

A PROJECT GUIDE TO

UX DESIGN

**FOR USER EXPERIENCE DESIGNERS
IN THE FIELD OR IN THE MAKING**

THIRD EDITION

RUSS UNGER AND CAROLYN CHANDLER

**New
Riders**

VOICES THAT MATTER™

FREE SAMPLE CHAPTER |



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A Project Guide to UX Design: For User Experience Designers in the Field or in the Making, Third Edition

Russ Unger and Carolyn Chandler

New Riders

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Praise for *A Project Guide to UX Design*

A Project Guide to UX Design is essential reading for anyone looking to get started in design or product management or hone their existing skillset. It will teach you what to do, when, and how while giving you an overview of how it fits into an overall product development process.

—Donna Lichaw, executive coach and bestselling author of *The Leader's Journey*, the much-awaited follow-up to the *The User's Journey*

This book is a fantastic introduction to the world of UX. It provides a high-level overview followed by practical examples that are both engaging and insightful, making it perfect for students and early career UX designers. It's also an invaluable tool when shared with cross-functional team members, helping instill a deeper understanding of the significance of the role of UX in product development and design. If you're looking for a solid framework to kickstart your UX knowledge or provide mentorship to a newer designer, this book is a must-read.

—Amy Jiménez Márquez, VP of Experience Design at Zillow

This book made me unhappy. It is exactly what I needed 25 years ago at the beginning of my career, but I didn't have. As a new UXer, I needed a broad, relevant view of this expansive craft. I needed practical advice rooted in the realities of real-world product design work. All of which *A Project Guide to UX Design* offers. Future UXers, be happy that Russ and Carolyn have refreshed this great launchpad into user experience design. Use it well.

—Farai Madzima, designer and coach for people managers

A Project Guide to UX Design is the best overview of what it really takes for a team to deliver great user experiences that I've seen anywhere. Period.

—Jesse James Garrett, executive design leadership coach and author of *The Elements of User Experience*

This may become *the* book I hand out to folks moving into UX. It's practical, pragmatic, and... a punchy little grab bag of just about everything needed to get started in UX. There's the stuff you'd expect to find: How to do customer interviews, types of prototypes, and so on. But then, the book slips in overlooked details, like pricing or compensation for user research. It's all here! Definitely something I'd recommend to folks new to UX or those looking to shore up some gaps.

—Stephen P. Anderson, author of *Seductive Interaction Design* and *Figure It Out*

A Project Guide to UX Design is filled with clear, comprehensive explanations of every critical element of the UX profession. It's a "must have" reference for anyone looking to enter the field or round out their knowledge of UX.

—Katie Swindler, author of *Life & Death Design*

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Acknowledgments

Russ Unger

I'm grateful to find joy in the work that we get to do in this field, and to be able to change with it as it changes. A lot of industry (and life) happened in between editions, and I've felt lucky to get to be a part of that evolution in some way, shape, or form. So many experiences have fed into what ultimately became this third edition—and not just ours, but also those of the folks we met along the way and brought in to share with us.

My family allowed me to do this. Again. Again. I'm eternally grateful. Thank you Aves, Syd, and Nic for keeping me in smiles and laughter at times when they've been in short supply. Thank you for laughing at jokes no one else would ever find funny.

Lots of great friends helped breathe life into the pages that follow, and kept things moving when it seemed like deadlines were out of reach. In no specific order, the stars of the third edition are: Brad Nunnally, Kim Nunnally, Brad Simpson, Gabby Hon, Dan Brown, Billy Carlson, Nathan Shedroff, Fred Beecher, Brigette Metzler, Rachel McConnell, Noah Kunin, Tanya Snook, Jesse James Garrett, Lisa deBettencourt, Shannon Leahy, Matthew Grocki, Tim Frick, Meghan Casey, Natalie Marie Dunbar, Marc Rambeau, Mary Carroll-Mason, Donna Lichaw, Amy Jiménez Márquez, Farai Madzima, and Stephen P. Anderson.

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Everyone who helped out with the first and second editions: You helped us grow up in the industry and get better by knowing you. You played an invaluable part in getting us there, and then in getting us here. Thank you so very much.

Having written a book is so much easier than writing one, and finishing the writing only happens when you have an amazing support system. We did, at that.

Carolyn Chandler

I knew going into it that this edition would be a big endeavor. It's been 11 years since the last edition, and the tech field changes at light speed. Plus, during much of the writing of this book, in-person events were scarce—and my favorite way for staying in-the-know is a lively face-to-face conversation.

Luckily, the experts in this edition helped me immerse myself in some of the most recent and relevant changes in the field, suggesting topics and giving feedback.

Mary Brown, one of the most plugged-in people I know in the UX research field, lent her time in suggesting tools and techniques to add and how to explain them. Katie Swindler, fresh off publishing her book *Life and Death Design* (2022, Rosenfeld Media), started me off with great conversations about design after a literal workshop where we created wooden toys. The folks at Eight Bit Studios gave me ideas and encouragement, including Danny Lopez, Jess Meister, Holly Ferguson, Jason Oliviera, John Ostler, Steve Polacek, Don Bora, and Heather Brown (among many others).

Since the last edition, I also met and married the amazing Matt Smith. No, not the Doctor, though he does use some of the same chaotic good energy to improve the lives of others. He fed me encouragement, silliness, poetry, and breakfast to supply the energy needed for the long haul of this work.

And finally, in addition to the people Russ has already acknowledged, and of course Russ himself, I'm continually grateful for the people who contributed to the first two editions with their support, expertise, and time: Jim Jacoby, Brian Henkel, Steve Baty, John Geletka, Linda Laflamme, Nate Bolt, Brandy Taylor, Steve Portigal, Christine Mortensen, Brett Gilbert, Jen O'Brien, Jason Ulaszek, Haley Ebeling, Meredith Payne, Jenn Berzansky, Santiago Ruiz, and Danyell Jones.

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Introduction

Why We Wrote This Book

Welcome to the third edition of *A Project Guide to UX Design*.

Somewhere, there's a student in user experience design losing sleep because they don't know what it will be like to work on a real project at their new company. Across town, there's a UI designer with plenty of project experience who yearns to take on new responsibilities in defining their product's user experience. These are two people at different points in their lives but with a similar need: to understand how to integrate user experience practices within the context of a living, breathing project.

Our goal with this book is to give you the basic tools and context that will help you use UX tools and techniques with working teams. As you'll see in many of these chapters, we're not trying to be everything to all people, but we are trying to provide you with the core information and knowledge that you should have to perform many of the activities you'll need as a UX professional. We'll share our own experiences as well as advice and ideas from other experts to help you identify ways to jumpstart the basic materials and allow you to mash up the information and create something newer, better, or even more suited to your own purposes.

We hope we've done a decent job of articulating that this is a pretty good approach to UX design projects.

We're nothing if not constantly trying to learn and improve (*whatever we do*) with each iteration. That's why, to a degree, we're in this field.

A Bit from Russ

I don't think a single book will cover everything that a person working in, or around, UX will need to know. I hope we've identified the critical items that help folks in the work they're doing today, and helps those around them understand why they're important to delivering an excellent product, application, or service.

A lot has changed since the first two editions, but fundamentals still remain. This book will not encompass everything, and it will not go as deep as everyone needs. We have done our best to supply additional resources to help you dig deeper where it is important to you, while providing you a foundation that helps you get started.

A Word from Carolyn

For many years now, I've been in the lucky position of building and managing UX teams. I say "lucky" because I find that UX designers in general have a great balance of characteristics that make them plain fun to work with, mixing right-brain intuition and left-brain logic.

As I've conducted interviews to build these teams, one thing has really stuck out: A related educational background, like human factors or communication design, is a great indicator that someone is committed to the field of UX design, but it's not the number one indicator of whether someone would be a good fit within the team or on a project. Just as important—if not more so—is the person's ability to have a consultant's mind-set. This means a positive attitude, a drive to understand and include others throughout a project, and—above all—a focus on making a real impact for users and clients.

This mind-set means taking the time to understand the perspectives of other roles on the project, making cases and compromises when necessary. It takes experience and effort to get this mind-set down really well, but having an open mind, a strong foundation, and a good set of questions (with the courage to ask them) can take you a long way. This book may not supply all "the answers," but it will give you the questions to ask to help you find them.

Who Should Read This Book

A Project Guide to UX Design provides a broad, introductory overview to UX design within the context of a project.

But should we be talking about projects or *products*?

Since our first edition, team structures and methodologies have evolved enormously. This means you're likely to hear "project" and "product" teams referred to in different ways out in the field. Let's take a moment to clarify how we used those terms in this book.

We define a “project” as a team-based initiative that has a definitive starting point and stopping point. The timeframe may vary widely; it could last a few weeks or over a year. When the project ends, the team may move on to other things (let’s say, at the end of a specific seasonal marketing campaign) or the team may stay engaged on a specific digital product but change their focus to another initiative. A team may have multiple projects going on at once or may be working on multiple products. Possibly all of the above!

Regardless of the project being undertaken, or the type of product involved, anyone with an interest in UX design should find something useful here. We focused on the following groups in particular:

- ▶ **Students** taking UX-related courses (such as human–computer interaction or interaction design) who want to supplement their coursework with information on how to apply their learning to real-life situations, involving cross-disciplinary teams, where communication and collaboration are vital.
- ▶ **Practitioners** who would like to deepen their knowledge of the basic tools and techniques of user experience work and improve team communication about the roles involved.
- ▶ **Leaders of UX groups** who are looking for a book that will help their teams integrate project best practices with UX design activities.
- ▶ **Leaders of any project and product teams** who are interested in learning more about how UX design integrates into their initiatives, what the value is, and what to expect from UX designers.

TABLE I.1 What Should I Read?

| IF YOU NEED TO... | THEN YOU SHOULD READ... |
|--|---|
| Define user experience design and understand what draws people to the field | Chapter 1, “The Tao of UXD” |
| Understand the different product types you may work on, roles you may interact with, hats you may wear, and team structures that may support your work | Chapter 2, “The Project Ecosystem” Chapter 3, “DesignOps, ResearchOps, ContentOps, Oh My!” |
| Start things off right with clear objectives and an understanding of how to work within your team’s methodology | Chapter 4, “Project Objectives and Approach” Chapter 5, “Discovery” |

TABLE I.1 What Should I Read?

| IF YOU NEED TO... | THEN YOU SHOULD READ... |
|--|---|
| Define ideas for product content and functionality that are unambiguous and easy to prioritize, drawn from business stakeholders and users | Chapter 6, "Workshops and Collaboration Activities" Chapter 10, "Product Definition" Chapter 12, "Content Strategy" |
| Learn about your users so that you can represent their needs throughout the project, and validate design directions based on user behavior | Chapter 7, "User Research" Chapter 8, "Personas" Chapter 14, "Design Testing" |
| Choose and utilize the tools and techniques that enable you to bring visual ideas to your project team quickly | Chapter 9, "Mapping Methods" Chapter 11, "Design Foundations" Chapter 13, "Wireframes and Prototypes" |
| Ensure your site can be easily found and searched by users and by search engines | Online chapter, "User Experience Design and Search Engine Optimization" |
| Communicate and evolve your design with the project team as it becomes a reality | Chapter 15, "Launch and Release" |

Be sure to visit www.projectuxd.com to read the bonus chapter "User Experience Design and Search Engine Optimization" and to download other bonus materials such as templates.

What's New in the Third Edition

For this third edition, we kept two major changes in focus when deciding what fresh needs and questions should be included. One was the maturing of the design industry through the enterprise level; some of the practices covered here have led to robust design systems, research repositories, and the creation of brand-new roles and team structures.

The second was the grand move to remote work that occurred during the COVID pandemic. While many have since returned to in-person work, the explosion of remote tools has created a broad spectrum of avenues for gaining qualitative and quantitative data and strengthening the foundation of our design decisions. These tools also connect us with people around the world, enhancing our ability to gain a greater diversity of perspectives.

More specifically, here are some of the updates and new chapters you'll find in this edition:

New team structures and roles have been added to multiple chapters.

This includes information about product managers, service designers, and UX writers in Chapter 2, and a new chapter on Operations teams, including DesignOps, ResearchOps, and ContentOps.

Remote research approaches have a major update. Since our last edition, remote research has become the dominant approach for many companies. You'll see tips on working remotely throughout the book, and updates regarding research specifically in Chapters 7 and 14.

Data-informed decision-making gets a larger focus. Incorporating insights from product analytics, A/B testing, and large-scale customer surveys helps designers ensure that their recommendations are based on a strong combination of qualitative and quantitative findings.

We explore more approaches to product definition and prioritization.

Chapter 10 brings more depth to frameworks and techniques that help you define your product from high-level ideas to low-level details, including new content on Jobs to Be Done and user story mapping.

Design systems and accessibility guidelines are expanded on. Chapter 11 contains updates on design principles from the previous edition, enhanced with an overview of common systems used by teams to accelerate the creation process and ensure their products are usable and accessible for a wide range of users.

Discovery gets its own chapter. A valuable part of a UX toolkit, Discovery is an important part of any UX-related efforts and helps provide clarity and alignment, mitigate risks, and set the stage for all the work that follows. Adding Chapter 5 to cover it made sense for this edition.

Workshops and collaboration activities are explored. Chapter 6 introduces folks to the setup and planning of a workshop and the collaboration activities that can happen in them, while providing sample activities that can be immediately put into practice.

The personas discussion is simplified and focused. Chapter 8 provides direction for creating your own user research-informed personas, while also providing an alternative approach for when time and resources are in short supply.

We modernized and bolstered content strategy coverage. We've infused fresh perspectives and modern approaches to ensure Chapter 12 is aligned with today's best practices.

Mapping methods get an update. Chapter 9 still covers site maps and process mapping/task flows, but now includes tips on getting started with journey mapping.

Wireframes and prototypes discussions merge. There's now enough overlap between these outputs that it made sense bring them together into a single location (Chapter 13) to help you identify which approach is the best for your product, application, or service.

We better reflect more modern design and development practices. Chapter 15 is focused on the continuous cycle of refining and enhancing the user experience post launch, while emphasizing the importance of analytics and user insights as the drivers for either iterative or broader-scale updates.

A Note on Methodology

There are a variety of approaches and methodologies out there. We aren't proponents of one approach over another. Our goal for this book is to focus on the steps that are common to most projects: discovering needs and opportunities through stakeholder sessions and user research, defining project needs and product capabilities, designing the product experience, and developing and deploying the solution. The amount of overlap between these steps will vary greatly depending on the project approach you use (see Chapter 4 for more detail). For the most part, our framework is a loose, linear approach, and in each step we take advantage of facilitation and design techniques where they're most helpful.

What About AI?

As we were writing this update, it was impossible not to notice a third major change building: the enormous growth of generative AI solutions. Rather than try to predict which tools will be used (and how) in the coming years (and months!), we kept focus on the project-related activities, skills, and roles that UX designers currently need and that we believe will remain critical. One constant about UX design is continual evolution, however, so we highly encourage those entering the field to experiment with AI offerings to find out how these tools may help teams reach their objectives and improve the user experience.

What This Book Is Not

Before diving in, let's clarify and establish some helpful boundaries: This book is not a one-stop shop for all things UX design. While we did our best to be inclusive of many of the common practices that happen in the work of UX designers in the field, we've intentionally narrowed the scope rather than trying to compile an exhaustive list. With that in mind, it's important to let you know that this book *isn't*:

An encyclopedia of all techniques: The UX field has an enormous number of creative people, and they're always trying new approaches to design problems. Including all of those approaches here would make a much larger book—and one that would quickly be outdated. What we've included here are the most commonly used techniques, the nuts and bolts of UX design. We've tried to provide enough information to both intrigue you and allow you to communicate the activities to other project members—including the basic process for each technique and additional references to books or sites that will help you implement it once you choose your path.

A guide to being a project manager: Good project management (including setting and tracking project objectives, timelines, and budgets) is key to any project's success. We don't cover specifics on how to be a project manager or how to choose a particular project approach. We do discuss the skills that a UX designer brings to a project that allow it to run effectively, such as facilitation and communication, as well as the ability to clarify and maintain focus on project objectives. These skills will help you become a partner in project management.

The only or the perfect process or methodology for you to follow: We don't have all the answers—no one does today. The UX design field is relatively young, and we're all working to improve upon where we are. You will probably find that trial and error, enhancements and improvements, and feedback from others will help you tailor a process to fit your needs. When you find something that works for you, share it! Let us know!

How to Use This Book

There are many excellent resources out there for UX designers. We cover topics broadly here but point you to references that will allow you to explore topics at a deeper level, depending on how much time you want to dedicate to them. To help you understand the amount of time generally needed for each reference, we've split them out into three major categories:



Surfing

References called out with the surfboard are shorter features (usually online) that will take 5 to 30 minutes to read.



Snorkeling

Those called out with the snorkel are longer online articles, white papers, or short books that take anywhere from an hour to a weekend to read.



Deep Diving

Those called out with the diver's helmet are longer books that will probably take more than one weekend to read; they give you in-depth coverage of the topic.

4 Project Objectives and Approach

Know Which Star to Navigate By

One of the keys to a good project is to start the team out with clear project objectives and a well-understood approach. Ideally, the project leadership will have this defined for you—but how do you know if they don't?

This chapter talks about forming project objectives and offers some questions that will help you solidify those goals. We'll also discuss some common project approaches (or *methodologies*) and how they may influence the way you work.

Carolyn Chandler



You're in the project kickoff, with the full team for the first time. The project manager hands out some materials and gives you an overview of the project. By the end of the meeting, ideally, you should have enough information to answer the following:

- ▶ Why is the project important to the company?
- ▶ How will stakeholders determine if the project was a success?
- ▶ What approach or *methodology* will the project follow?
- ▶ What are the major dates or *milestones* for key points, such as getting approval from business stakeholders?

All of these questions concern the expectations that stakeholders have for the project: *what* the project will accomplish and *how* they will be involved in it. The first two questions pertain to the project's objectives and the last two to the project's approach.

A *project objective* is a statement of a measurable goal for the project. Let's talk about objectives in more detail.

Solidify Project Objectives

Objectives are important focusing lenses that you'll use throughout the project. They should spring from the client company's overall business strategy, so the project objectives should be in line with the strategic initiatives within the company. For example, if there is a strategic initiative to appeal to a new group of prospective customers (called a *market*), the project you're working on may be an effort to provide that market with better online access to products and services relevant to them. The objective for that project would then be focused on reaching and engaging that market.

A clear objective resonates throughout a project. It helps you:

- ▶ Ask the right questions as you gather ideas from business stakeholders.
- ▶ Run discovery activities, such as research with users, and focus your analysis of the results.

- ▶ Detail the ideas gathered from stakeholders and users and convert them into a consolidated list of project ideas.
- ▶ Prioritize those project ideas based on their value to the company.
- ▶ Define the product and its features in order to focus design and development.
- ▶ Create effective design concepts and prototypes.
- ▶ Manage requests for changes to the design once development begins.
- ▶ Focus efforts during deployment activities (such as training and communications to users about the new site or application before and during its launch).
- ▶ Determine whether you've met the needs of the client company, once the project is complete.

When you start a new project, you probably have objectives from the project's sponsor (the business stakeholder who has direct responsibility for the success of the project or the product manager, if you have one), as well as a set of project-related requests coming from business stakeholders and from customers, but they all may be a bit fuzzy (**Figure 4.1**). Your goal is to clarify these into a group of solid statements that you can use as a yardstick for the project's success.

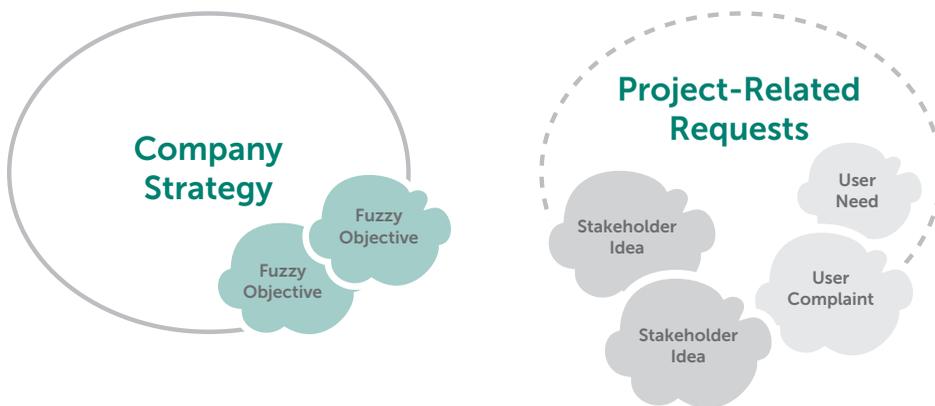


Figure 4.1 Fuzzy objectives, ideas, and needs

A solid objective has three key characteristics. It is:

- ▶ **Easy to understand:** Avoid insider terminology.
- ▶ **Distinct:** Avoid vague statements; instead, use wording that seems like it will be useful when you're prioritizing requirements.
- ▶ **Measurable:** Make concrete statements that you can set an independent measurement against to determine your success.

As you define a fuzzy objective, making it clear and measurable, it becomes a solid objective that you can base decisions on (**Figure 4.2**).

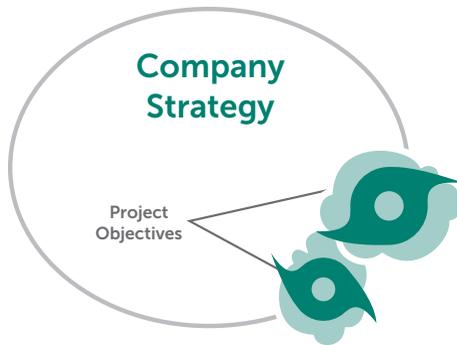


Figure 4.2 Objectives being solidified

You'll hear many statements that could be considered objectives. Analyzing fuzzy ones such as those below will help you solidify your objectives and communicate more effectively within the project team.

"Our objective is to become the market leader in industry x."

This is an objective for the entire company, but it is too broad for a specific project. Multiple initiatives at the company need to come together to make this happen; any one digital product may *help* with this but will be very unlikely to be able to handle the entire burden.

"Our objective is to generate excitement among our customer base."

This one is better, because a digital product could have an impact on this, but it's still too vague. Why is it important to generate excitement? How does that excitement translate into meeting a business need? And how can you tell if you've been successful?

"Our objective is to increase the number of returning users by 10 percent."

Now we're getting close. This one is easy to measure, but it's too focused on an intermediate step. Suppose more users do return after their first experience—it may not help you if people don't perform the actions you think are important once they get there.

Fuzzy objectives can give you a sense of a client's desires and larger goals. From these you can craft more solid project objectives, such as:

- ▶ Increase the revenue from online product sales by 10 percent.
- ▶ Increase the revenue from online advertising by 20 percent.
- ▶ Increase the number of current and potential customers in our customer database to at least 20,000.
- ▶ Deliver highly rated and highly referenced content to our primary users. (Note that this one requires some work to decide how to measure "highly rated" and "highly referenced," but the elements are there to build from.)

Each of these can be measured and affected by your project. They can also map pretty closely to your designs and the features offered. For example, it's very common to offer an email newsletter as a way to meet an objective of growing the customer database. To deliver the newsletter you'll need to capture customer email addresses, which will be added to the database. Objectives may also bring out new product ideas. For example, if you're measuring success by the average rating given to articles available in your product, you'll need a feature that allows users to give ratings. In these ways, objectives help you focus as you gather ideas for the product, and these may later become prioritized features.

If there are multiple objectives, be sure to create a prioritized list with your business sponsor and project team. Objectives sometimes conflict with each other during design, and the team will need to know what takes precedence. The final prioritized list of objectives should come from your project sponsor or product manager.

Pairing Product Analytics and Objectives

If you're working on a brand-new product, you'll want to track some common product analytics to set the stage for measuring progress in the future. Some important analytics to consider are:

- ▶ **Acquisition:** How many new users download or sign up for your product (on a daily, weekly, or quarterly basis for example)?
- ▶ **Activation:** How many new users interact with the product in a meaningful way, like reading an article or writing a review?
- ▶ **Retention:** What percentage of your users come back after the first use and continue to return over a period of time?
- ▶ **Referral:** How many users refer the product to other people? How many of those referrals sign up?
- ▶ **Revenue:** How many users take an action that generates money for the company in some fashion (like viewing an ad, making a purchase, or subscribing)?

If you're working on enhancements to a digital product that already exists, your team will ideally have some analytics currently in place. Anytime you deploy a new release, review the data gathered before and after that release to see if you can measure the results of your changes.

To help keep a clear focus across iterations of a product, teams often choose a small number of analytics to be *key performance indicators* (or *KPIs*) that visualize positive or negative changes to product usage.

Your stakeholders may have one metric over all of them that should be a focus for a particular team because it aligns with the company's overall strategy for that product. This metric is referred to as the *North Star* because it's one focal point used to guide decisions and measure progress. For example, a brand-new product may have an acquisition North Star around the growth of the user base. For a more mature product, the North Star might be around increasing engagement with a feature set key to business value, such as something that generates revenue.

Understand the Project Approach

Knowing the overall approach, or *methodology*, of a project is an important part of understanding when and how you'll be involved and how you should be involving others, such as your project team and business stakeholders.

Sometimes there seem to be as many project approaches as there are projects. How to choose the right approach for a project is a large topic in itself. The methodology you choose can depend on many things, including the structure and location of the project team, the technologies being used on the project, and the degree to which collaboration is a part of the company's culture. For the purposes of this book, we're assuming that you've joined a project where the approach has largely been determined by those responsible for the project's success, such as the project sponsor and project manager. In this situation, your main goal will be to understand the approach and help make it effective for the business stakeholders and your users.

Here we'll focus on some of the most common methodologies, as well as some design approaches you might encounter on a project. The important thing to note is that most methodologies involve the same steps:

- ▶ **Plan** the overall strategy, approach, and team structure.
- ▶ **Discover** the relevant user and business needs that the product should help address.
- ▶ **Define** the product's purpose and functionality (or that of a specific release of the product) by ideating on features and prioritizing the results.
- ▶ **Design** visual concepts, user interface elements, and interactions, evolving them as needed prior to development.
- ▶ **Develop**, test, and refine the solution.
- ▶ **Deploy** the solution via messaging, training, and a planned launch.
- ▶ **Iterate** by making recommendations for improvements.

The names for these steps may vary, as may the degree to which they overlap, the number of times you may repeat some steps before moving to the next, and the way information is documented. But the general activities in each step are common to most projects, and across different methodologies.

Waterfall Methodology

A *waterfall methodology* (**Figure 4.3**) involves treating the steps of a project as separate, distinct *phases*, where approval of one phase is needed before the next phase begins. For example, the Design phase does not begin in earnest until requirements have been approved by business stakeholders, who sign off on one or more requirements documents at the end of the Define phase. The linear process then proceeds through implementation, testing, and maintenance.

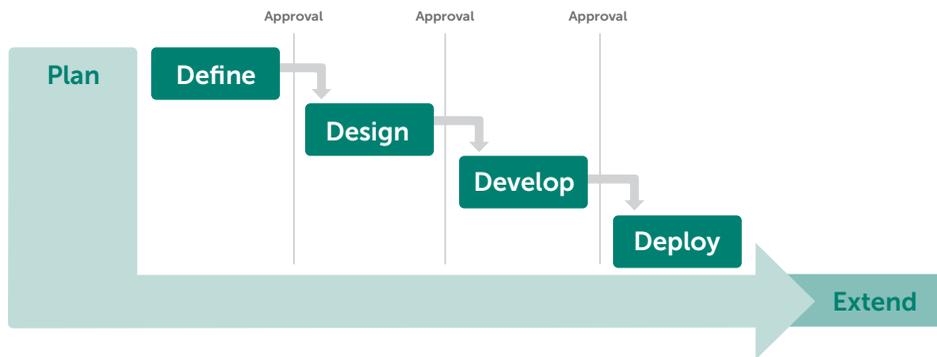


Figure 4.3 Example of a waterfall approach, where each phase “falls” into the next upon completion

The problem with a pure waterfall methodology is that it assumes that each phase can be completed with minimal changes to the phase before it. So, if you come up with new requirements in the Design phase, which is common, you must suggest changes to documents that were approved at the end of the Define phase, which can throw off the plan and the schedule.

Agile Methodologies

Because change is constant, project teams are continually looking for more flexible approaches than the waterfall model. Many methodologies follow a more fluid approach, with some steps happening alongside each other; for example, versions of the website could be released on a rapid, iterative schedule using an *agile*, or *rapid development*, approach (**Figure 4.4**). An agile approach generally has a greater focus on rapid collaboration and a reduced focus on detailed documentation and formal sign-off.

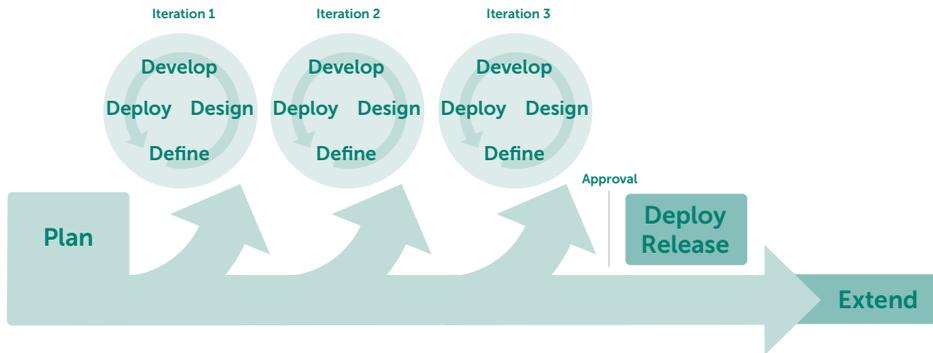


Figure 4.4 An agile approach focuses on short cycles and high levels of communication between disciplines on the team.

A true agile approach (following the best practices developed by members of the Agile Alliance, for example) calls for small teams whose members are located next to each other physically, or remotely in a highly synchronous work setting, with little focus on defining formal roles between team members. Working this way allows a very high degree of collaboration, which reduces the need for heavy documentation between the stages of design, development, and testing. A team member can pose a question, come to the answer together with other team members during a quick whiteboarding session, and implement a solution without the delay of detailed documentation and approval. Stakeholder reviews occur with a fully functioning system when one of the many iterations is released, and the resulting input is taken into account as the next iteration is planned. (*Iterations* are draft versions of a particular site or application and may also be called *sprints*.)

Many different agile approaches have been created, each with recommended practices. Here are three common variations that are good to know:

- ▶ **Scrum** includes timeboxed sprints of work, usually of two to four weeks, with small teams and daily check-ins called *scrums*. There are clearly defined roles within the team, such as a *scrum master* who (among other things) is responsible for helping the team communicate and overcome *blockers*, or obstacles that are preventing work to be done on an area of focus. According to the “State of Agile” report based on a survey of over 3000 companies, scrum is the most commonly used agile methodology. (For the full report, visit stateofagile.com.)

- ▶ **Kanban** is a Japanese word meaning *visual signal*, so it may come as no surprise that the framework is best known for its visual representation of workload and progress. A *kanban board* is the most widely referenced example of the framework and has cards representing user stories (which we'll cover more in Chapter 10). You can find a kanban board template in most development-oriented platforms, like Trello and Atlassian's Jira software (**Figure 4.5**). Kanban is less timeboxed and less role-oriented than scrum by nature, but many companies combine aspects of the two frameworks and refer to it as "scrumban."
- ▶ **SAFe** (Scaled Agile Framework) is an agile approach that has been optimized for large enterprises. It has many of the features of scrum and kanban but is designed for companies with more than one team. This means there are additional practices for alignment and collaboration across these multiple teams and workstreams to help them divide and conquer in their work, but also come together when needed for shared milestones (like a major marketing event that could impact multiple digital products) and other reasons. You can find out more about SAFe at www.scaledagileframework.com.

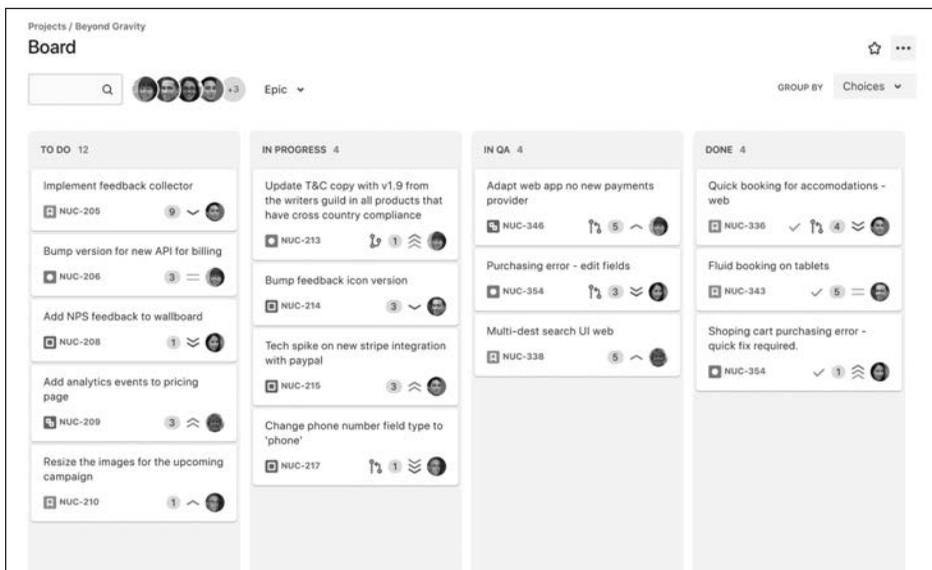


Figure 4.5 A kanban board (shown here in Atlassian Jira) is a visual representation of planned upcoming work. That work is broken down into small units that team members can move between levels of status (the columns), like *To Do*, *In Progress*, and *Done*. The board gives the team visibility into ongoing progress.

When joining a new team, be sure to ask which product development approach the company tends to follow. It's not uncommon for companies to borrow practices from more than one methodology—for example, a team could be holding daily scrums and use a kanban board to track work—so don't be surprised if you end up blending practices from different agile methodologies, or blending waterfall approaches with agile ones!

Other Approaches a Designer Should Know

The approaches we've covered so far tend to cover the full product development lifecycle. There are also several common frameworks that specifically illustrate the Discovery, Definition, and Design phases that a team might go through (note that here as well, a "phase" could take days, weeks, or months depending on the cadence expected of your team). Here are some approaches that are often referenced:

- ▶ **The Double Diamond** framework, created by the British Council in 2006, models an approach to the discovery work on a project (as shown in **Figure 4.6**). The Double Diamond itself is often applied to problems at a variety of levels including large strategic problems; this is a common aspect of an approach called *design thinking*. (See the sidebar "Design Thinking" for more on this.) Teams diverge as they explore the challenge, converge on a definition of the problem, diverge again as they explore ways to address that problem, and converge again on the solution to launch.

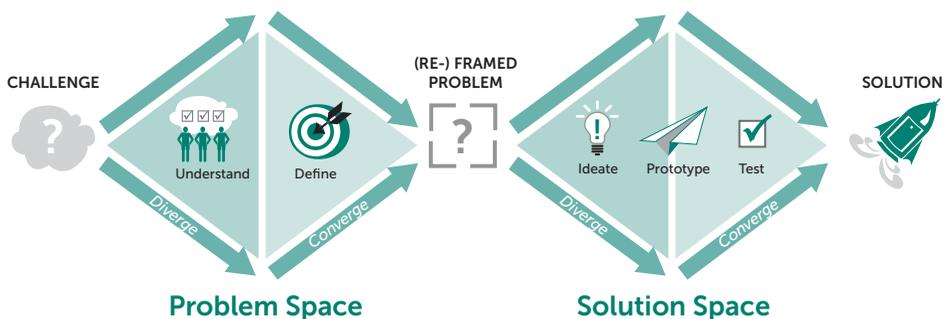


Figure 4.6 The Double Diamond shows two rounds of divergent and convergent thinking—one around the problem space (choosing the right product to create) and the second around the solution space (designing that product well).

Design Thinking

Although it doesn't propose a specific, linear flow of work, *design thinking* applies five steps to problem-solving:

1. **Empathize** with the people you're designing for.
2. **Define** the problem.
3. **Ideate** on potential solutions.
4. **Prototype** one or more solutions.
5. **Test** that prototype.

Do these steps sound familiar? They should! Design thinking takes some of the most common aspects of design—like a human-centric focus, collaborative work, the challenging of assumptions, and the creation and testing of multiple ideas— and applies it to problems that are not typically considered “design” problems within organizations. For example, innovation labs at companies may follow a design thinking approach with senior leaders of the company to redesign services in a consumer-centric way.

Tim Brown, CEO of the design and consulting firm IDEO, goes into detail on design thinking and its impact on businesses in his book *Change by Design, Revised and Updated: How Design Thinking Transforms Organizations and Inspires Innovation* (Harper Business, 2019).

And here's a more personal recommendation from me (Carolyn). Anna van Slee and I co-authored a book to introduce design thinking methods in a playful way, for younger folks interested in the approach or for those looking for team-building games that illustrate lessons in design thinking. Check out *Adventures in Experience Design* (New Riders, 2012).

- ▶ **Lean UX** complements a lean product management approach, which is popular for products being developed in the face of great uncertainty (as most products for startups are). Lean practices focus on reducing waste in the project's process by (for example) keeping documentation to a minimum and keeping a tight constraint on the number of features included in each iteration. The team creates a hypothesis and builds a *minimum viable product* (MVP) meant to help test the hypothesis (Chapter 5 contains more about forming a hypothesis). The idea behind it is to *build* and launch an MVP quickly and efficiently, *measure* the results, *learn* from those results, and build again in an iterative loop (as shown in **Figure 4.7**). For designers, the hallmarks of a lean UX approach are a higher use of sketches and conversations, and a move away from detailed and formalized deliverables like high-fidelity wireframes.

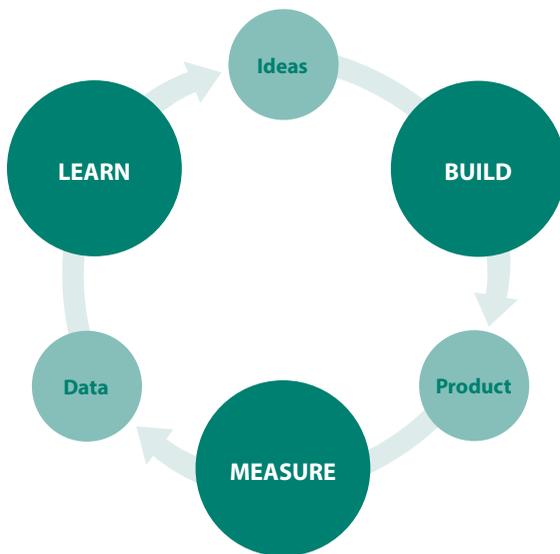


Figure 4.7 Lean approaches focus on a loop of Build—Measure—Learn. The process is meant to increase the speed by which teams cycle through the loop, maximizing learning and allowing for quicker adjustments in strategy based on customer response.

- ▶ **Dual-track product development** is an agile variation that runs two different tracks of work concurrently (**Figure 4.8**). A lean *Discovery* track is meant to help the team explore user needs and experiment in a search for valuable future features, which get added to a backlog, while an agile *Delivery* track focuses on the delivery of product releases based on the features chosen from that backlog by the product team. Separating the tracks gives the team the room to try an experiment (and have it possibly fail) without directly affecting the cadence of the Delivery team.

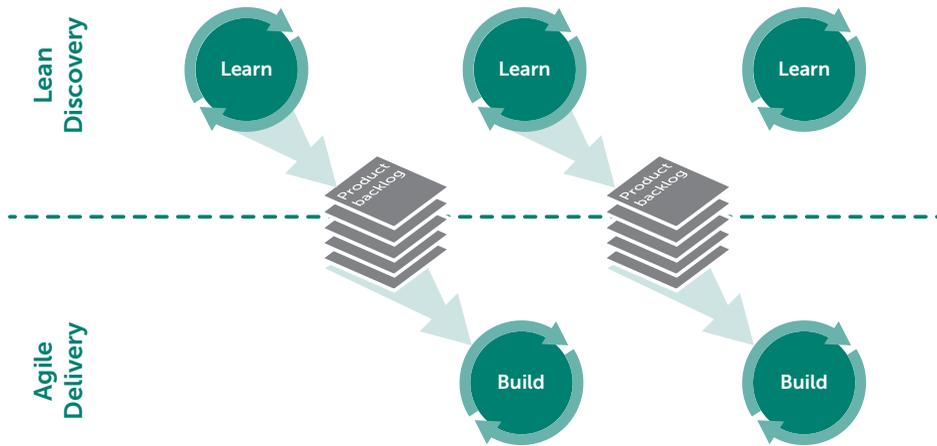


Figure 4.8 Dual-track product development runs discovery efforts and delivery efforts at the same time, so team members have the space to test out ideas (and possibly have those ideas fail to meet expectations) rather than being required to deliver ideas that have not been validated.

► **Design sprints** were popularized by Jake Knapp during his work with Google Ventures, and are described in his book *Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days* (Simon & Schuster, 2016). They are a method of running some of the phases of the second diamond in the Double Diamond approach in a short, focused scope of work over the course of five days. A small multidisciplinary team immerses themselves in the week-long sprint, exploring and sketching ideas, choosing ones to prototype, and then testing that prototype with customers (see **Figure 4.9**). The sprint might be part of a regular agile cadence or done as a one-off activity when there’s a desire to do a deep dive into a particular problem the team would like to solve.

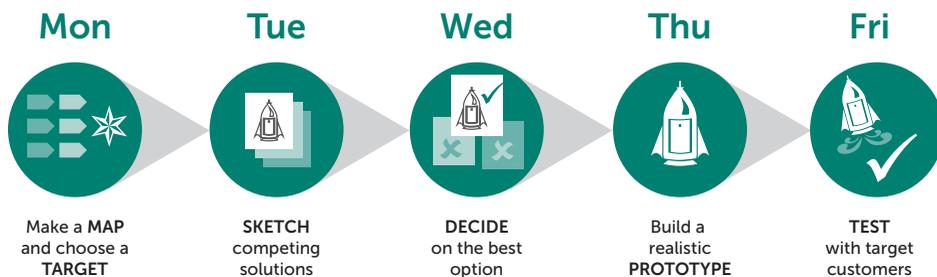


Figure 4.9 A design sprint focuses on a particular challenge and uses a highly collaborative, time-constrained set of activities to move the team from concept creation to prototyping and then to testing.

Though the pace, scale, and process of the approaches we've covered may differ, many of the topics covered in this book will apply to your project regardless of which approach you follow, because the basic activities behind them—defining and designing, for example—are still necessary.

Minimally Viable or Lovable?

Eric Ries developed an approach called the *Lean Startup* after studying Toyota's lean manufacturing processes and Steve Blank's Customer Development model, which emphasizes the need for startups to have an early focus on customers. A Lean UX approach builds on Ries's approach with its customer inclusion, its reduction of waste in the process, and its definition of a product iteration as an experiment using a minimum viable product (MVP).

The concept of a minimum viable product inspires a lot of discussion. Often companies can confuse an MVP with a full first version of a digital product, instead of understanding that it is a test of a hypothesis (where the test may use something digital as part of the test). The result is an overuse of the term to describe "a first release of a product that is stripped down to a small set of features people can use," which itself might lead to a product people can use but aren't very satisfied with.

Coined by Brian de Haaff, founder of the road map software Aha!, the term *minimum lovable product* refers to a version of a product that has enough value and satisfying experience that users can not only use it, but love using it. Usually an MLP takes more time to design and build than an MVP might.

Variations on the "minimum" theme continue to emerge as companies try different ways to engage users on new products without wasting time and money on products that don't show value to users or the business.

Ask the Experts: Jeff Gothelf



Jeff Gothelf is an expert on product management, OKRs, and agility and is the co-author of Lean UX: Designing Great Products with Agile Teams, Third Edition (O'Reilly, 2021). We asked him to clarify some key aspects of Lean UX.

You've said that Lean UX is an approach that gets teams out of the deliverables business. Does this mean skipping deliverables (like detailed designs with annotations) entirely?

Deliverables aren't skipped in Lean UX. They're still used, to the extent necessary, to communicate to target audiences like stakeholders, developers, and customers. But they're not the focus of the project, and they don't create the bottleneck they would in waterfall where the team waits for the design to be "done" and then signed off before anyone else begins working. Also, there's still a large amount of work that you're doing as a designer outside of the actual documentation, because the goal is to validate your design hypotheses as soon as possible. The more experiments you can run with customers, the more right you'll be in the product you're building. The goal is to do the learning work collaboratively in an effort to build a shared understanding across the entire product development team. The more involved the rest of the team is, discussing what you're trying to learn, why it's important, and what results the experiments yield, the more everyone gets a

How Does the Approach Affect Me?

Knowing your approach helps you understand a number of things:

- ▶ **What questions you should be asking, and when:** For example, if you're working with a pure waterfall approach, you'll need to put in extra effort to make sure the requirements captured in the Define phase contain all the information you need for the Design phase. (We'll be discussing requirements in the next chapter.)
- ▶ **Expectations on how project team members will collaborate and how close that collaboration will be:** For example, an agile approach requires very close collaboration. A waterfall approach may involve individual work most of the time, with touchpoints once or several times per week.

clear sense of why you're making the design decisions you're making and what direction the design is heading in. When they have a shared understanding, they need less documentation in order to start building.

How does a Lean UX approach affect the role of a UX designer on the project?

It assumes a leadership quality to the UX role on the team. The Lean UX process forces you to constantly communicate out to the team and solicit feedback from them. But it's not design by committee, either. Yes, you're out there soliciting feedback from your team early and often, but it isn't your job to take all their feedback and make sure it all makes it into the next iteration of the design. It's your job to prioritize the feedback based on your experience, your expertise, and the evidence you're collecting from the market to get the next iteration in customers' hands.

Is there anything the team should have from the beginning to ensure a Lean UX approach is successful?

There needs to be a freedom to fail in the organization. If people feel they have to get it right the first time, right out of the gate, then the whole process fails. This is a hypothesis validation process, and by the very nature of it you're going to come up with some wrong answers. The goal is to figure out what those wrong answers are as quickly as possible and minimize the wasted effort spent going down those paths. If you don't have the freedom to be wrong, then Lean UX will struggle in your organization.

- ▶ **The level of detail needed in your documentation and the level of formality:** Documents submitted at sign-off points need to be formal, almost like legal contracts. Typically, you'll need more formal documents in a waterfall approach, where sign-off is required before you move on to the next phase. However, you may also have some formal sign-off documents when using an agile approach—for example, to capture information at major decision points, such as when a particular iteration is prepared for full release and deployment.

- ▶ **Important milestones that involve approval from stakeholders and deployment to different groups:** The approach will determine what different audiences need to provide at various points in the project, including approvals from stakeholders at sign-off points and feedback from potential users during a beta release.

Now that you've solidified your project objectives and gained an understanding of the project approach, it's time to meet up with your stakeholders to really define the product space. On to Discovery!

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