Rapid prototyping

In this reading, you will learn about rapid prototyping, its advantages, its cycle and the levels of fidelity you can use. Before investing time and money in developing an idea and creating a product, you should make sure it works as intended. You should test it to ensure that it is user-friendly and free of bugs and that it assists the user in carrying out their desired actions.

To accomplish this, you create a scaled-down version of your product. This is referred to as a prototype. Prototypes can be as simple as paper models or as complex as fully functional digital prototypes with which the user can interact. After creating a prototype, you will test it on some target users. You'll observe how users interact with the product to identify any usability or design flaws.

This reading focuses on rapid prototyping.

What is rapid prototyping?

Rapid prototyping is the process of creating a fast, preliminary version that closely resembles the final product. To understand rapid prototyping, it is helpful to consider where the term originated. The phrase "rapid prototyping" comes from the manufacturing industry. Rapid prototyping is used in manufacturing to create a 3D model of a product or a single component of a product. Before mass production of the product or part, the prototype can be tested.

Similarly, digital designers have adopted rapid prototyping as a quick and cost-effective way to build and test a working version of their product. Rapid prototyping in digital design is the process of iteratively mocking up an interface and validating it with users, stakeholders, and even teammates. However, what distinguishes it from standard prototyping?

Rapid prototyping is much faster in manufacturing than traditional prototyping, which can take months or even years. However, when it comes to creating digital products, designers should never take months or years to create and test a prototype. As a result, all digital design prototyping can be considered rapid. Prototyping tools like Figma can demonstrate the digital nature of rapid prototyping: they are designed to speed up an already quick process, allowing us to stitch together screens in minutes.

Advantages of Rapid prototyping

For starters, rapid prototyping provides us with visuals to ensure everyone is on the same page. It is not the same thing to describe a product as it is to see it. And while we can probably get away with descriptions within teams because we all speak the same language, they are useless to stakeholders, investors, or users.

A rapid prototype eliminates miscommunication. Rapid prototyping also allows us to identify problems or pain points early in the design process. This allows us to address and solve problems before they reach development further along in the process, saving us valuable time and money.

Finally, testing our work continuously and quickly allows us to validate that we are creating a product tailored to real user needs and desires. We will show them our rapid prototype, and they will be able to tell us whether or not it works. We build a rapid prototype of a product section that we want to validate in a relatively short period. We then show it to users or our team for feedback and make changes based on their responses. This process allows us to collect feedback early and frequently and build better products faster.

The Rapid Prototyping Cycle

Now that you know what a rapid prototype is let us look at how to create one.

1. The first step is to create what you are testing.
2. Test it on users, stakeholders, or your team and make changes based on their feedback.
3. Repeat the procedure
   That's the end of it!

 The procedure isn't complicated, but it's incredibly beneficial.

It takes a lot of time and effort to prototype an entire product repeatedly! Even for a master prototyper, the process is not quick. It is also not necessary to create an entire product from the beginning. So, what do we construct?

We frequently prototype:

1. Main functions and features and
2. New interactions and patterns.

1. Main Functions and Features

Where will your users spend the majority of their time? Which features are they most likely to use? Start prototyping from there! Examine critical areas of your app or website to ensure they meet user expectations, needs, and desires.

2. New interactions and patterns

Users have come a long way since seeing plenty of bad designs. For example, the world's worst website ever presents a number of issues that we've learned negatively impact the user experience: https://www.theworldsworstwebsiteever.com/

Would you be able to name a few of these issues? Users now see traditional structures and experiences in apps and on websites. These are well-known among users. When they see them, they know how to use them. You need to prototype and test anything new that deviates from what users expect. If you're creating an exciting new login screen or a new, cool kind of checkout process, make a rapid prototype early on to test any change that may confuse users.

Rapid prototyping is not just for these two scenarios. Any section of your app can be prototyped and tested. However, only work on one part or feature at a time. If you try to address the entire product at once, you will end up with a prototype that is too large to be easily understood.

Fidelity level

You can test at various levels of fidelity. You will continue to work quickly, gather feedback, and revise to reflect it. The distinction is in the type of feedback you will receive.

Low-fidelity prototypes allow users to concentrate on how they will use a product. Is it effective?

Mid-fidelity prototypes allow users to concentrate on interactivity. They aid in the validation of element and screen behavior. These are frequently created using wireframes.

High-fidelity prototypes, which closely resemble the finished product, are created using tools such as Figma. When these are presented to users, they tend to focus on their visual design, making them unsuitable for the early stages. You would usually use them at the end to ensure that visual design decisions clearly communicate what they're supposed to.

So, what is the appropriate level of fidelity? It all depends on the stage of your project and what you want to measure or discover.

Final thoughts

In this reading, you learned about rapid prototyping, its advantages, its cycle and the levels of fidelity you can use.