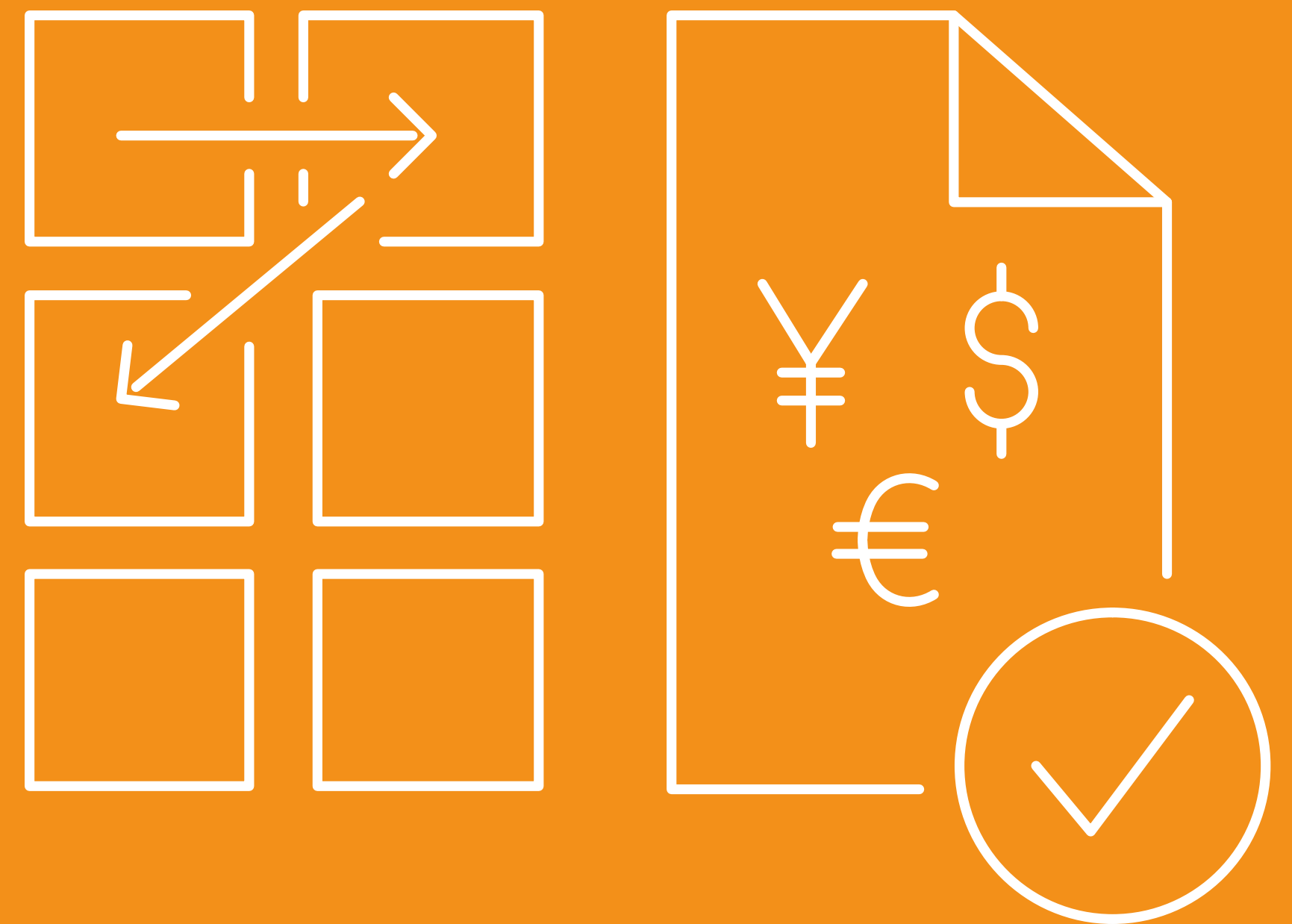


FileMaker Developer Conference 2017 Presenter Series

# Estimating and storyboarding.

A guide to improving accuracy.

Deborah Zempel, Deborah Zempel Consulting





# FileMaker Developer Conference

DevCon is an annual developer conference that includes in-depth sessions, special interest meetings, face-to-face consultations, and opportunities to network with many FileMaker, Inc., staff and other experienced FileMaker Platform developers. DevCon is the single most valuable gathering of more than 1,500 FileMaker practitioners from around the world.





# Welcome

This ebook is based on the presentation given by Deborah Zempel at the 2017 FileMaker Developer Conference, “[Estimating & Storyboarding with Accuracy](#).”

Deborah has been designing with FileMaker Pro for over 26 years, working on projects large and small both as a designer and project manager.

Through years of development, Deborah’s specialty has become storyboarding and estimating.

## In this guide

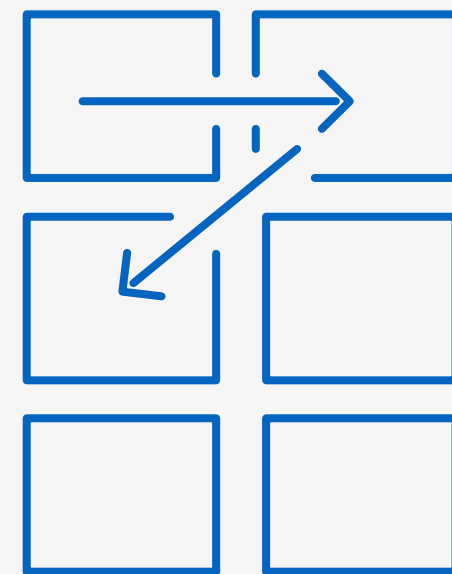
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# 01

## Storyboarding

### What is a storyboard?

A storyboard is a graphic organizer and collaboration tool that helps define the basic requirements and functions of your project. Storyboarding also creates quick reference points that may need revisiting during the iterative phases of the development process, especially when refining the product before completion.



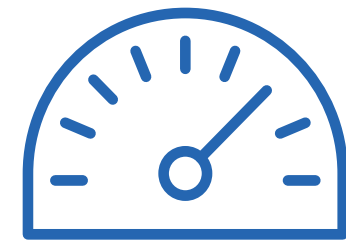
- ✓ Ways to storyboard
- ✓ Why storyboard?

## Why storyboard?

The most important factor in a storyboard is making sure everyone is on the same page. When a client tells you, “We need to make sure we include International Shipping on the shipping layout,” what does that mean? Is that just a check box so someone can note that this package is international, or is there an entire procedure just for international packages? When a client says, “We need to send out registration packets,” what does that mean?

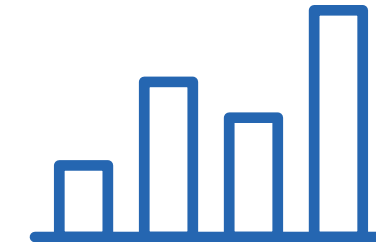
A storyboard will help you figure this out. How you create and present the storyboard is up to you.

## Storyboard value proposition: Three principles that matter to your customer



### **Efficiency**

Same result with  
less effort



### **Effectiveness**

Doing things the  
right way



### **Productivity**

Do more with the  
same effort

# Ways to storyboard

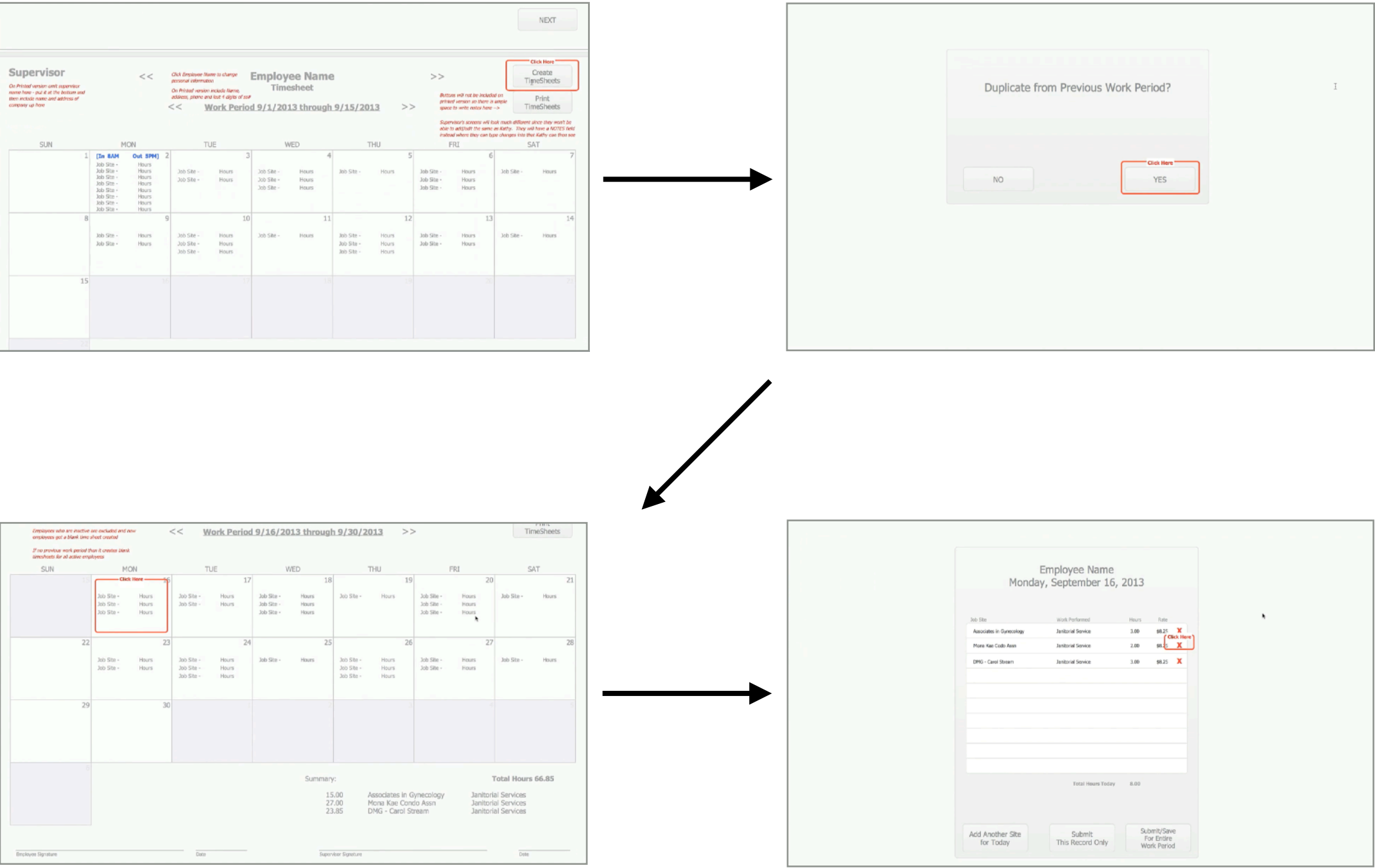
There are many ways to storyboard. You need to pick a method and format that you are comfortable with and that makes you efficient.

There are many products on the market to help you create storyboards.

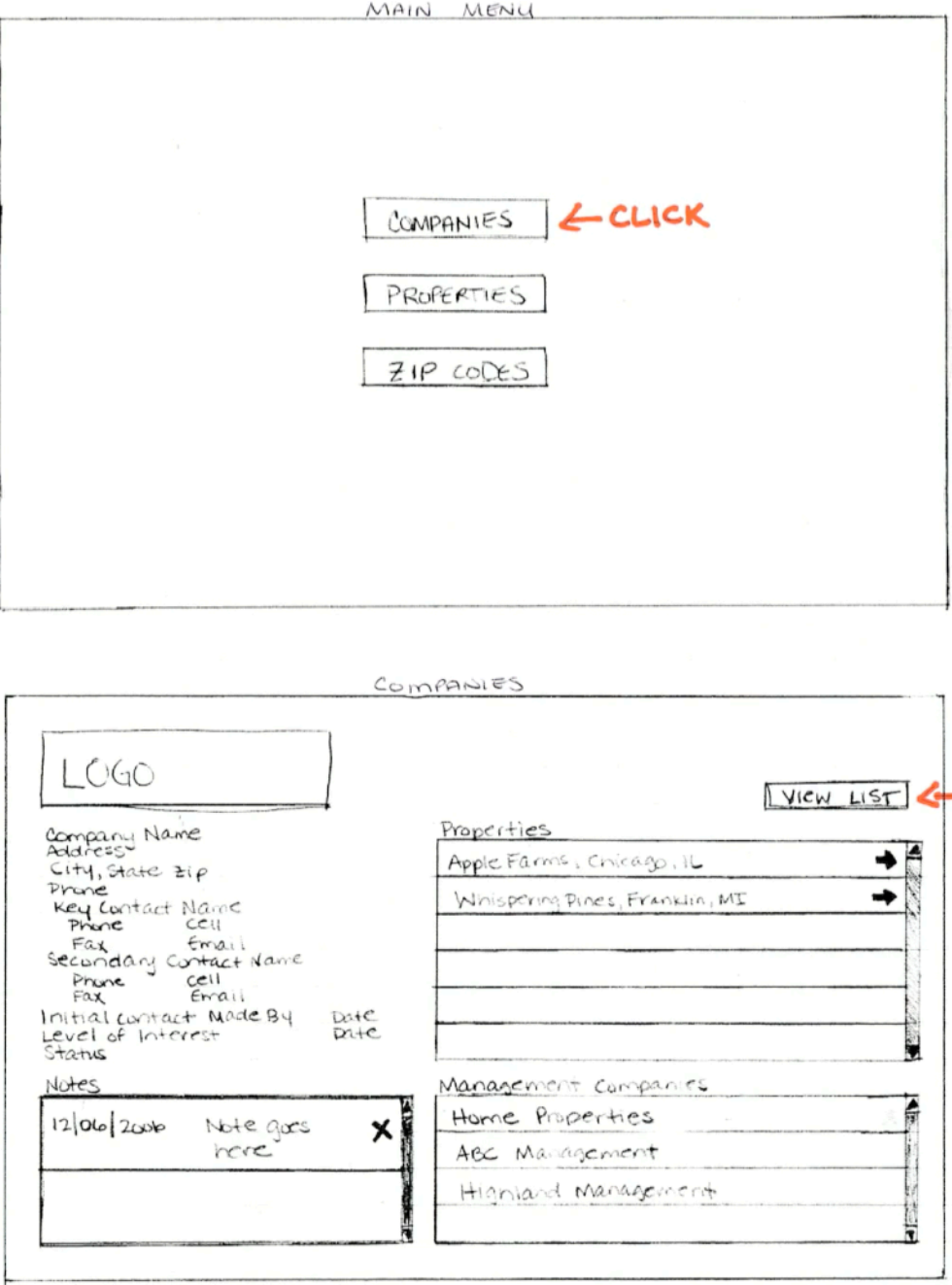
# Popular storyboarding software and templates

Software	Available
FileMaker Pro	<a href="http://www.filemaker.com">www.filemaker.com</a>
Balsamiq	<a href="http://www.balsamiq.com">www.balsamiq.com</a>
Paper by 53	<a href="http://www.fiftythree.com">www.fiftythree.com</a>
Sketchbook by AutoDesk	<a href="http://www.sketchbook.com">www.sketchbook.com</a>
Graph paper	<a href="http://www.printablepaper.net">www.printablepaper.net</a>
Index cards	Local office supply

# Examples of storyboards



Physical prototype created using FileMaker



Simple pen and paper using notecards

# 02

## Estimating basics

### Get started with estimating

Estimating can be difficult because there are so many factors to consider when determining how much time it will take to develop a system or part of a system for an organization. When estimating a project you must start with a discovery conversation.. A detailed discovery phase will help to refine your storyboard, as well as allow the ability to adjust your estimate if needed.

- ✓ **Discovery**
  - a. Initial questions
  - b. Evaluate and investigate
  - c. Detailed analysis
- ✓ **Create the Recipe**
  - a. Break down tasks
  - b. Calculate time
  - c. Is it logical?



## Discovery: Initial questions

During the discovery, phase you will gather information from your client through both listening and through explicit questions asked during interviews.

## Topics for initial sample questions:

- ✓ Platforms
- ✓ Security requirements
- ✓ Intended use
- ✓ Resolution
- ✓ Integration with other systems
- ✓ Design requirements
- ✓ Number of users

# Initial sample questions: Platforms, security, output, and resolution

Question	Explanation
Which platforms are we designing for: Mac, Windows, iOS, Web or all?	There are design issues to consider for cross-platform situations. Make time for development on one platform and then corrections on the other platform when the time comes. Whatever platform you develop on, you should always consider the time it will take to test on the other platform. If you are developing on the same platform as the users will be using, then you don't need to worry about testing other scenarios.
What are the client's security needs?	Do we need an account and password for each user? How many privilege sets are needed? Will we lock things down through scripts or with FileMaker's security features or both? The tighter the system, the more time it will take to implement security.
What is the intended output? Reports, forms, contracts, lists, spreadsheets, PDFs?	Is it 2 pages or 30 pages? Can we get away with user defined list views or does each report have to be custom and hard coded into the system?
What screen resolution for which we are building?	Screen resolution will be helpful when designing interface. The question of platform compatibility comes into play again. The window size may vary from platform to platform. If you don't know the screen resolution, there is no way to tell how the interface looks when testing on both platforms.



# Initial sample questions: Integration, design and, number of users

Question	Explanation
Is there any integration with other systems, plug-ins or third party software? If so, what are they and how do they need to be integrated?	If the system will integrate with other systems, take into consideration how well you know this other process. If it's just a CSV export, then all you need to know are the fields and the order in which to export them. If it's a plug-in, and you've never actually worked with it before, include extra time to incorporate it properly. If you need help from someone else, such as an associate at your firm, plan for extra time for an additional person.
Does the client have design ideas or do they want you to come up with a UI?	This is not such a big a deal if they let you design the interface. This can be huge if they have designed something and they want you to stick with their design. Sometimes clients think of only design and do not consider the implications of their design. As long as we know the answer to this question and we have an idea of what their interface looks like, we can estimate more accurately.
How many people will be in the system at the same time?	Is it a single user system? Will you have multiple users working in the system at the same time?

## Discovery: Evaluate and investigate

Once the initial questions have been completed, it is time to take a deeper dive into the information you have gathered.

## Getting to the details



### Evaluate

- Existing software
- Existing documents
- Existing data



### Investigate

- Interview users
- Hear their story
- Watch their process



## Discovery: Detailed requirement analysis

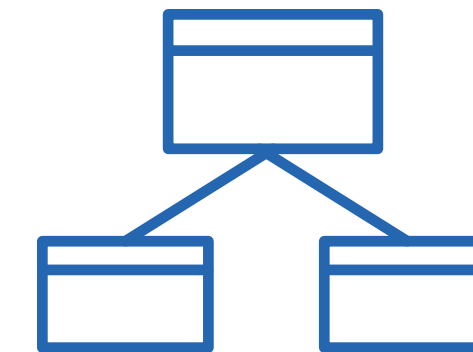
After the initial questions and evaluations are complete, it is time assemble the storyboard with your analysis of the initial questions and the entity relationship diagram (ERD).

## Client review

Reviewing the Detailed Requirement Analysis with your client may uncover additional details that will help you create a more accurate storyboard and ultimately create a more accurate estimate.



+



**= Detailed Requirement Analysis**

### Storyboard

- Visual element for client
- Outlines system for breakdown step

### ERD

- Determines the complexity of system

## Create the Recipe

Now that you have a more detailed storyboard, it's time to break everything down. Are you going to need custom menus, custom themes, or custom functions? Are you going to provide training? Are you going to install the system for the client?

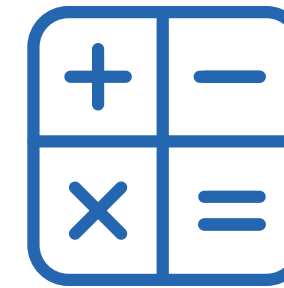
Every task needs to be taken into consideration, from the total number of layouts, scripts and fields, to the total number of meetings and level of project management required. Then, you need to estimate the total amount of time it will take to complete each task, and apply your billable rate.

## Putting it all together



### Break Down Tasks

- Layouts
- Scripts
- Project management



### Calculate the Total Time

- Determine time for each task



## Create the recipe: Is the estimate logical?

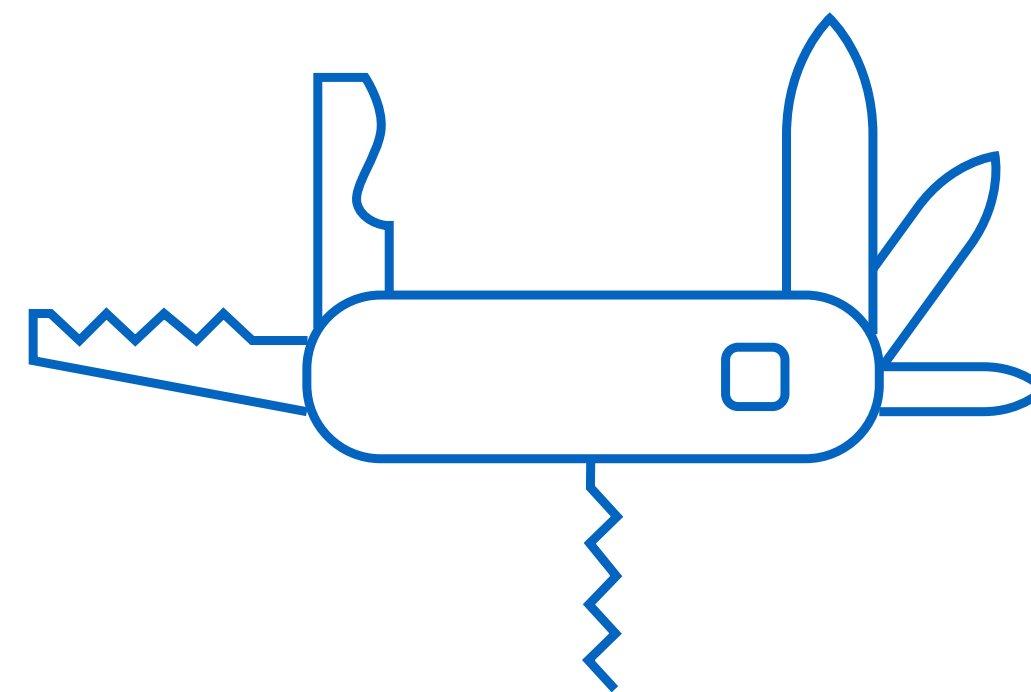
Once the total time for the project has been calculated, it is important to add a buffer (5-10% of total project time) to take into account things you may have forgotten or underestimated.

Now, take a moment to look at the total and make sure that estimate you are about to submit is realistic.

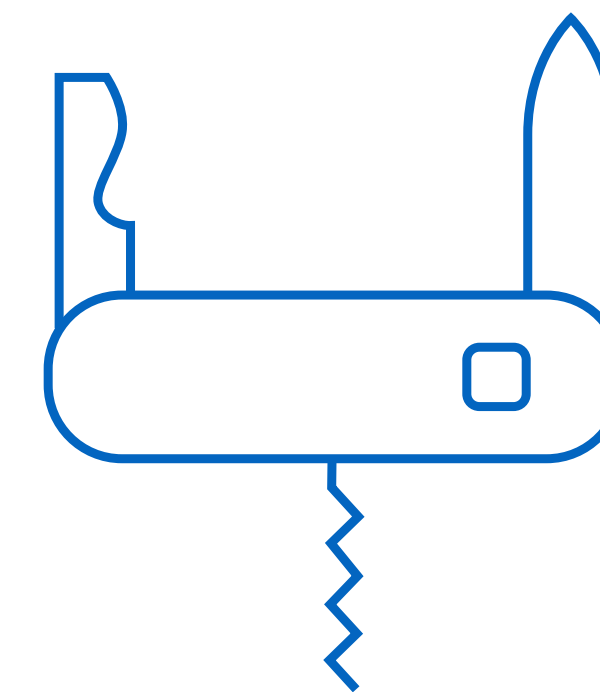
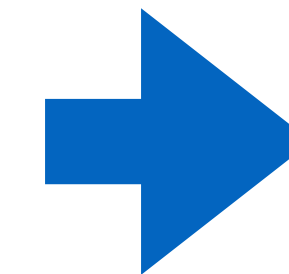
If it doesn't seem realistic, you may need to go back through your process and reevaluate, and make adjustments, which may include moving options to a future phase.

## Bells and whistles: Setting expectations

When make your initial estimate, be sure to include all of the features and options discussed. If your estimate seems high, you may need to simplify.



**Feature rich**



**Simplified**

## Ongoing Project Management

It is important to manage the project based on the agreed upon storyboard and estimate. As changes occur, or if the scope of the project changes, you need to be able to clearly document and communicate these changes in order to avoid unexpected increases in project budget.

## Moving forward with the project



### Requirements Agreement

- Manage changes based on agreed storyboard
- Capability of moving items to future phases



### Budget Agreement

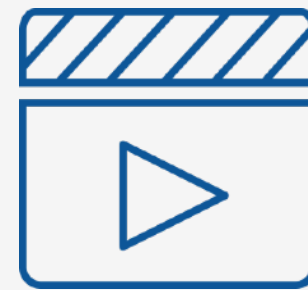
- Determine what can be included in initial estimate
- Allows you to defend what would be an additional cost
- Track time against breakdown



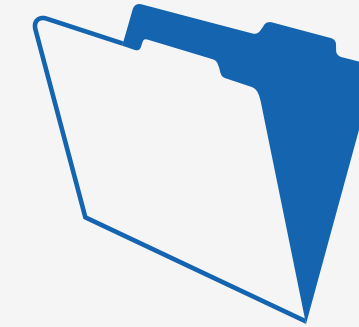
# 03

## Next Steps

Watch Deborah Zempel's complete DevCon presentation, download the estimating tool she uses in her demo, her white paper.



[Estimating & Storyboarding  
with Accuracy](#)

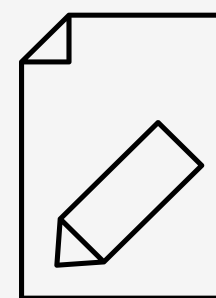


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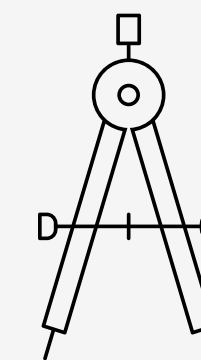
[Defining the Scope  
of a Project](#)

Plan your project, create your custom app, and deploy it to  
to your team with the help of these downloadable guides:



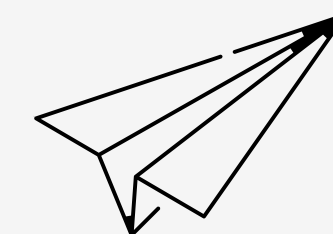
### Plan

[Your first steps to custom  
app development](#)



### Create

[Time to start building your  
custom app](#)



### Deploy

[Share your custom app  
with your team](#)

## Explore resources

Enjoy these great resources to help you along the journey as you learn how to develop a custom app using the FileMaker Platform.

## Online learning, training and community

The FileMaker.com learning site connects you to a Custom App Academy training series, webinars, discussions, videos, and tutorials:

[filemaker.com/learning/](https://filemaker.com/learning/)

The official FileMaker Community connects you with other FileMaker users and experts. Get answers to your questions, watch videos, access technical briefs, how-to articles, white papers, and more.

[community.filemaker.com/](https://community.filemaker.com/)

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[filemaker.com/support/](https://filemaker.com/support/)