

Key questions pro developers ask themselves before ever touching a line of code.





You work at the organization or maybe you are starting a new organization, so why are we asking you to spend time answering questions in this area? Even though you may be familiar with your organization, many of our clients have found it useful to give a summary of their organization.

Also, one of the goals of this KeyQ Software Planner is to give you a full picture of your software project to help you make business decisions, present the idea to stakeholders, development companies, and/or investors.

Therefore, understanding the context of this software project is important.

What does your organization do?

What is your elevator speech? You have 30 seconds to tell someone about your organization including key characteristics, history, product/services you offer, target market you serve, and goals for the future.

What makes you unique?

Think about traits such as quality, convenience, dependability, customer services, and emotions. What makes your business stand out from the rest? What makes you unique and special to your ideal customer?

Who are your customers?

Think about who buys your products or services. Keep in mind your current customers as well as the customers you are targeting now or in the future.

Who are your competitors?

When thinking about competitors, think about who provides the same or similar products or services. Also, sometimes customers will think of another organization as a competitor that you might not. Put yourself in a customer's shoes or better yet, ask your customers who they think are your main competitors.

Where does your revenue come from?

Which of the products or services you selling generate revenue? Is it a subscription base, one time sale? Do you get revenue from a couple customers or many customers?

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What does your organization do?	What makes you unique?	Who are your customers?
		Who are your competitors?
		who are your competitors:
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Whether this idea just came to you or you and your team has been talking about this for a while, it's good to collect the idea in a way on paper.

What is the high level summary of your project?

No need to get into the weeds here, just a high level summary.

Just like in the previous section, the elevator speech comes in handy here. You'll get into the details a bit later.

If you had less than a minute to describe this project, what are the main points?

What process (or software) already exists?

If this a brand new piece of software, think about what process it will enhance, add on to, or replace. What happens now and how will a new software application change the way people do things?

If this is an evolution or replacement of existing software, what works about your current solution? What doesn't work well?

Will you be seeking an outside partner? Why or why not?

There are also many paths you can take to build custom software.

What options have been considered?

What expertise and capacity do you have in house? What value do you need to get from an outside partner?

Why custom software?

There are many ways to solve problems. Custom software is only one.

Why do you believe investing in custom software is the right path?

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How will custom software impact your business?



Software projects almost always sound interesting and useful.

In order to gain the confidence needed to invest time, money, and energy into building custom software, you should have a good understanding of what value the software will provide your organization.

What business problem or unmet need are you trying to solve?

What problems do you have in your organization that caused you to consider creating custom software? Or what unmet need are you seeing at your organization or in the marketplace that you think can be improved with custom software?

For example, one of our clients was experiencing very long sales cycles due to their customers having an unrealistic view of how much the service would cost. The sales team would spend hours talking and following up with people that weren't qualified. They had a business goal to better qualify potential customers earlier in the sales process.

When you are completing this section make sure you are focusing on the organization, not individual users (that will come later).

What are your desired business outcomes?

Put yourself in the ideal future. What does it look like to have solved the problem or unmet need you defined in the previous question? What has changed? What is true about your organization, your employees, your customers?

Most of our clients find it valuable for these to be measurable. So, think about: How could you prove the software was a success?

Take some measurements of your current world, and take time to think about what those would look like in a successful scenario. For example, "X customers signed on by the end of the year" or "X% reduction of errors".

How much are you expecting to invest in software?

One of the most common questions we hear is "How much does custom software cost?" This is like asking "How much does it cost to build a house?" You can build a house for 50k or 5 million and everywhere in between. The first thing a builder will ask you is, What is your budget? When thinking about building custom software, there are two costs to consider, the initial investment and the cost to maintain, and improve the application over time.

Look back at your business outcomes. For example, if you are able to reduce waste by X%, how much is that worth to your organization?

What is the time period you need to recoup your investment?

Sometimes when an organization is investing in custom software, they are looking for a short-term return. Other organizations might be building more substantial software for a longer term outlook. For example, if you invest in software, do you expect to recoup that in 6 months or over the next 5 years?

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What are the desired business outcomes?

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Ultimately you are building software that will be used by real people. In order for it to be valuable, it needs to be a useful, easy to use tool that solves a real need. This is really hard to do without talking to those people.

If you have already done some user research, awesome! Refer to your research to complete this section.

If you haven't done research, make some educated assumptions. When you are completing the riskiest assumption section later in this planner, we recommend you think about what you still need to learn about your users.

Identify 3 types of people that will use your software.

There may be more, but for a start, list the 3 most important type of people (often referred to as personas) that will use the software. Each persona will represent a major user group for your product that typically share common challenges, needs, and motivations.

For example, the personas might be titles or departments. (ie. "Sales team" "Attorneys"). Or it might make sense to be based on buying habits, personality, etc. (ie. "active shoppers" "elementary teachers" "Mothers with 3+ kids".) It is best practice to build personas based on user research, then condense and combine in a way that allows you to tell a story about the user group.

If you haven't invested in research yet, it is still valuable to do a quick version of personas.

TIP: Don't forget about the system admin. They often have an important role to play in making sure a product has all the features to perform well.

What are the biggest challenges or unmet needs?

As we mentioned before, it is really important to talk to users in order to make the best decision for your product. What causes frustration? Does it take too long to complete a task? Is there something missing that would change your life in a positive way?

For example, a window shade company offered home visit consultations for customers to measure windows, and work with the homeowner to select shades for their home. These consultations took so long that they were a significant cost to the organization. They predicted if they could reduce the time it took to run a consultation, they could not only reduce costs, but also generate more revenue.

Next step was to talk to the sales consultants. What was taking so long? What made things painful? The sales consultants would didn't have any digital resources. When measuring, they'd hand write measurements, then enter them into a system later. Sometimes they'd lose the paper sheet and have to go back to the home to remeasure. When conducting consultations, the salesperson would bring multiple catalogue to show samples to clients. It took a lot of time paging through pages in multiple books to find products to suggest to their customers. Consultations took 2 to 3 hours of time at the home and hours afterwards.

What is the challenge or unmet need each of your personas are facing?

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What are the biggest challenges or unmet needs? Identify types of people that will use your software. Persona 1 Description Persona 2 Description Persona 3 Description

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What are the biggest challenges or unmet needs? Identify types of people that will use your software. Persona 4 Description Persona 5 Description Persona 6 Description

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Referencing the challenges and unmet needs of each user, what would the software need to do to solve or at least improve the situation?

Keep a look out to ensure solving these needs is still in support of the organizational goals.

What are the features ideas for your app?

This is the fun part, brainstorm the possibilities!

We suggest not filtering yourself yet. Even though an idea might sound crazy and impossible, there might be a version that is within your scope.

Remember our sales consultants at the window shade company? They needed a tool to be able to capture window dimensions in a reliable system right at the house. They needed a digital catalogue where they could sort and filter products based on size, style, color, etc.

How would you prioritize the features?

Look at your feature list and do a rough draft of prioritizing your features.

Most important (1)—Add a 1 before features you think are the most important. These should

be the essentials of the app and the features that will have the biggest impact immediately. It is really tempting to put a lot features in the first phase, but do your best to be a bit ruthless. One thing you can ask yourself to help is "If all the features with a 1 were complete, except this feature, would you hold off launching?" If yes, it gets a 1. If not, it could be a feature that follows on later.

Next up

Now, what are features that should follow on after the first phase? Add a 2 next to those that are the next priority after the essentials.

Future

Don't waste your time planning too far in the future. The one thing we can say we have confidence is: things change. You'll learn something new, you will get feedback that will changes your priorities. For the remaining features, mark them as 3s, and set them aside in your mind for a while.

Keep in mind, you don't have all the information you need yet to make all the priority decisions. A good software partner will help you make some of these decisions by helping you understand the amount of effort that each feature will take. Experienced software partners will also have ideas of how to streamline big features into stepping stones so that you can launch with the essentials and continue to grow and scale your software as your business evolves.

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Most important (1)

Add a 1 before features you think are the most important. These should be the essentials of the app and the features that will have the biggest impact immediately.

Next up (2)

Add a 2 before features that should follow on after the first phase. These are what you determine are most likely the next priority after the essentials.

Future (3)

Add an F for features that are in the future.

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) What are the riskiest assumptions?

When we are building software, we are inevitably going to make some assumptions along the way. Assumptions are things you believe are true without proof. These could be about your customer needs, predicted behavior, feasibility of technology, etc.

Assumptions aren't necessarily a bad thing, but you need to be aware of what assumptions you have made. For each assumption you should be clear about what level of unknown exists and what the impact would be if that assumption is wrong.

Many assumptions can be investigated before the software is built, but you aren't going to spend endless time and energy to validate every single assumption. So how do you use your time wisely?

There is a more detailed exercise we often do with clients called assumption mapping, but for now we suggest you start with these three sections.

What are the biggest assumptions you have made?

Be honest with yourself. You might believe it is true based on your experience or previous conversations, but we recommend you still write it down. Here are some examples of assumptions we've seen in the past: "People will pay \$10/month for this software." "Users will always have Internet access when using your app." "People will not buy the application without a free trial."

If wrong, which would have the biggest impact?

Looking at your list (especially the assumptions that you are less confident in), identify which would have the biggest impact on your product or organization if you woke up tomorrow and found out that assumption was wrong. Would it be a waste of money or cost a lot of money to change? Does it give you a bad impression in the market? Will your stakeholders lose confidence in your project?

What is the most important thing to learn before investing?

Looking at the items with a high level of uncertainty and those listed to have a big impact if wrong, what areas do you need to gain more insights before moving forward? What are ways you can learn more to increase certainty and lower risk? Do you need to do more user research to better understand your users and their goals? Do you need to build a proof of concept to ensure your idea is technically feasible? Think about the smallest tests you can do to get answers to your riskiest assumptions.

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What are the biggest assumptions have you made?

If wrong, which would have the biggest impact?

What is the most important thing to learn before investing?





What is the path to adoption?



If you build it, they will come? So many of our clients seem to have this mindset. And while we hope it is true, it is often not the case.

For external tools, marketing and sales process is key in the success of your product.

If you are building an internal tool, how will you roll it out? Thinking about the path to adoption will most likely influence some of the decisions you make.

Who are the stakeholders in this project and what is their role?

List the people involved today, but also the people that you will have to get approval from down the road. Who needs to be involved in the major conversations for this project?

Who will be the first users and/or customers?

Is the first release for a pilot group of users? How does their experience need to be the same or different from those that follow?

For a recent project, the first release went to a group of 20 pilot users. These were volunteers who expressed interest in being on the front lines of trying out the new product. They got free access to the app in return for providing feedback on their experience. After that group, the product would be marketed for sale to the target market.

For another project built for internal operations, the department had 40 employees that would use the application. We selected a handful of people to use the app for the first few weeks to ensure it worked as expected. Once we tested it out, made adjustments, it was rolled out to the whole departments.

How are you planning to introduce your software?

How will you let the first users/customers know about your project? What is the plan after that group?

If it is an external product, what is your marketing strategy?

If it is internal, what is the roll out plan?

Are there any key milestones you are trying to hit?

Is there a roll out event or conference your product needs to be ready for?

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Who are the stakeholders in this project and what is their role?

How are you planning to introduce your software? Who will be the first users and/or customers?







As with any big project, when you build custom software, you may encounter some roadblocks. Knowing as many potential risks, constraints, and barriers as you can before you get started will set you up for the smoothest possible outcome.

What risks exist that could prevent you from success?

Is there something looming that poses a risk to the success of your project? Is there anything might happen that you know will cause problems with your project?

Are there any non-negotiable constraints?

Some projects have non-negotiable constraints. This could be a legal requirement, timing need, technology requirement, etc.

Are there any barriers blocking your forward progress?

Is there anything standing in the way of forward progress? Do you need to convince a stakeholder or hire a software partner? Do you need to gain funding or get a budget approved?

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Our best advise to continuing forward progress is to list out your next steps.

Revisit your assumption section and make a plan to figure out what you need to learn more about. Revisit your desired business outcomes to see if you have numbers you need to fill in. Go talk to real users to help validate or populate the user section. What are the barriers that are blocking progress, and what is the next step to get passed that?

What are your next steps?

Get a Free Consultation

We work with many clients on helping them through the journey of building custom software. We'd love to help you! Bring your planner (even if it isn't complete) and we can give you recommendations on how you can improve on what you have already done.

Schedule your consultation here.

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Need help? Schedule Your Free Consultation