring their needs are met and the project stays aligned should business requirements evolve.

- Be aware of cultural differences and biases when working with teams from different countries.

Questions to ask the agency:

■ Are there any communication channels or techniques you usually use that we aren't using on this project? Should we adopt them?

■ Is our team easily accessible to your team? If not, how can we improve?

Questions to ask yourself:

■ Is the agency likely to share bad news with us openly?

■ Is the agency likely to tell us if there is an unexpected issue with our specification?

■ How are we managing these and other risks on the project?

02

Make sure the development methodology is well defined and understood

Agencies will usually have a defined process for undertaking development work. Make sure the project team and stakeholders understand the process.

Why it's important:

There are many app development methodologies available. Agile is one of the most popular, but many alternative approaches could be used and may be more suitable. Regardless of the development methodology used; a clear, agreed, and understood mode of operating is key to a project's success.

Best practices:

- Put the user at center of the design process, make use of user data and insights particularly in the design phase.

- Ensure that your project team, including key stakeholders, are briefed about the planned process.

- Remember to take advantage of beta testing (which you can manage from the Google Play Developer Console) to get feedback from real users before launching.

Questions to ask the agency:

- What development methodology do you use?

- How do you involve the end user within that methodology?

- What challenges have you previously encountered with the approach and methodology you've proposed? How can we apply the lessons learnt to avoid them in this project?

Questions to ask yourself;

- What is my organization's preferred methodology?

- Have I set expectations on how we should work together within that framework?

- Am I giving the agency sufficient access to the stakeholders in my organization?

03
Be prepared to deal with change

Put in place a management process that deals with change in an effective and timely manner.

Why it's important:

It's tempting to think of an application as 'complete' when it's functioning according to its specification. The reality is that no app is complete, there are always opportunities to improve it.

As you share your application design or beta version with your users, you'll probably get unanticipated feedback. At the same time updates to Android and new features will emerge, offering options to improve your app or suggesting changes you should make.

Having a process that captures this feedback or platform changes, evaluates them, and if necessary implements changes will help in delivering an app that delights users. It will also allow you to predictably manage the project timeline and budget.

Best practices:

- Ensure you have robust project management in place, with an agreed methodology such as PRINCE, APM, Scrum, Agile, or similar.

Questions to ask the agency

- What project management methodology do you use?

- How do you propose to handle changes in the specification, for example, through development methodology or documentation?

Questions to ask yourself

- Have I budgeted for ongoing change and maintenance?

- Have I made sure that the app is future proofed so that updates to the app will be easier?

- Am I setting the expectations of others in my organization at the right level for version 1 of the app and then for subsequent versions?

04

Strive for architectural excellence, supported by rigorous code testing and documentation

Create an excellent app architecture from the moment you begin designing. Then create and execute a great suite of tests, which can stand as the documentation for the code.

Why it's important:

A clean, well architected code base using tried and tested code patterns will be easier to maintain and less likely to encounter unexpected effects when changes are made. A good testing discipline will also help maintain code quality by isolating issues quickly, so they can be fixed while code changes are fresh and in-mind. A clean architecture and well tested code will make it easier to reduce the costs of adding new features later.

Testing is the foundation for app quality. During the project testing depth can range from a quick check on a device, through to fully automated test scripts. Disciplined testing is also helpful in ensuring your code is well maintained and help prevent seemingly minor changes in the code base causing unwanted effects on your user base.

Best practices:

- Develop for the latest versions of Android.

- Look for tried and tested architecture patterns that you can reuse.

- Include usability testing in the both the design and development processes.

- Identify the most popular devices among your target users, and tests on those devices first. Then expand the test device range as far as is practical.

- Apply the 'toothbrush test' we challenge Google products to pass: if the app is used twice a day, every day, will the user find frustrations that could magnify over time.

- Strive for ongoing product excellence from the beginning.

Questions to ask the agency:

■ How will you identify suitable code patterns for our app?

■ What kind of usability testing do you do? How do you conduct usability tests? What testing framework are you planning to use? Can you give examples where you've successfully employed usability testing?

■ Are you planning to use a test service, such as Google Cloud Test Lab?

■ What level of automated testing do you plan?

■ How regularly will you run these tests?

■ What devices, including tablets, are you planning to test on? What testing (for example unit testing) is covered in the quote and what might be additional?

■ Do you have a representative library of test devices? Will you expect this project to require you to add new devices to the library? If you've allowed for device purchases in the project fee, will we get the devices on completion?

■ Are you providing any guarantees, for example fixing errors within 3 months? This is more relevant for fixed price contracts.

■ How are you going to handle regression testing?

Questions to ask yourself:

- What kind of reporting on tests do I want?

- Should I get a third party to review the commenting and documentation within the code to ensure future maintainability?

- How are we going to handle integration testing?

- How are we handling user acceptance testing?

- Do we want or need to maintain our own library of test devices?

- Given it's not a trivial task, how will we maintain an up to date library of test devices?

Get started:

Cloud Test Lab

05
Test your app with trusted users before rolling out

Use the alpha and beta testing feature of the Developer Console to conduct user tests, before releasing your app publicly.

Why it's important:

Typically you'll only have one chance to get things right with your users. Running beta tests with a limited number of users provides an opportunity to validate any assumptions made about your users. These tests will also usually help find any errors missed in your internal testing. By doing this before you publicly release the app, and push out your app's marketing campaign, you increase your chances of a successful app launch.

Best practices:

- Look for suitable testers from your organization's existing social networks; look for both loyal customers and detractors.

- Consider how tightly you want to control beta testing: run closed tests if you want to involve selected users only or open tests where you're happy for anyone interested to participate.

- Consider capping the number of participants in an open beta-test, to ensure the test is manageable.

- Use the staged rollout feature of the Developer Console to release an updated app progressively to larger portions of your user base. Monitor for issues; halt the roll out and correct issues if unforeseen problems arise.

Questions to ask the agency:

- Do you take a 'big bang' approach to rolling out new features or use beta testing and staged roll outs?

- Where have you used staged roll outs and beta testing effectively?

Questions to ask yourself

■ Is my organization supportive and set up to work with agencies on staged roll outs and beta testing? Do we need to adjust our culture in any way, to make it work?

■ Do we have a culture that puts the user at the center of design and can make the most of beta testing? How can we build this into our way of working?

Get started:

Set up alpha/beta tests

Bonus tip:

You can also use Store Listing Experiments to optimize your store's listing performance (for example alpha/beta testing content and graphics).

06

Provide the agency with access to your Google Play Developer Console account

To enable the agency to release the app using your Google Play Developer Console account, rather than giving your Google Play credentials to the agency, add them as a user to your account.

Why it's important:

You might want the agency to handle alpha and beta tests, app publishing, responding to app reviews, stage roll outs, and more. You may also want to share the apps statistics and revenue information with them too.

However, your Google Play account and the credentials to access it are a valuable asset. By setting up the agency as a user on your Google Play account you retain full control over your account.

How to do it:

- In the Developer Console, click **Settings**.

- On the left menu, click **User accounts & rights** and then **Invite New User**.

- Enter the user's email address and choose an access expiration date.

- Select a role or choose individual permissions. If you want to restrict the user to a specific app, leave permissions unchecked. You can add app specific rights after you've sent an invitation.

- Click **Send Invitation**.

Best practices:

- Add agency or your own staff to the Developer Console only when they need access, don't add users just because it might be useful.

- Set permissions for each app, if you've got multiple agencies working on multiple apps.

Questions to ask yourself:

- What is the support strategy for the application? For example, if defects are found or customers raise questions or comments in their feedback on Google Play. How does this fit into the strategy for other support channels for the product?

Get started:

Add developer account users & manage permissions

Section 5

Useful resources

Additional resources:

We recommend that you stay up to date with news from the Android world. To do this, please review the resources below.

Google Developers Agency Program
developers.google.com/agency

Find success on Google Play
developers.android.com/distribute

Get Play & Android news and tips
g.co/play/developernews

Android Developers Blog
android-developers.blogspot.com

+AndroidDevelopers on Google+
google.com/+androiddevelopers

Android Developers on YouTube
youtube.com/androiddevelopers

@AndroidDev on Twitter
twitter.com/androiddev

Google Play Developer Help Center
g.co/play/developerhelpcenter

Please give us your feedback!

Google Play is committed to the success of developer's apps and games. Please give us your feedback on this guide so we can continue to improve our guidance:

goo.gl/UGMZns