Fulfilling Users' Needs:

Take a Design Thinking Approach to Ship Digital Products that Win

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Introduction

At the time of this writing, it’s 2021. The mobile landscape has changed a great deal since MentorMate developed its first mobile app twenty years ago. At that time, we were limited to the few mobile devices that could handle any sort of third-party application — mainly PalmPilots.

Mobile devices have obviously become much more plentiful and powerful since then and so too have our options for creating mobile applications. Over the years, we’ve worked with hundreds of organizations to design, develop, and deploy mobile apps used by millions of people around the world.

Throughout the course of that work, we’ve learned a lot of valuable information about what's important when considering whether and how to create a mobile app as well as all other digital products. And we want to share those learnings with you as you embark on your own digital journey.

DESIGN THINKING:

Not Just For Designers Anymore

Product Mindset

When it comes to product development, there are generally three different approaches that drive companies to build and release a product:

Market First

A market-first approach starts by looking at the market as a whole and analyzes what competitors are doing. Then, it looks for ways to beat those competitors by releasing a better or more impressive product. While this drives incremental improvement, it doesn't usually drive innovation. Think about a razor company adding an extra blade just to outdo their competitors. Those incremental improvements are made at the behest of what market leaders think the product should be and not necessarily what users want it to be.

Technology First

A technology-first approach begins by looking at the tech stack (either one that the company owns or is already comfortable using) and builds products within that tech stack. Again, while this approach drives innovation, it doesn't do so with the user in mind. Since technology is the focus here, often that innovation sacrifices usability which doesn't build loyalty.

Design First

A design-first approach keeps the end-user top of mind through the entire product lifecycle. Their unmet needs (emphasis on unmet) are what drives the innovation here. And it's in this approach that design thinking comes in.

But what exactly is design thinking?

Design thinking is a set of principles that drive innovation in product development. A design thinking approach looks at a problem through a human-centered lens to find a creative solution. Companies all over the world use design thinking every day to create the products that we all use and love. And the main reason why we actually do use and love them is specifically thanks to design thinking.

Design thinking isn't just for those tasked with the visual design of a product. Designers, product managers and owners, engineers... anyone who plays a role in the product's development benefits from incorporating design thinking into their work.

While design thinking applies to all types of products (digital and physical), for the purpose of this eBook, we'll focus on how it applies to digital products.

Product teams and companies around the world have their own nuances when it comes to design thinking. But generally, it can be broken down into five main pillars: empathize, define, ideate, prototype, and test.

EMPATHIZE

~~You have an idea for an app.~~

People have an unmet need.

Product-Market Fit

Contrary to popular belief, great products don't start with a big idea. They start with an unmet need that eventually leads to an idea of how to fulfill it. Your chances of building a product that people actually want to use are exponentially higher if it's based on an unmet need rather than a creative idea alone.

That's where product-market fit comes in.

The success (or failure) of any product is often determined by its product-market fit. That is, the market demand that exists for your product. Is there a problem that the product solves? Is there an unmet need that it fulfills?

Determining product-market fit is no small task. But doing so saves you from building an product that no one actually needs or wants to use.

How do you determine the product-market fit and uncover unmet needs? Research. And lots of it.

EMPATHIZE: ~~You have an idea for an app.~~ **People have an unmet need.**

Start by identifying the broad space that you'd like your product to be in. As an example, let's look at healthcare. From a 10,000 foot view, the digital healthcare space is vast and heavily saturated. But if you start to look into the many niche markets that make up the broader vertical, you can start to hone in on a corner of healthcare that your product can occupy, like diabetes care.

Looking deeper at the digital diabetes care space, there are plenty of competitors at the table. But most are focused on the broad daily care for anyone living with diabetes. Is there an opportunity for you to zoom in further and carve out a spot where your product can live and grow?

Your market research ultimately steers you toward looking at diabetes statistics. You learn that of the 1.4 million Americans living with Type 1 diabetes, 200,000 of them are under 20 years old. This triggers a lightbulb moment for you. What does diabetes care look like for teenagers with Type 1 diabetes? How does it differ from someone much older and with much more experience handling personal responsibility?

All of this initial research leaves you with the confidence that there is a product-market fit here:

Teenagers with Type 1 diabetes would be better served by an app tailored to them and their specific unmet needs than one built for the broader community of diabetes patients.

Foundational Research

With your product-market fit confidently determined, you can get out there and start figuring out what unmet needs your product can fulfill. And for that, we turn to foundational research.

Foundational research can take on a lot of different forms but the ultimate goal is **gaining empathy for the people who will be using your product.** You won't be able to successfully fulfill their unmet needs if you aren't empathetic to their pain points.

The best method of empathizing with people is to observe them and gain a deep understanding of everything going on around them. In the case of the diabetes care app, that means finding teenagers living with Type 1 diabetes and observing their daily habits. Get to know them and find out what their current care routines look like. Interview their parents and see if there are any external factors that might be contributing to pain points. Talk to their doctors, teachers, coaches, friends, and anyone else who might be a stakeholder in their care.

If the product you're developing is in manufacturing, observe the line workers or machine operators who will be using it. Medical records or appointment scheduling app? Find some healthcare administrators, doctors, and nurses to observe.

Regardless of the industry or user groups that you're observing and connecting with, the key to useful research lies in how you approach it. To get an effective qualitative data set, plan on observing at least 10–15 people in your user group.

Observe people in their environment

It may be tempting to simply schedule a sit-down interview with someone in a conference room or coffee shop. Resist that temptation. **The best way to fully understand people's experiences is to observe them in the context of that experience.** That means while they're checking their blood glucose or self-administering insulin, working on the manufacturing line, or inputting patient data.

Ask the right questions

Observing people in context is key but that alone won't get you far unless you're also asking the right questions of people. **Ask broad, open-ended questions that prompt a discussion or explanation rather than a yes or no answer.**

Ask this:	Not this:
Tell me about a time when you forgot to check your blood sugar.	Have you ever forgotten to check your blood sugar?
What are some of the most challenging aspects of working on the line?	Do you enjoy working on the line?
Can you walk me through the entire process of inputting a patient's medical history?	Does the software you currently use have all the features that you need to do your job?

Take note of workarounds

As you observe people, take note of any shortcuts or DIY hacks they've implemented to make their work faster or easier. **If there are workarounds in place, that signifies a gap in the process which usually points to an unmet need.** A reminder in their calendar app that it's time for a glucose check, a cheat sheet of complicated codes to run a certain machine, a second computer because the current software bogs down the hard drive... all of these are problems that your product can potentially solve.

Synthesize your data

All of your research will undoubtedly leave you with a massive swath of raw data. **Before you can pull any insights out of all of this data, it needs to be synthesized in a way that allows you to interpret it.** That means transcribing all of your interviews, highlighting commonalities, and putting them on Post-Its (physical or digital), sticking them on a wall where they can be moved around as needed. The goal is to get the information out of machines and into a format that allows synthesis to happen. You simply can't get there in a spreadsheet. As you synthesize, you'll begin to notice patterns and spot anomalies in the data. **It's within these patterns and anomalies that your insights and unmet needs lie.**

While you're synthesizing and analyzing your data, you find that kids who are active in a lot of extracurricular activities have more lapses in their glucose checks. And that in many cases, they're the only ones in those activities who have Type 1 diabetes. Further, multiple kids you interviewed said that they're the only diabetics in their entire school. They don't find themselves interacting with other kids who understand the challenges of the disease very often, making it easy to slip into bad care habits. **Those sound like some unmet needs.**

DEFINE

Finding the soul of your product

Product Design Strategy

Equipped with plenty of empathy for your users and some unmet needs on which to focus, it's time to move on to defining your product's design strategy. **This critical step is what gives your product its soul.**

What is a Design Strategy?

A design strategy defines what your product is well before you write a single line of code or begin moving any pixels around. When done properly, your design strategy intersects and integrates with your organization's business strategy and technology strategy. Combined, these three strategies outline long- and short-term plans for how and why your product will change and innovate over time.

A strong design strategy lays the groundwork for determining the value proposition of your product. That is, a defined value that your product or service provides to your users. Ideally, that value should be something that your product and only your product can offer. It's what sets you apart from your competitors, presently and in the future.

In the case of our example, your mobile app provides teens with Type 1 diabetes with everything they need to check and monitor their blood sugar as well as keep track of their activity levels and foods they're eating. But more than that it creates a sense of community with a social media component built into the app. **The value proposition for this app is that it provides consistent diabetes care that doesn't feel like a chore or make kids feel different from their peers.**

Defining a Product Vision

While the product design strategy defines what value your product provides your users, the product vision defines how it delivers that value. Put another way, product vision encompasses a high-level view of your product's main features, flows and information architecture, stakeholders, and goals.

Product Concept Map

A product concept map is a key tool to help you define your product vision. It shows the relationship between different conceptual components of your product. Essentially, it links people or things with the actions they're doing (people) or that are being done to or with them (things).

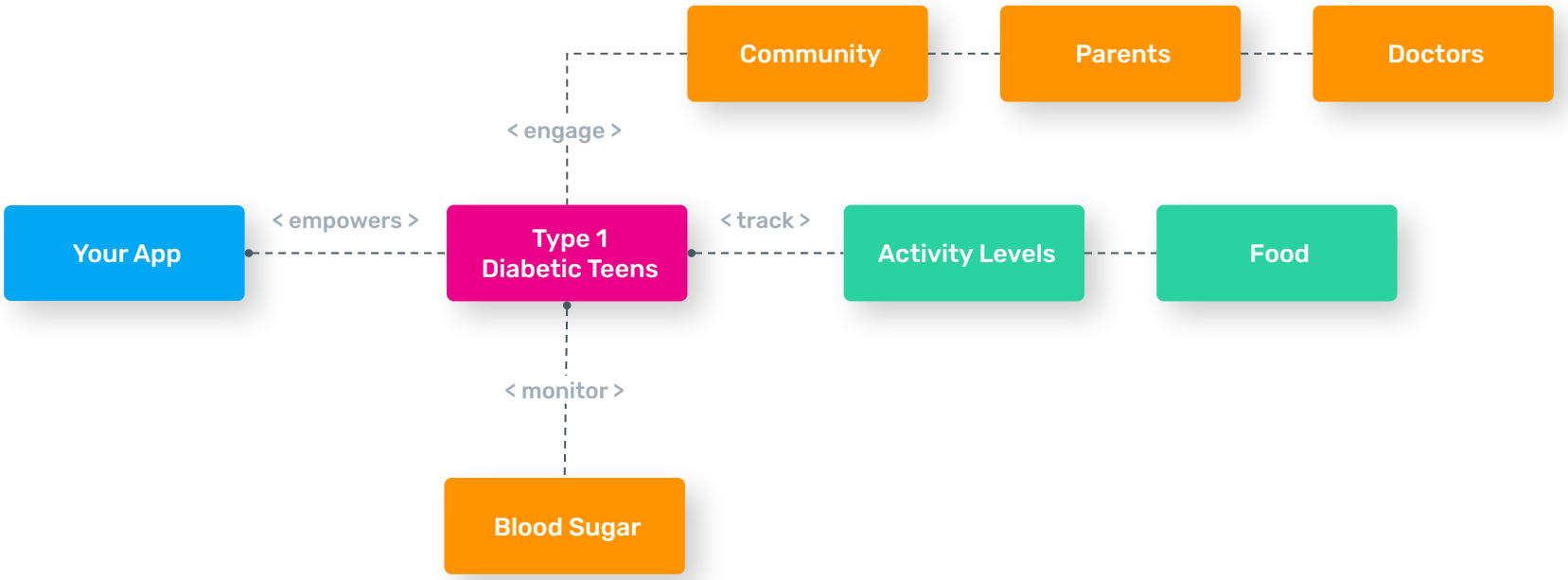
In order to create a concept map, we first need to list out what those components are. Chances are they're all already words that you have written in your notes or that you've already been using to describe your product. Prioritize the list based on what's most important.

DEFINE: **Finding the soul of your product**

Nouns		Verbs	
Teenaged Type 1 diabetics	Blood sugar	Monitor	Check
Reminders	Check-ins	Receive	Send
Activity levels	Food	Track	Engage
Community	Parents		
Doctor			

DEFINE: **Finding the soul of your product**

With this prioritized list figured out, you can begin to sketch out the concept map.



DEFINE: **Finding the soul of your product**

After you've completed this initial sketch you can continue refining your product concept map to include additional words and concepts not captured in your original list. This expanded map should have a lot of new offshoots and encompass all the complexities of your product as you can identify them.

From there, you can simplify the map down to a core concept like "Your App empowers Type 1 diabetic teens to monitor their blood sugar to take charge of their own care and build a community."

That statement really starts to get to the soul of your product — empowerment, take charge, build community. With that soul defined, it's easier to start adding details around how the experience reflects that soul. For instance, since a lot of kids indicated that it was easy to forget to check their blood sugar or fall into bad habits, the app has push notification reminders as well as the Buddy System. The Buddy System allows for kids to help keep each other accountable for their care regardless of whether they're in the same school, state, or even country.

IDEATE

Create Your User Experience

User Experience Design

By now, you know everything there is to know about your users, their unmet needs, and how your product will solve those needs. Now, it's time to start building the experience that actually delivers on that how. To do that, we turn to several different tried and true human-centered design tools and methods.

Experience Mapping

An experience map outlines the entire user experience from start to finish. It's through this exercise that you can begin to understand how people will use and interact with your product.

User Requirements Definition

Requirements definition adds more structure to the journey your experience map outlines. It translates the entire journey into specific user requirements that get put into a matrix along with the individual components required to meet them. This exercise is what helps you determine the components and user flows. It's about figuring out what must be there to allow the user to complete the task at hand.

User Flows and Information Architecture

With detailed product requirements in hand, translate them into user flows that describe specific interaction patterns and use cases. These user flows then allow you to build a site map and taxonomy to define the overall information architecture.

Wireframes

Based on the user flows, move on to building wireframes of the product. Assuming all the previous steps are complete, the wireframes have annotations. Annotated wireframes describe in detail exactly how elements on the screen should function. In essence, they serve as an extension of the design team to the developers building the product.

User Interface Design

Moving into the user interface design stage of the process, start to add to the product's visual side. The UI is the display layer. It's what the user sees and interacts with. UI design is also the stage of the process that most people think of when they think of design. But as you can see from all of the pages that precede this section, there is a lot of design work that must be done to even get to the point of adding a display layer to any product. With that said, what does UI design all entail?

Visual Concept and Production

UI design encompasses things like colors, fonts, grid structure, and how elements on the screen look. All of this together is called the design system. When creating a design system, every decision is evidence-based and backed by thorough research. After all, the whole point of doing all that work on the front-end is to make your UI work successful.

Interaction Design

UI design also addresses how the elements in your product's design interact with one another. Create a design system of components and add some small, micro-interactions to elevate specific features within the product's overall experience. The keyword with these interactions is "micro." They shouldn't distract the user from the overall experience. Keep them minimal and very subtle to make them successful.

UX Writing

UX writing lays out the language guidelines to which all of your product's content must adhere. Does a button say "Enter" or "Go"? "Get started" or "Begin"? According to your product strategy and user research, what are the right words to use for your audience?

PROTOTYPE

Show vs Tell

Prototyping your product

Imagine that someone sends you an extremely in-depth email detailing every single nuance of the product. It covers everything from features and benefits to outlining how you should feel while using it to how different elements of it interact with one another.

Now, imagine someone hands you a rough (albeit still usable) prototype of that same product. You can click around in it, scroll, see all of the features in action, and really get a feel for yourself how the product works and the experience it provides.

Which of those two experiences is more effective in providing a sense of the product? For most people, the prototype is a far better tool than an in-depth explainer.

A prototype of your product is an extremely useful tool in a number of ways. It can serve as a proof of concept that your idea is viable and worth moving forward. Prototypes also assist in showing investors what your product can do rather than simply telling them.

PROTOTYPE: **Show vs Tell**

Prototypes can take several different forms depending on your needs. In some cases, it's a clickable front-end only prototype with placeholder data. This method is mainly intended to give users an idea of the look and feel of the product. Basic functionality, interactions, user flows... enough to give an understanding of the product so it can continue moving forward or be further iterated.

In other cases, a more refined prototype is necessary. This might be for testing purposes, or to really wow a decision-maker. In those instances, it makes sense to work your development team to build out a more robust prototype with real data to really show people what your product can do.

TEST

Testing the Rawest Form of Your Experience

When should you test?

This simple answer of when to test your product is: as often as makes sense for your organization. Testing can be done at any stage of the product development lifecycle. Taking that approach can be costly both in terms of budget and time though. If those are both more constrained, it makes sense to only test when you'll get the most actionable feedback on your product — during the wireframe stage.

Testing during the wireframe stage offers two distinct advantages.

The first is speed. If you find that something in a wireframe just isn't working for your users, it is far easier to iterate and make changes than if you were to test with a fully designed display layer.

The second advantage is that it allows you to truly test the experience and only the experience. If you were to wait until you've added the display layer, it can cloud people's perception of the experience because there are more elements to distract them from the experience. By stripping all of the visuals away and focusing people's attention on the wireframed experience, you can be more confident in the feedback you receive.

Conclusion

Developing a digital product is a long, difficult journey. But by adopting a design thinking mindset and keeping your users top of mind, you'll ship a digital product that wins. Set yourself up for success early on in the journey by conducting thorough foundational research and uncovering an unmet need your product can fulfill. If you do, the rest of the journey will be easier and much more successful.

And if you find you need some help along the way, let us know. We'd love to help.

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