UXPin

THE GUIDE TO

UX DESIGN PROCESS & DOCUMENTATION

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Introduction

UX Design Documentation is easily misunderstood as paperwork for the sake of deliverables. Whether you choose a Lean UX process with light documentation or a more detailed approach, you need to make sure that the documentation moves the design forward instead of just being a paper trail.

Documentation is much more than a pile of papers for occasional browsing. It is product narration, a formalized vision, and a compass for when things become unpredictable. Smart documentation brings people together and gives form to ideas. Documentation should inspire, not dictate.

In this book, we'll share a wide breadth of expert commentary, theories, practices, and real-life examples of successful documentation. To name a few, we've included advice from product and design experts like **Jeff Gothelf, Josh Porter, Brandon Schauer, Ian McAllister, Kristofer Layons, Ash Maurya, Marty Cagan, Neil Patel, Ryan Hoover, Jason Fried, Andrew Chen**, and more. We'll discuss basic

concepts like how all documentation can be planned for each of the 7 phases of product design. For more experienced readers, we've included how to incorporate group activities into kickoff, how to create realistic personas and detailed experience maps, and even how to use case studies and videos to launch products. Our hope is that it helps you see documentation in a new strategic light.

When you think about it, design documentation helps keep today's successful companies on track with new designs and product releases. We'll look at how highly successful companies like **Apple, MailChimp, Hubspot, Salesforce, AirBnB, Mozilla,** ZUR**B, Google, Amazon, AppSumo, and Atlassian**, among others, used different documentation tactics that all suited their own unique needs. We've also included our own preferences and processes, and outlined how UXPin helps build documentation into the design.

We'd love your thoughts on what we've written. And feel free to include anyone else in the discussion by sharing this e-book.

For the love of structure,
Chris Bank
(co-written by Jerry Cao)

An Overview of UX Design Process & Documentation

A Summary Of The Documents & Deliverables At Every Product Design Stage

Documentation is instrumental for concepting, designing, creating and measuring the performance of products. But it shouldn't be done just for the sake of maintenance. After all, there's nothing about a thick stack of paperwork which resembles the experience of your real product.

As **Lean UX advocate Jeff Gothelf** describes in a piece for Smashing Magazine, thick deliverables created simply for future reference regarding the user experience become obsolete almost as soon as they're created.

There's nothing about a thick stack of papers that resembles your product's UX.

In today's Lean and Agile world, the experience should be the focus – not deliverables. Whether you choose lightweight or more detailed processes, the key is that your documentation should help move the design forward (rather than being just a lagging indicator).

The following is an overview of product design and development documentation, individual elements, and the respective phases to which they belong. Product development and documentation can vary depending on the company but many of the deliverables below are common within most organizations in some form.

We've chosen the methods that we think work best, so feel free to pick only what works.

How They All Relate

When it comes to product design documentation, theory and practice are two very different things. We all know basic tenets of user-centered design. We recognize different research methods, the prototyping stage, as well as the process of documenting techniques in our rich methodological environments. The question you probably often ask yourself, though, is "How does it all work in practice?"

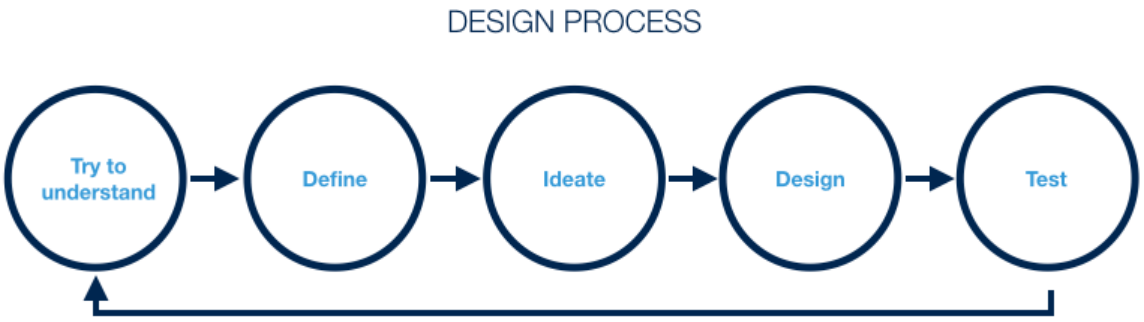

Photo Credit: Marcin Treder, UXPin

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Documentation should complement, not supplement, the design process.

Simply put, it's all about making documentation complementary rather than supplementary to the design process. Before we go into detail, it might help to take a quick birds eye view of documentation during product design and development. Below, we've given a practical explanation of how every step of design documentation ties together:

1. During the initial phase of **product definition**, you're brainstorming the product and how to execute on the project at the highest level with all necessary stakeholders. This might result in project kickoff plan, a lean canvas, and a bunch of really early concept maps and mockups of what you're looking to build.

2. Moving into **research**, your team refines assumptions and fills in the blanks. This stage varies based on complexity of the product, timing, resources, level of existing knowledge, and many other factors. In general, however, it's good to build out competitive and market analyses and conduct customer surveys. If you have an existing product, reviewing analytics, heuristics, content, product context, and user tests are also quite helpful.

3. In **analysis**, the product marketing data collected so far provides the foundation for personas, experience maps, and requirements documents such as prioritized feature spreadsheets and user-task matrices. At this point, the product definition, product

priorities, and product plan has been defined and are ready for more formal design deliverables. Sketches and diagrams are also likely constantly being generated throughout this time.

4. From this output, scenarios, concept maps, and mockups may be created, leading into the **design** phase. Common documentation includes sketches, wireframes, prototypes, task-flow diagrams, and design specifications. For example, competitive analysis and personas created during research and analysis feed into the mockups, concept maps, and scenarios. In turn, these pieces influence intermediate and advanced deliverables such as wireframes, storyboards, and detailed mockups. Some companies treat the Research, Analysis, and Design phase as one large process, as you can see in this overview graphic.

5. During **implementation**, code and design assets are assembled to create a product that follows the product design specifications.

6. Upon launch of the **live product,** feedback data such as support tickets, bug reports, and other analytics continue to drive product refinement through subsequent iterations, and upgrades. With the offering in production mode, data should be continually generated and monitored in the form of analytics and reports to ensure continued success.

7. Continual, data-driven product improvement is achieved through **measuring and iterating** the offering in production, using performance dashboards and analytics.

Guiding Principles

Now that you've seen how each stage is connected to each other, let's look at some helpful principles for moving the product along each stage. We'll explain how to use design sprints so that the process evolves over time instead of being defined only in the beginning.

Photo Credit: milos milosevic. Creative Commons 2.0.

Similar to its Agile software counterpart, design sprints are 1-3 week sprints that focus on solving specific product and design issues. According to **Alok Jain, UX Lead at 3Pillar**, the three key elements to design sprints are collaboration, reduced handover friction, and team focus. In a nutshell, your documentation is a collaborative effort that must always focus on the user itself. Because you move quickly between each stage, you build momentum and minimize waste. More importantly, you're tackling smaller problems which allows for more exploration and risk-taking.

An extremely lean version of the complete cycle can be found here, but we'll describe in detail below how to understand the product, design the product, and release and improve the product.

1. **Understanding the product**

   Before you can build a product, you need to understand its context for existence. Why should stakeholders, the company, and the users care about moving forward with your idea?

Photo Credit: Marcin Treder, UXPin

According to Smashing Magazine, you need to include activities that address business requirements, user requirements, and the best design solution to satisfy both. The keyword here is ”activities”, because while documents like the Business Model Canvas and Lean Canvas are important, you need to energize stakeholders – otherwise you just have a bunch of expensive people talking about stuff everyone already knows. These activities are efficient and invite collaboration:

- **Stakeholder interviews** – Using this template, you can have each team member interview 3 stakeholders. How will the product make customers feel? What should they do? By recording how stakeholders think customers will think, feel, and

do, you're setting a benchmark to compare against usability testing and user analysis.

- **Requirements workshops** – Get stakeholders together, discuss the project plan, and start discussing how concepts feed into product and technical requirements. You can start with a blank Business Model Canvas or Lean Canvas and complete it with the team.

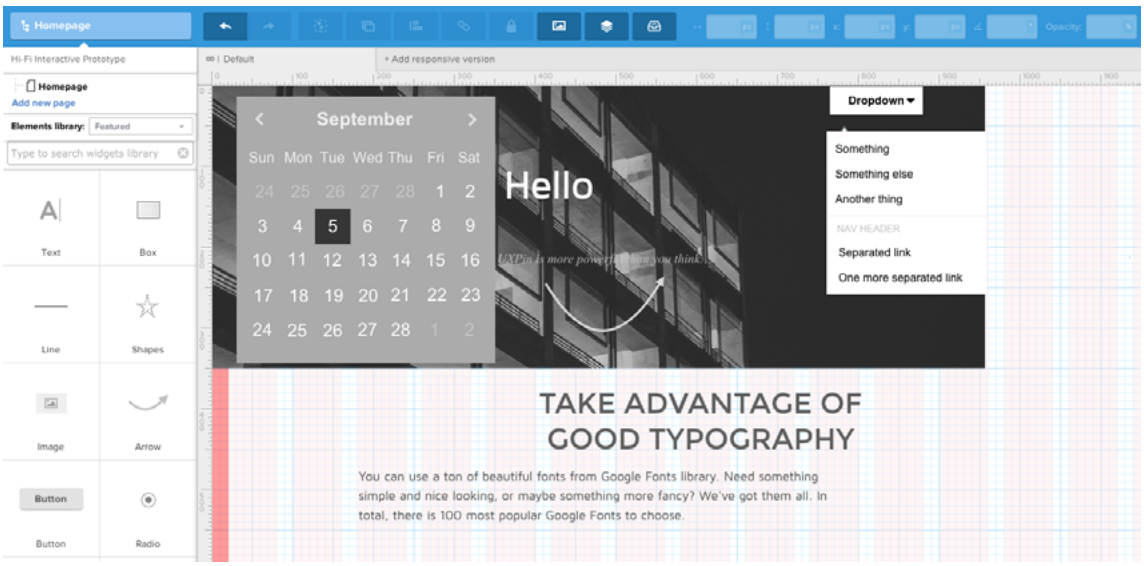
- **Crazy 8s** – Grab some markers and get everyone to sketch 8 product or feature ideas in 5 minutes. Have everyone score each idea, and you'll start to see trends and preferences. This was actually Step 2 in the redesign process for Google Ventures. For additional ideas, check out this list of brainstorming activities.

Once you've laid out the groundwork, talk and test with tons of users so you have real field data for research and analysis. **Marcin Treder, CEO of UXPin**, dove deep into customer development and usability testing after identifying the problem and scope. Back when UXPin was just a paper prototyping tool, Marcin documented (on paper and video) over 50 user interviews and in-person usability tests with UX superstars like Brandon Schauer, Luke Wroblewski, Indi Young and others. The product team then used these insights to create personas, write dozens of user stories, and eventually, outline the product requirements.

At Amazon, an alternative ”working backwards” approach is used in which the first step is drafting an internal press release for the finished product. This approach helps to work backwards from the customer, rather than trying to bolt customers to an idea. By iterating the press release until it sounds appealing, the product team gets an immediate reality check as well as a quick benchmark document for later design and development.

2. Designing the product

Once you have a sense of the product purpose, your main goal is to build a prototype. Whether your team likes to draw on napkins, create high or low fidelity wireframes, you should ultimately end up with something functional. What's unique about this stage is that for most of the deliverables, the documentation is the design.



source: UXPin

According to **Cennydd Bowles, Design Manager at Twitter**, the product team should research two iterations ahead, design one iteration ahead, and review the previous iteration. If you're trying

to stay Agile, he advises diving straight into low-fidelity prototypes as a way of prioritizing "interactions over processes". If you want to get a bit more detailed but still want to stay somewhat lightweight, you can start with concept maps or sketches, then iterate to low-fidelity wireframes, and finally create a high-fidelity prototype. Regardless of your method, make sure you test with stakeholders and users.

If budget and timing allow for it, you can also create experience maps to highlight where the product meets or fails user needs and task models to provide insight into activities users perform to reach their goals. While these aren't part of the design, they are complementary since you also need to see where your product fits into mind and market. Interestingly enough, Yelp takes their design stage a step further by creating a style guide that includes common lines of code, allowing the documentation to literally be built into the product.

Research two iterations ahead, design one iteration ahead, review the previous iteration.

At UXPin, our process is to hold a group sketch session with sharpies on gridded paper, then cull that down to a few wireframes, and then add detail until we have a high fidelity mockup. If user testing is involved, we will build the mockup into a high-fidelity prototype. For large feature releases, we conduct extensive user testing so the ratio is about 70/30 in favor of prototypes.

3. Building and launching the product

As you start to do the heavy technical lifting, it's important to create documentation that helps you see the overall vision. Specific requirements may change as you refine the product, but your documentation should help you understand priorities as your product goes into the wild.

Kristofer Layon, UX Manager at RedStamp, believes that you can visualize product requirements and technical specification documents as a roadmap. The product road map shows user stories and helps prioritize the features you'll build to satisfy them. Sometimes, specific dates may be added into the roadmap so that it also works as a timeline. The elegance of the roadmap is that helps you prioritize what you're building, making it complementary to the "how" defined by your product requirements and technical specs. s Layon suggests, when deciding features,, you can use the Kano Model to evaluate them in 3 categories:

- **Basic Attributes** – These are absolutely required just for the product to work. For example, a laptop's basic attribute is the keyboard or screen.

- **Performance Attributes** – These can be compared between different products as a KPI. For example, a laptop is judged on CPU speed and hard drive space since people tend to prefer fast computers that can store lots of data.

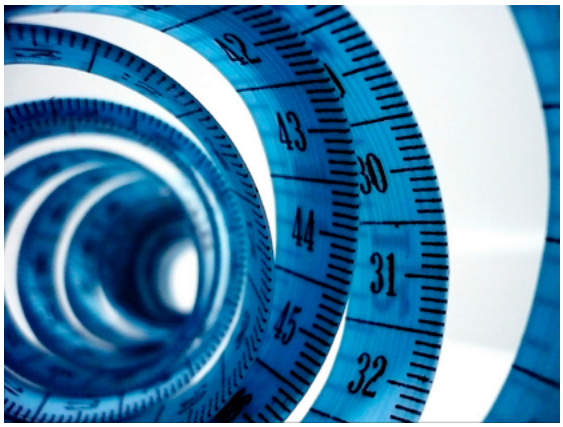
- **Delightful Attributes** – These are subjective depending on customer preferences. For example, the Macbook Air is extremely

thin and smooth to the touch. The right customer would find it a great selling point while others are unimpressed.

By scoring features on a 1-5 scale based on this model, you can then plot them out on a prioritization matrix to help you start envisioning what your product roadmap will look like. **At Apple**, the "Rules of the Road" and "Apple New Product Process" serve as the product roadmap by defining responsibilities, stages of creation, and significant milestones from inception to launch. In fact, the Rules of the Road is taken so seriously that losing it can result in immediate termination (it's even stated in the document).

4. **Building and launching the product**

   As you build (and ultimately launch) your product, the documentation also needs to focus on defining and tracking sales and other KPIs. After all, you can't improve the product if you don't know what metrics you want to optimize.



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Dave Daniels, Founder of LaunchClinic, advises that you write down the launch goals (e.g. 30,000 downloads in 30 days) and verify

that you have the right tools to document progress. Using metrics tools and bug reporting software, you can set up recurring reports to keep tabs during the first few weeks of launch and beyond. On the customer side, you can also segment users and send them custom surveys to gauge where you may want to iterate.

At Spotify, the iteration phase is the longest stage of product development. The product team uses current metrics and prioritization matrix (likely created during the Design stage) to weigh benefits vs. effort of improving certain products beyond their ”local maximum”. If they determine the effort is worthwhile, they will then return to the Definition stage to revamp the product for it’s ”global maximum”.

Objective Processes In a Subjective Environment

When it comes to product design documentation, there is no single magic bullet. Almost all companies that use our product employ bits and pieces of the tactics we’ve described above. While product development and UX design are highly subjective spaces, your processes and documentation don’t need to be. After all, the end goal of a product is revenue, and there’s nothing subjective about that.

Whether you go lightweight or prefer more detailed documentation, the goal is all the same – get it out of your head and onto paper (or the screen) so your team can interact and react. Documentation should serve as a compass for the product, not rules carved in stone. Some of the stages we discussed may happen in slightly different order or even parallel, but they all exist to provide method to the madness. Use what works, scrap the rest, and evolve your documentation as your product evolves.

Defining a Product Before Diving Into Design

An Overview Of Product Definition
Process & Documentation in Product Design

The Product Definition phase sets the stage for the success of your product. Without properly completing this phase, your team might as well be working in the dark. The worst enemy in product development, after all, is ambiguity and untested assumptions.

Photo Credit: Samuel Mann. Creative Commons 2.0.

During the first phase of product design, your answers will come from brainstorming the product and execution at the highest level with all necessary stakeholders (and their egos). This might result in project kickoff plan, a lean canvas, and a bunch of really rough sketches of what you're trying to build.

The worst enemy in product development is ambiguity

Below, we'll analyze all the different ways to tackle these processes so that everyone starts in the right direction for the right reasons.

Why Product Definition Matters

One definition of a product is "anything that can be offered to a market to satisfy a want or need". If you've worked on products before, you've probably heard this before. But no matter how simple that objective might seem, products are all quite complex – they are, after all, created for people – and many products don't get this quite right.

Your product needs to simultaneously be viable, feasible, and desirable. **Mark Curphey, former Principal Group Manager at Microsoft**, believes the concept of the "whole product" is one way of thinking about these needs. For example, supermarket canned soup is more than just liquid in a tin can – the "whole product" includes the soup, the can label, the store display, and the store's cleanliness. To help better understand the tangible and intangible aspects of a product, we've broken down the product into three levels based on Curphey's analysis:

- **The Core Product** – This is the benefit(s) a consumer receives when purchasing a product. For example, the core product of

a bed is rest or sleep, not the mattress.

- **The Actual Product** – This is what we normally consider the physical product. It's goal is to deliver on the benefits embodied by the core product. Actual products may have as many as five characteristics such as quality level, features, styling, brand, and packaging.

- **Augmented Product** – This represents additional services and benefits associated with the actual product, for which consumers may pay a premium. The augmented product lets you tailor the core or actual product to individual consumers. For example, IBM's success was largely due to its sophisticated software and after-sale services (not the actual product of computers).

Because products are so multidimensional, a structured product definition process is required so that you can consider the emotional, physical, and supplemental parts of the product. The lean canvas and project kickoff look at why and how consumers might buy your product while rough sketching helps you bring those ideas to life.

The Kickoff Meeting

The kickoff meeting covers the high-level outline of the product purpose, who is involved in designing and developing a product, how they'll work together and stay up-to-date on the progress, and what the intended results or success metrics are.

Photo Credit: Samuel Mann. Creative Commons CC BY-SA 2.0

The process is becoming shorter and shorter as teams become more nimble and projects more lean, and the documentation can be presented in a Powerpoint, document, wiki, or project management software. We'll cover how to prepare and conduct a kickoff as well as some overall guiding principles.

1. **Preparing for the Kickoff**

   The project kickoff is the equivalent of a grand opening, bringing all the key players together in one moment to share information and a common purpose. You should take advantage of this one-time chance to energize the group, set proper expectations, and set guidelines to complete the project on time and within budget.

   Mike Sisco, CEO of MDE Enterprises, provides a comprehensive plan for kickoff success. By taking the right steps to prepare, he ran a successful kickoff even though attendees included 12 team members from four company departments in seven separate physical locations. He recommends including these steps in your preparation:

- **Develop the project goals and deliverables** – Defining these elements will help you decide resourcing and planning for the product. Why do stakeholders care, and why are you building this product at this particular time?
- **Identify team members and responsibilities** – Resources vary depending on the product's size and complexity. Make sure you consider what's needed from design, marketing, development, support, and operations teams.
- **Develop a rough product plan** – Clarify the risks and opportunities. This helps validate whether you have the right resources and helps determine the appropriate timelines for tasks and milestones.
- **Define key success factors** – Why is the product valuable to the company, and how will you know you've succeeded? Define your specific success criteria and validate these with stakeholders.

When speaking with stakeholders prior to the kickoff, it helps to break the ice and then dive straight into the hard questions. What is the one thing that must be done right to make the product worthwhile? What would exceed your wildest dreams? Assure them that certain questions are "off the record" so you can understand their specific hopes and fears for the product. These stakeholder interviews also help to accumulate a list of high level functional requirements.

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When speaking with stakeholders, break the ice and then ask the hard questions.

For a detailed kickoff plan that covers everything from technical assumptions to desired emotional states, you can check out this Pre-Kickoff Template.

2. Doing the Kickoff

Once you've done all the preparation, it's time to gather up the gang. In theory, the kickoff meeting should have plenty of energy and excitement and team members should leave full of ideas and a desire to explore solutions. In practice, however, kickoff meetings can be sleep-inducing or even totally awkward.

Photo credit: Innovation Lab. Creative Commons.

Whether you're a startup or an enterprise, the key to a great kick-off meeting is involving people rather than only reviewing your pre-kickoff documents. **Kevin Hoffman, a design consultant at**

Rosenfeld Media, believes in taking a design studio approach to fostering creativity. A classic approach to ideation in industrial design and architecture, this technique is all about building relationships with co-workers and can be executed with groups between 10 to 60 in under a few hours. Here's some useful activities Hoffman suggests to get started:

- **Priority and feasibility plot** – Plot your discussed features on a chart based on feasibility vs. business value.
- **Card sorting** – Write your discussed features and functionality on index cards (ideally, less than 20) and then have each person sort the deck with highest priority on top and lowest ton bottom.
- **20-second gut test** – Collect screenshots of web-pages or product images and show them in a presentation to the group. Each member will rank each image with a score between 1-5. This tells you everyone's aesthetic preferences.
- **Fishbowl conversations** – When discussing the pre-kickoff documents or doing group activities, arrange your seating in a circular fashion (like a fishbowl), giving everyone in the group face-to-face contact and the opportunity to contribute.

Of course, there's no denying that an agenda and/or kickoff document are necessary to keep the activities on track. You can either use this question-driven kickoff document, or more lightweight options like Mozilla's Kickoff Wiki and Pivotal Labs' Product Definition Exercise.

3. **Guiding Principles**

   Whether you're planning for kickoff or holding the meeting, following a set of principles will prevent you from going off track. Kevin Hoffman again provides a helpful framework which are applicable whether your kickoff is in-person or remote:

   - **Base your meeting agenda off the research** – Ideas and challenges that are come up during research or stakeholder interviews should be front-and-center in your agenda.
   - **Be as inclusive as possible with your kickoff process** – It's better to include too many people up front rather than realize you forgot a stakeholder close to launch.
   - **Build activities around "risk-free" exploration** – Your kickoff process should explore the full potential for what is possible, so leave egos at the door.
   - **Introduce fun and creativity** – Don't be afraid to make it weird. Besides, team members may be thrilled to break from a more traditional format.

Don’t be afraid to make kickoffs weird. People might be thrilled to break from tradition.

At UXPin, we involve everyone in the company in new feature kickoffs. Once a quarter, we conduct a company-wide strategy meeting in which employees and investors are allowed to suggest product or design ideas. These tasks are recorded in Asana and visited on a weekly basis by our product team to prioritize the best ideas (as well as add new ones). We prevent ”design by committee” since anyone can contribute, but the product team has the final say.

Lean & Business Model Canvas

An actionable blueprint for product and market development, the Lean Canvas was adapted from the Business Model Canvas. It overlaps a lot with a project kickoff plan in defining the key problems it's solving, customer segments, it's unique offering, details of the solution, key metrics, and so forth. The Lean Canvas, however, is more strategic while the Project Kickoff Plan is more tactical so they are complementary to some degree.

Lean Canvas. Photo credit: Ash Maurya. Creative Commons, via Wikimedia Commons

As you can see above, The Lean Canvas has 4 main differences from its Business Model Canvas predecessor. According to **Cloudfire CEO, Ash Maurya**, these changes help companies address the riskiest elements of business ideas. By focusing on problems instead of key partners, you reduce the chance of building the wrong product. By considering key metrics instead of key resources, you keep the prod-

uct focused on impacting only the metrics that matter. It's important to not get overwhelmed by the lean canvases – they aren't meant to be perfect, so at this early stage its more important to get something down on paper. A completed Lean Canvas can be found here, and you can use this template when you're ready to get started.

If you're a larger company, the above Business Model Canvas template might be a more suitable option because it takes existing partners and resources into account. Key partners, key resources, and customer relationships are left out of the Lean Canvas but all have tremendous impact on how enterprises design, manufacture, and distribute products. For example, the next version of your smartphone might be half the size and twice as fast, but that may only appeal to your costliest customers (and might infringe on existing patents).

For a hybrid option, you can also use the Javelin Experiment Board for turning goals into actionable items. This method combines the "Get out of the building" mentality of Lean Canvas with the enterprise elements of the Business Model Canvas. You can find a template here.

Concept Maps & Mockups

Another helpful way of defining the tangible and intangible aspects of your product, concept maps begin with a main idea (or concept) and then branch out to show how that main idea can be broken down into specific topics.

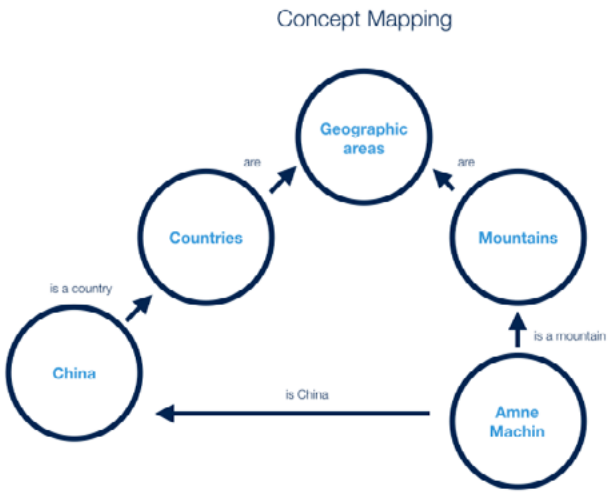

Photo credit: Marcin Treder, UXPin, based on: Concept Mapping

Concept mapping is a structured process focusing on a specific topic that can involve input from one or more participants. The goal is producing a visual that shows how ideas and concepts are interrelated. When creating a concept map, keep these tips in mind:

- **Use specific language** – The less ambiguity, the better the shared understanding
- **Iterate frequently** – Start drawing the map early in the product definition phase and redraw frequently. With each iteration, you can discover new relationships between concepts
- **Implement a hierarchy** – You can make a smaller set of key concepts and propositions more prominent, allowing readers to get a sense of the general structure and dive into detail as needed
- **Involve stakeholders** – The power of concept maps lies in collaboration, so validate it with stakeholders to ensure your vision is aligned

Hugh Dubberly, CEO of Dubberly Design Office, believes that concept maps help foster understanding by showing both the forest and trees in a single view. When working on a rehauling of Sun Microsystems' Java landing page, he found this method instrumental to understanding the purpose and structure of its over 110,000 pages. He quickly experienced benefits such as a deeper understanding of technical infrastructures, more quality feedback, and additional trust from stakeholders.

As a parallel process, you can also create concept mockups which are quick sketches that show the product's overall structure. We discuss this in great length in our Guide to Wireframing.

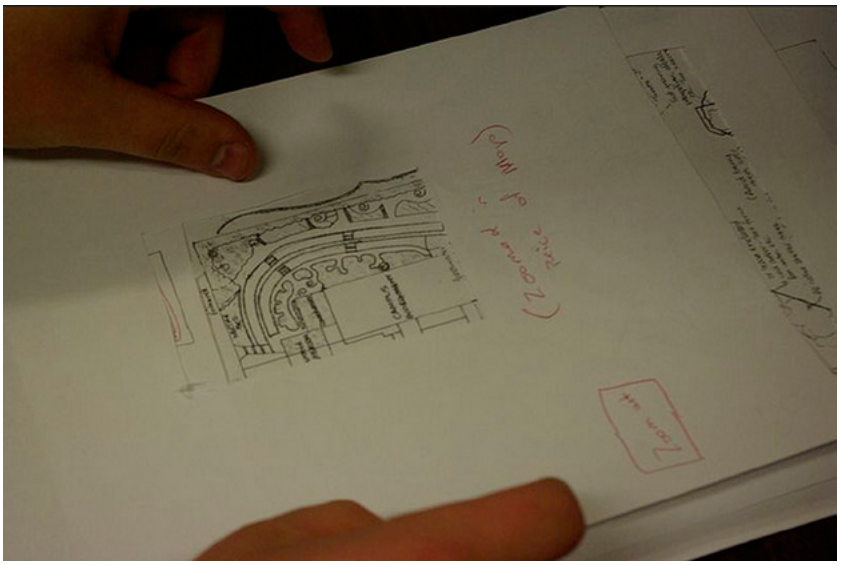

Photo Credit: Samuel Mann. Creative Commons.

According to **former AOL UX designers Richard Fulcher, Bryce-Glass, and Matt Leacock**, concept mockups are a great foundation for later product documentation. Concept mockups can serve as early explorations for detailed mockups, early sketches for wireframes, and provide visuals for storyboards. Similar to concept maps, concept

mockups provides a unique space to think differently, generates a variety of ideas quickly, and is a low-risk way of exploring alternatives with stakeholders.

Sean Hodge, Editor at Tuts+, goes into great detail on the benefits of sketching for product design. For him, sketching out a concept map or mockup is the quickest way of experimenting with different product ideas – and the larger the project, the more ideas will need explaining and the more valuable sketching will be. To see how this can be done for a complex product on the market, you can check out this conceptual sketch of Apple's recently released iWatch.

Defining Your Vision

In today's world, products aren't just the items you can hold in your hand at the local Best Buy. Health insurance, dating apps, and even the Internet itself can all be considered products because they all make people's lives easier.

Photo Credit: Innovation Labs. Creative Commons.

Creating a tangible or intangible product out of thin air requires a structured process. As you move through the Product Definition phase, you might even find that the power of defining your product comes from what you include as well as what you exclude. When you think about all the ideas that are bounced around, you realize that you might get more value from understanding what your product shouldn't be.

In today's world, products aren't just what you can play with at the local Best Buy.

Do your ideas line up with the direction of the company? Have you considered "second-best" options which might achieve 90% of the impact but with less time and money? Kickoff meetings, business canvases, and concept sketching can all help answer these questions. This process of elimination can help you from being blindsided later due to over-ambition or poor judgment early on, especially as you start gauging how the market and customers might react to your product idea.

Researching Products Before Diving Into Design

An Overview Of The Design Process & Documentation At the Research Stage

The process of defining and researching a product are intertwined since you can't really define a product unless you know the context in which it exists. Once you've defined the product idea, product research – which naturally includes user and market research – provides the other half of the foundation for great design.

Photo Credit: Marcin Treder, UXPin

As you can see in the above illustration, a user's mind is a complex and competitive space. To complicate things further, you need to

understand customers as a collective (i.e. market research) and on an individual level (i.e. user research). Market research may start by looking at demographics while user research finds information that challenges and qualifies the segmentation. Both types of research have a role in innovation and both can find gaps that drive new product ideas.

We'll discuss how market research reports, user surveys, heuristic evaluations, usability reports, and analytics reports help you see the big picture and the little details.

Why Research Matters

Simply put, if you don't know who you're building the product for, then you don't know why you should be building it. And if you don't know why, then it doesn't really matter how you build it – you're already on the fast track to disaster.

According to **Louis Rosenfeld, founder of Rosenfeld Media**, the reason behind product research can be found in the simple fable of the blind men and the elephant. As the tale goes, some blind men walk into a bar and encounter an elephant – one feels a trunk and calls it a snake, another feels a leg and claims it's a tree. Nobody sees the whole picture. Just like those blind men, unless you have a holistic research strategy, you'll never see how all the pieces should fit together to inform your product.

Photo Credit: Rene Mensen. Creative Commons.

If you don't yet have a product on the market, research tactics like market segmentation and competitive profiling helps you determine the necessary scale and timing of your investments. **Rebecca Bagley, CEO of Nortech**, believes that market research helps to distinguish between addressable and distinguishable markets:

- **Total addressable market (TAM)** – The total revenue opportunity for your product. Think of this as your product's planet.
- **Serviceable available market (SAM)** – The portion of the addressable market in which you can realistically compete. Think of this as your product neighborhood.

Knowing your available market is already half the battle since, at that point, you'll have a clearer picture of how to segment customers as well as other "neighborhood" competitors.

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If you don't know who you're building for, then you don't know why. Without 'why', 'how' doesn't matter.

According to **Apala Chavan, Chief Innovator at Human Factors International**, user research is better at providing direction on designing solutions because it looks at how a person uses a product – not data on what they might buy. For instance, market research identifies that a market exists in Europe for smartphones. But what's profitable and what's desirable may be two very different things. User research can then validate that assumption by documenting how 10 people use smartphones versus how they use your smartphone.

Market Segmentation Report

A market segmentation report is a document examining potential customers based on their specific and shared needs and characteristics. Generally speaking, they're segmented by geography, demographic, behaviors, psychology, benefits or some combination of the above.

According to **Inc Magazine**, segmentation reports should cover three main market bases – descriptive, behavioral, and benefit bases. All of these benefit bases are constructed of customer traits, which you can also flesh out into personas during the later Analysis phase. Below, we've summarized these three benefit bases and included company examples:

- **Descriptive bases** – As the name suggests, these include factors which describe demographics (age, gender, income, family size, etc) and geography (climate/population/region, etc). Because it's easy to measure, this is usually the most commonly used base.
- **Behavioral bases** – More difficult to measure than descriptive bases, these are more powerful indications of purchasing. Behavioral bases include the deep personal motivations of buyers such as personality, lifestyle, social class, and even brand loyalty.
- **Benefit bases** – This segmentation approach is the most logical and assumes segments exist to satisfy consumer benefits. One pitfall, of course, is that consumers aren't always logical or know the specific benefit they want. As such, a combination of benefit bases is best to reflect reality.

Bert Markgraf, President of North46 Technologies, describes how different prominent companies focus on different segment bases. McDonald's segments by descriptive base and targets children with Happy Meals, while creating its popular breakfast menu for working adults. Patagonia, on the other hand, segments by behavioral base by creating products emphasizing quality and responsible production – values that matter to its progressive outdoor enthusiasts.

Victor Yocco and Jes Koepfler, both Usability Researchers at Intuitive Company, market research and segmentation reports should be used to inform user research. However, since strict segmentation can let you miss out on potentially profitable secondary customers

(eg: adults who love cereal), the tactic should be combined with user research so you can see beyond what's on paper.

Survey Results

Steve Jobs once said that "It isn't the consumers' job to know what they want". While that's true since you don't want a committee of customers designing the product, survey results are still helpful as a baseline measurement. They certainly aren't mandatory for product success, but any insight into the customer mind is better than guessing.

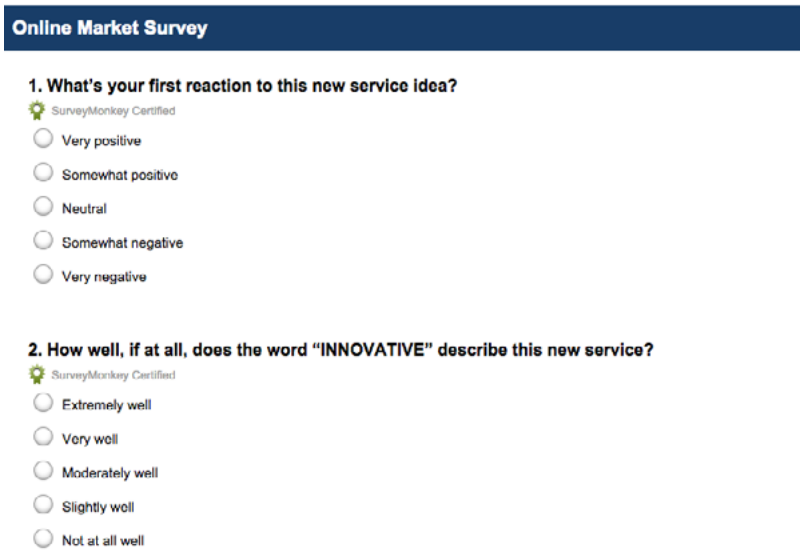

Photo Credit: www.surveymonkey.com

According to **David Masters, Editor at Tuts+**, online surveys are a low-cost tactic that lets you see data patterns quickly. Focus groups and interviews can provide in-depth research, but they're costly (find the potential customers, prepare questions, pay people to interview, etc). If you're short on resources, online surveys are a leaner yet scal-

able way of gathering vast information – especially if you don't have a working prototype yet. If you decide on this simple route, here's a few tips based on Masters' article:

- **Be crystal clear on your goals** – Who are you talking to, and what do you want to know? Shorter is better, so make sure you only ask questions you need answered. A 3-minute survey will give you cleaner data than a 20-minute one.
- **Put ideas to paper** – Draft every question you need answered. Once you have a list of 10 to 15, phrase them in different ways that all focus on the issue at hand.
- **Edit ruthlessly** – Group your original list into common themes and then choose one out of each theme. Ideally, you want 5 questions. If you have more than 8, start culling.
- **Craft your questions** – Closed questions have a limited choice of answers. These may be binary (yes/no) or multiple choice. Open-ended questions let you discover things you never thought of and let you learn the language of customers. Regardless of your choice, the simpler and shorter your questions, the better your responses.
- **Order your questions** – Order matters. The most important questions go first. If you need to follow up, ask questions last (if you ask them first, people will ignore you because they don't know you).

Jonathan Kochis, Partner at Treble Apps, used survey results to help define the features of a consumer-facing mobile project for 3M Canada. If budget permits, he advises investing in a research firm to refine your questions and find the perfect set of participants. If you're on a budget, following the above advice with Fluid Surveys or SurveyMonkey can still get you good results. Regardless of your method, he advises being highly selective with open-ended questions since they create friction for respondents and can be difficult to interpret.

Surveys aren't mandatory for product success,
but any consumer insight is better than guessing.

Constant Contact provides a comprehensive list of survey questions mapped to answer choices. To get started, you can then use this sample survey template from SurveyMonkey.

Heuristic Evaluations

Once you have a working prototype, a heuristic evaluation (or usability review) can be a low-cost method of checking your early iterations against usability best practices. Heuristic evaluations are also helpful for competitive benchmarking since you can compare competitors against the same criteria.

According to **Neil Turner, founder of UX For The Masses**, heuristic reviews can be carried out by non-UX folks provided they follow a

set of guidelines. While they're cheap and usually only require a day or two, they don't actually tell you the usability of a system (since you're not testing with real users) and may suffer from inconsistency and subjectivity (since they're carried out by different people). That being said, they are a still a great reality check since you'll be able to catch glaring UX violations. We've summarized the approach favored by Turner:

- **Define your usability review scenarios** – Define common and important user tasks. Who uses the product, and is this the first time? What task are they trying to complete, and what is their goal? For example, when evaluating a laptop, you would look at scenarios like sending email and watching movies.
- **Walk through the steps** – Now that each scenario is defined, you need to walk through the steps to achieving user goals. Can they see how to do it? And how will they know if their action was correct? Walk through each scenario until you think the user achieved their goal or gave up.
- **Complete a heuristic review scorecard** – Use a template such as this 45-point checklist. It's best to have 3-5 people do this. Remember that a high score doesn't mean your product is actually usable, only that it should be usable.

Oracle uses a streamlined 10-point list of heuristics gauging everything from application complexity to frequency and helpfulness of error messages. Usability issues are categorized as either "low",

”medium”, or ”high” severity with supporting notes. The team then isolates the top 10 most important issues for immediate fixing. If you’re curious about what a full heuristic report may look like, check out this full heuristic evaluation of Apple iTunes.

User Research Report

Once you’ve checked your product or prototype against best practices, it’s time to verify those findings with real users. Tactics like card sorting, tree testing, moderated user testing, unmoderated user testing, and other techniques can all be used (as you’ll see in the illustration below). We won’t discuss all the tactics, but we will provide a general framework.

While usability testing is more expensive than heuristic evaluations since you need to plan and recruit for controlled experiments, there is no better way to see how your product might perform in the wild. According to **David Sherwin, Design Director at Frog**, market research explains what users do and when they do it, but user research completes the picture by answering why they do it and how your product design can react accordingly.

He advises a 5-stage framework:

- **Objectives** – Create framing questions like ”Who would share video clips?”, and ”Why would they share these clips?”. Prioritize the most important questions, and then translate them into

focused objectives like ”Determine how frequent TV viewers in China decide what shows to record to watch later”.

- **Hypotheses** – Using your framing questions spend up to 8 minutes individually sketching answers. You may generate attitudinal hypotheses (TV watchers on social networks like to know their friends’ favorite shows), behavioral hypotheses (TV watchers only share clips from shows they watch frequently), or feature-related hypotheses (TV watchers will share clips if they’re popular with others).

- **Methods** – Sort all your hypotheses based on themes (attitude/behavior/feature) and then assign testing tactics. For example, observational and contextual interviews are great for building a foundation of knowledge. Diary studies, card sorting, paper prototyping, and other collaborative activities help explore design ideas.

- **Conduct** – Recruit around 8 users for 3 testing sessions each (1 hour length). Develop an interview guide and then document all the notes, photos, and videos as you test. Constantly ask yourself if you’re discovering what you need to learn in order to achieve your objectives. If not, switch tactics.

- **Synthesize** – The why behind the data is more important than the what. Is there a pattern that suggests you need new designs? Did what you learn change how you should frame your research objective? And do you need to change the design activities that you’ve planned?

Demetrius Madrigal and Bryan McClain, founders of Metric Lab, provide a helpful list of Do's and Don'ts for usability testing. For example, you should get involved and observe as much testing as possible, but don't jump to design conclusions based on only a handful of tests. And while you shouldn't hide yourself from participants using a one-way mirror, you also shouldn't turn your testing session into a product demo.

By sticking to a regimented user testing plan, **Volusion** was actually able to increase paid conversions by 10% and product trials by 6%. While they used a very specific formula of video-recorded testing sessions and A/B testing, it's certainly proof that the process works.

If you're looking for a leaner user research approach, you can follow this user testing framework (which you can learn in 10 minutes) and then document your plan in a simple format that resonates with stakeholders.

> *At UXPin, we're big fans of guerilla testing (as discussed on p.39 of the UX Design for Startups e-book). When testing new features, we enlist the help of User Testing to record on video the reactions of designers, UX professionals, and product managers. On the research side, we conduct in-depth interviews with product managers and UX folks from companies like Uber, Google, Etsy, and Apple to understand their pain points, their needs, and how UXPin fits in.*

Analytics Reports

Analytics reports are a quantitative complement to the mostly qualitative processes we've described so far. While qualitative methods like user research and heuristic reviews are bottom-up ways of analyzing users, analytics are top-down since you're distilling broad data into a few insights.

Jennifer Cardello, Director at the Nielsen Norman Group, says that analytics has traditionally informed marketing strategy but is seeing growing usage in user research and design. Because qualitative research is expensive, you can first get a birds-eye view of potential issues and testing scenarios based on analytics reports. As Cardello reminds us, analytics serves 3 crucial roles for identifying new tests and validating existing tests:

- **Identifying issues** – Weekly metrics reports can identify issues in web-based products. For example, you may find out that conversions suddenly dropped following a site redesign.
- **Investigating issues** –If any issues are flagged, you can investigate further. Is the decrease in conversions coming from a specific device? If so, you could design a device-specific A/B user test to check possible solutions.
- **Verifying qualitative research** – Analytics can also pinpoint trouble spots that arise during user testing. For example, study participants don't know where to find information because a word on the site is confusing. Using a tool like Google Analytics,

you can then check the keyword traffic for that term. If there's a high volume, you've just verified that the problem is worth solving.

If you're interested in specific user segments, you can also use cohort analysis to determine what further research and testing is needed. For example, you can treat Black Friday shoppers as a cohort, analyze their behavior, and design user tests accordingly.

If you don't have a working product, analytics are still useful for doing market research. According to **Inc Magazine**, keyword and backlinking analysis are both effective yet lean methods. Using a tool like Google Adwords, you can check for search volumes and deduce consumer interest as well as competition. Backlink analysis will also tell you whether competitors are promoting similar products or services.

Analytics is about the 'what'. User research is about the 'why'.

At UXPin, we analyze customer and cohort data. Using KISSMetrics, we're able to see the usage of certain app features and how it affects conversion rates. We can then create feature variations for user testing, capture results, and continue the feedback loop. We also segment that data by cohort so we can see what features resonate most with what users.

Research, Test, Validate

Market research lets you see the broad context, while user research helps you learn things that are immediately practical. Whether you have an existing product or are on the cusp of your ”Aha!” moment, both will play a role in your product development.

When you combine market research with user research, you have a way to listen to the market as well as individual users. With that knowledge you mind, you can go forward and design solutions and test if they actually work. Your raw research will be especially helpful as it starts to take shape and form during the Analysis phase.

Analyzing Users Before Diving Into Design

An Overview Of User Analysis Process & Documentation in Product Design

A great product experience starts with a good understanding of your users. Not only do you want to know who they are, but you want to dive deeper into their motivations, fears, mentality, and behavior. But how do we know what our users really want?

JONATHAN VIZZIER

"Design isn't just how it looks, it's how it works."

Demographics:

- 27 years old
- Masters in Visual Design
- Visual Designer
- Single
- Earns $85K per year

Behaviors & Beliefs:

- Obsessive over visual quality
- Hates when product managers use the word "just" before describing last-minute tasks
- Wants to be as involved in the design process as possible
- Loathes jargon, wishes people would get to the point

Characteristics & Attributes (0 to 5)

- Design experience: 3
- Education: 4
- Tech Savviness: 5
- Ambition: 5
- Workload: 5

Goals:

- To build a strong portfolio, regardless of whatever job I'm at
- To start mastering UX design by the end of this year for a career transition
- To rise up in his company and start getting assigned larger-profile projects
- Wants to help the product team see the value of emotional design, not just "core KPIs"

Photo Credit: UXPin

Once you have a rough idea of your product definition and how it fits into the current market, it's time to dive into user-centric modeling. User modeling and analysis will be the ultimate reality check on whether people would actually be excited about your product. Your goal here is to understand their struggles, know the details of circumstance and context, and gauge their reactions to your current product.

In this piece, we'll look at the user personas & scenarios, experience maps, requirements documents, and user matrices you'll create to make your product respond effectively to customer problems. Ultimately, this will help you iterate to solve problems you might never have even considered.

Why Analysis is Important

User analysis answers questions about end users tasks and goals so that these findings can help make decisions about development and design.

Specifically, you'll be able to identify roles and define characteristics that aren't always possible through market research such as knowledge, state of mind, comfort with similar products, use cases & environments, and frequency of use. These insights ensure that feature changes are based on data from people who will pay versus the opinions of stakeholders.

According to **Smashing Magazine**, user-centered analysis helps get more profitable products to market at a quicker pace. Because user analysis lets customers decide the path of your product, the insights you gain can help circumvent time-consuming decision-making processes and politics. When you hit a roadblock due to conflicting views, user analysis lets you move in the right direction based on inarguable facts. We've summarized some specific benefits as suggested by Smashing Magazine:

- **Better products** – Processes that involve end users as well as understand business objectives will always result in products that work better for their intended purpose.
- **Cheaper to fix problems** – User analysis helps you match up your product against reality to make changes while it's still mostly just on paper. A wireframe or prototype is magnitudes cheaper than a technical fix to a live product.
- **Ease of use is a common requirement** – Customers often use the terms "usability" and "user experience" when describing qualities they seek in products. Therefore, user analysis drives your product to have better selling points.

A wireframe or prototype is magnitudes cheaper than a technical fix to a live product.

Personas

While it may seem hard to build a person out of thin air, creating a persona is an important first step to understanding the mindsets of potential customers.

source: UXPin

Personas help to focus product decisions by adding a layer of real-world consideration to the conversation. They act almost like another person in the room when making vital product decisions. However, personas shouldn't represent all audiences or address all needs of your product but should instead focus on the major needs of the most important user groups. Trying to please everyone with your product is one of the quickest ways to fail.

According to **Kevan Lee, Content Crafter at Buffer,** personas let you internalize potential customers so you can actually relate to them as human beings. He recommends three to five personas since this number is large enough to cover the majority of customers yet small enough to be specific. Below, we've summarized the information you'll want to capture based on Lee's advice:

- **Assign a name** – You can choose whatever name you like, but make it real so the person feels real. The name can also be labeled by segment, for example "Sally the Skeptic".
- **Describe job responsibilities** – Surveys can be very helpful for capturing this data. For example, Buffer's survey showed a large percentage of users are small business owners. They then used this information to create a specific "SMB" persona.
- **Include vivid information** – While age, gender, and device usage are important, you also want to describe psychology. What are their fears and aspirations? You can use metrics tools for demographics and educated guesses for psychographics.

Alan Klement, former Product Designer at Interactive Pioneers, believes that basic personas sometimes lack the causalities that lead to consumer purchases. For him, interviews and a focus on psychology are required to flesh out personas into "characters" that can be analyzed with regards to their anxieties, motivations, and touchpoints during the buying process.

As you start building out your personas, you can keep them better rooted in reality by conducting segmented interviews. You'll be able to inject tons of real-world data into your personas by interviewing existing customers, prospects, and referrals. To keep it simple, you can use a persona template or a more integrated solution like UXPin which allows you to attach personas to prototypes.

User Stories & Job Stories

Once you have a clear idea of who might use your product, it's time to map out how they might use your product. This helps you design the flow of your product to be as smooth as possible.

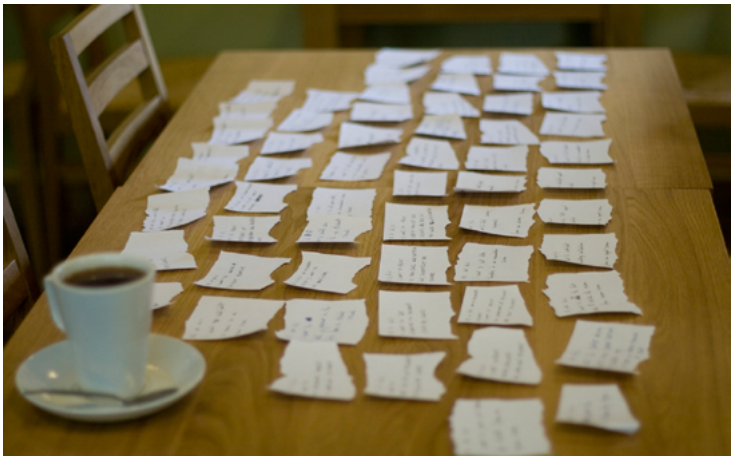

Photo Credit: Jackuza. Creative Commons.

Bill Wake, Agile coach & Senior Consultant at Industrial Logic, created a simple guideline to follow when developing user stories. Known by its acronym "INVEST", the methodology helps guarantee that user stories provide business value while being deliverable in a single iteration. We've elaborated each of the points below:

- **Independent** – The user story should be self-contained so it doesn't depend on other stories
- **Negotiable** – Avoid too much detail so user stories are flexible and can be altered
- **Valuable** – User stories must deliver value to the end-user
- **Estimable** – You should be able to estimate the resources needed for a user story
- **Scalable** – Keep the user stories lightweight so they can be tasked and prioritized with a certain level of certainty
- **Testable** – Explain the acceptance criteria so the team knows when a story is complete

Author of "Digital Project Management" Kristofer Layon explains that hitting the right level of specificity is the key to satisfying the INVEST criteria. He believes that a good user story must clarify the specific type of customer, describe the task with comparable detail, and clarify on the context in which work must be done. For example, a good user story would therefore be "As a Power User Pete, I need to be able to register for Program Q in office and mobile contexts so I can get back to my job quickly." On the other hand, a poor user story would be "Customers need to use a jQuery-enhanced web form for online registration, and the form must be in the top nav and homepage." The second example is overly specific and obsesses over technical detail rather than thinking about how users can accomplish goals.

Originally developed by Alan Klement, you can take the concept of user stories a step further and treat them as job stories. Instead of the ”As a _____, I want to _____ so that _____” framework, the above job story helps remove some of the ambiguity of a persona by focusing on causality instead. Job stories can be more actionable since they focus on motivation rather than implementation. Adapting our previous example, a job story could then be ”When travelling, I want to register for Program Q on my laptop and cell phone so I am as efficient as possible.”

Defining Your Vision

While use cases look at how your personas might use the product, the experience map takes a much higher level view of the user as part of a ”hero’s journey”, helping you better shape your product to be the ultimate sidekick.

According to **Brandon Schauer, CEO of Adaptive Path**, experience mapping uncovers the key customer moments that can be optimized for a more valuable overall experience. When done well, an experience map shows the entire customer experience, illustrating the highs and lows people feel when interacting with your product or service. Here are the four key steps to making the most of your experience map:

- **Uncover the truth** – Scour your company for quantitative and qualitative data on the experiences you're mapping. Look at a variety of sources like web analytics, call center logs and customer surveys & interviews. Triangulate your data so you fill any knowledge gaps.

- **Chart the course** – Experience maps should contain the lens (persona through which journey is viewed), the journey model (touchpoints across all channels), and takeaways (design principles & insights from mapping process).

- **Tell the story** – Your map needs to have a beginning, middle, and end. Identify what insights are important to the narrative and what are nice-to-haves. Like a good poster, your map needs hierarchy (what stands out immediately versus what sinks in later).

- **Circulate the map** – Present it in meetings, post it on the wall, print it in a tabloid size so executives can see it. Make sure stakeholders can use your map as a tool to see the world as customers do.

Throughout each step of the mapping process, make sure you refer back to the customer's actions, motivations, questions, and barriers. What is the customer doing in each stage of your map? Why will they move to the next stage? What uncertainties might prevent them from progressing? And what implementation, cost or other barriers stand in their way?

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Experience maps shows the user on a hero's journey with your product as the sidekick

According to **Chris Ridson, Design Director at Adaptive Path**, the inputs of an experience map can broken out into two parts. User discovery catalogues touchpoints while user research considers customer feelings, thoughts, and actions. Combining the two lets you see themes of how different touchpoints at different times are experienced – thereby exposing expectations gaps, pain-points, and areas of opportunity.

Following the above process will help see beyond just logical needs. **Joyce Hostyn, former Director of Customer Experience at Open-Text**, believes that experience maps can help brands completely reinvent consumer expectations. For example, by mapping out that most buyers experience uncertainty between time of order and delivery, Domino's was able to fulfill that gap and create a "Domino's Tracker" app that tracks pizza delivery in real time.

While experience mapping can be highly subjective and differ based on the company, you can use this helpful template as a starting point.

User Task Matrix

While user stories look at how your product is used and experience maps shows the start-to-finish picture, a user task matrix looks at frequency of use.

User Task	User Profile #1	User Profile #2	User Profile #3
Task 1	Rare	Rare	Multiple
Task 2	Never	Rare	Never
Task 3	Multiple	Rare	Multiple
Task 4	Multiple	Multiple	Multiple

Photo Credit: Marcin Treder, UXPin, based on: User Task Matrix by Taralk.

In the above example, the task matrix describes the various methods (and their frequencies based on persona) for accomplishing the goal of booking an airline ticket as shown in . The user task matrix helps you identify the non-negotiable aspects of the user experience. For example, our above matrix shows that the most important task is "searching travel routes" since it's used multiple times by all 3 personas. You can use this to inform design decisions by ensuring the "search route" function is part of the primary navigation instead of a discoverable item.

User Content Matrix

If your product is cloud or software-based, a matrix will help you better understand how your existing content satisfies user needs, where you can improve, and how to prioritize content improvements.

Colleen Jones, Founder of Content Science, believes that a content matrix will help you eliminate any content that is redundant, out-

dated, or trivial. Considering that most stakeholders need context rather than details, a matrix provides flexibility in letting you show only the rows and columns necessary to make your point. According to Jones, a content matrix provides four specific benefits:

- **Acute awareness of priorities** – Knowing what content is present in your product (and why) helps shape questions about usefulness that otherwise may not be revealed
- **Addressing operational constraints** – As you fill out the matrix, you may discover new constraints to solutions. For example, users may need a frequently updated home screen on your app, but you might find that you don't have the technical resources to do so. A content matrix prompts evaluations that can help you discover "second-best" options so you don't move forward under false assumptions.
- **A common language** – Your users probably don't talk like you do. A content matrix helps maintain consistency in tone and terminology so you don't go overboard on language specific only to the company.
- **A real sense of scale** – The better you understand the scale of content for your product, the better you can design the product. A matrix let's you see if you need to think about 100 or 1000 pages worth of content, and therefore create the right number of design variations.

Prioritized Requirements Spreadsheet

At this point, you will have done enough user analysis to have an idea of important features. After all, your product requirements should be derived from user requirements.

While you don't need to go into as much detail as the product requirements document and features specifications document created in the Implementation phase, you should be able to separate "nice-to-haves" from "must-haves".

According to **Jeff Sauro, Founder of Measuring Usability**, there are multiple prioritization techniques for trimming down impossibly long feature lists. Some of the techniques require more user testing while others are standalone:

- **Top Task Analysis** – Give qualified users a randomized list of easy-to-accomplish tasks and ask them to pick their top five. You'll quickly identify the tasks most important to users.
- **Gap Analysis** – Give some customers your first iteration of prioritized features and ask them to rate them in order of importance and satisfaction. Next, use the formula: Importance + (Importance - Satisfaction) to reveal opportunity for improvement.
- **Kano Modeling** – Ask some users to rate how much they like features when they are included in the product and how much they miss them if they're removed. This satisfaction gap shows "must-have" versus "nice-to-have" features.

- **Quality Function Deployment** – Start with a prioritized list of tasks or features (from top-tasks analysis) and combine this with a list of functions (from the company). A QFD ranks the features that best meets user needs.

- **Pareto Analysis** – Known as the 80/20 rule, this method can quickly isolate ”must-have” features from ”nice-to-haves”. Sort your features from highest to lowest (e.g. most votes in a top-task, most revenue, etc), add up the total, then compute the percentage for each item. The features that score highest are your most important.

- **Cause & Effect Diagrams** – Since UX issues can be complex, this analysis can expose multiple causes for each problem, letting you troubleshoot as effectively as possible. Create a set of cause-and-effect diagrams by asking ”why?” to uncover the root causes rather than the symptoms.

- **Failure Mode Effect Analysis** – This helps you understand the negative effects of certain actions. It can highlight cases in which you can improve the product more by fixing what’s broken than by adding features. An FMEA generates a Risk Priority Number based on commonality, severity, and difficulty of problems.

If you're looking for a leaner approach, Ian McAllister, General Manager at Amazon, believes a theme-based approach is an effective yet lightweight approach. He creates a list of themes for each product (e.g. user acquisition, user retention, etc.), assigns projects to each theme, and then prioritizes projects based on cost versus benefits. It's fairly straightforward, so you would only need a "forced ranking" spreadsheet to get started.

Know Thy User

If your product isn't made for users, then it's only made for yourself. Users don't care that your products can do a million and one things – they just need it to work for them.

When it comes to truly understanding your user, simply saying that they are "18 to 35 year old marketers who need an app to simplify inbox sorting" doesn't cut it.

As we've discussed, you need to know your user as a person, understand how and why they'd use your product (and how often), and all the experiences that come between them and your product. That multi-dimensional understanding is the only way you'll be able to prioritize your features appropriately – otherwise you might enter the Design stage without even knowing you're on a course for disaster.

Product Design Process & Documentation Essentials

An Overview Of The Design Process & Documents in Product Design

From the zipper to apps like Dropbox for iOS, every product gets put to paper (or onto the screen) before they come to life. The design stage is a right of passage for all products – they're either desirable or they just don't make the cut.

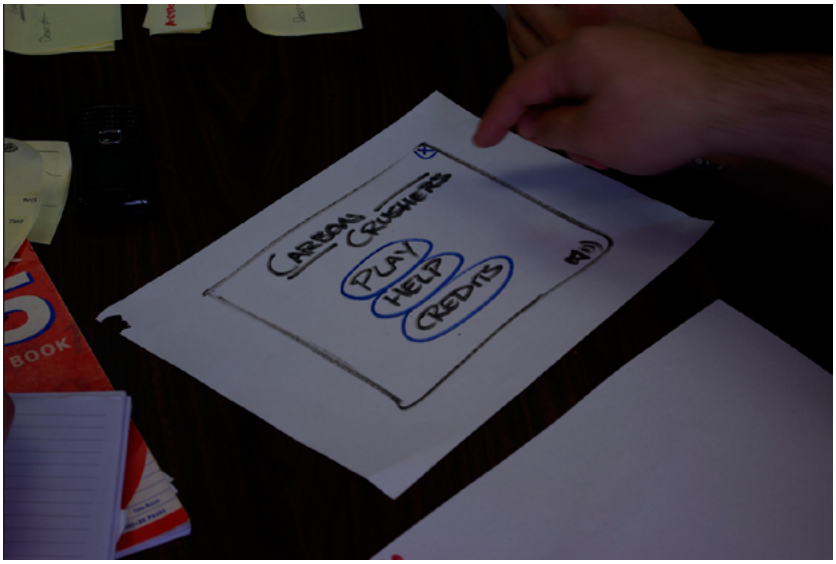


Photo Credit: Samuel Mann. Creative Commons.

The definition of design is pretty simplistic – but today's world requires an endless list of considerations to produce a perfect product. Is it helpful? Easy to use? Does it create a sense of familiarity after the first use? Product designers have a serious responsibility since

customers have problems and the product needs to give them a sense of ease and well being. The product is just a vehicle for delivering an unforgettable experience.

Design is a right of passage for all products. If they're not desirable, they don't make the cut.

While it might feel like the process is littered with crumpled paper and even a broken screen or two, you can rest assured knowing there is a method to the madness. We'll explain the different forms of documentation you can use as your idea grows into a design that's informed by user research. Read on to learn about conceptual sketching and wireframing, low and high fidelity prototypes, and the intricacies of design specification.

Iterated Sketching & Wireframing

Sketches are likely the most prevalent documentation you'll create during the design phase. Usually, the general workflow is sketch mock-ups followed by usability testing (whether it's internal or involving carefully picked testers) followed by plenty of iteration.

Regardless of the tool you use to create your sketches, it's important to keep user personas in mind. As you create your sketches, remember to reference the personas you created during the Analysis phase to keep users at the top of your mind. Below, we'll look at both rough sketching and wireframing.

1. **Rough Sketching**

   You can create rough sketches with anything that makes pigment on a surface. Pens, pencils, markers, crayons, Paper App, and even the classic Microsoft Paint all work.

Photo Credit: Samuel Mann. Creative Commons.

Laura Busche, design writer at Smashing Magazine, specifies that sketching by hand has distinct benefits for extending memory, aiding concentration, and improving flexibility. Drawing by hand is also the fastest way to visualize a concept so it should always serve as your backup method.

Product design firm ZURB relies heavily on paper sketching to present the function and flow of products. They prefer using sharpies because it limits the amount of detail and focuses the sketch on just the broad points. For them, paper sketching is all about communicating a process or interaction – not getting feedback on body copy or iconography.

While paper sketching is fast, focused, and flexible, it's ultimately not very scalable or interactive since you can't use any templates and there's no way to link sketches together.

2. Wireframing

Digital wireframing software abounds, but there's really only a few serious apps worth checking out such as UXPin, Balsamiq, Axure, and Proto.io. If you're going the paper route, you could also just make your rough sketch a wireframe by dividing up sections of the page and adding grid lines and boxes where appropriate. Wireframing should act as the backbone of the product. For tips and exercises, check out the Guide to Wireframing.

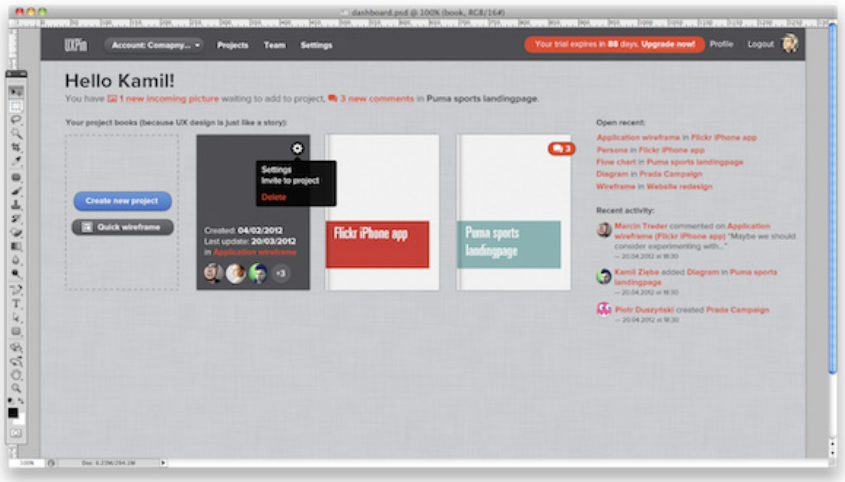
Wireframing is about structure and flow, not prettiness.

According to **Paul Boag, CEO of UX consulting firm HeadScape**, wireframing saves time and money with benefits like the ability to test early and getting over the fear of change. Once you have a low fidelity wireframe in hand, you can immediately test it with internal or external users. This way, you get feedback on what features users like, the naming of labels, and figuring out if you have the right visual hierarchy. And since you didn't spend considerable effort, it's no big deal to change up your design. To see how some big name companies like Apple and Twitter started with simple low-fidelity wireframes, you can check out this gallery of 18 real company wireframes.

Anthony Tseng, Editor-in-Chief of UX Movement, thinks you can also go high fidelity if the goal is better reflecting the actual form and function to persuade stakeholders. While they may take more time and are less ideal for quick feedback, high fidelity wireframes are clear representations of the interface and therefore leave no questions to stakeholders and users about what's a form field or button.

Detailed Mockups

Depending on your process, detailed mockups can either be the highest fidelity wireframes or the next iteration of concept mockups.



source: Wireframes vs. Prototypes vs. Mockups

Some companies will skip wireframing altogether and create a lower fidelity concept mockup before increasing fidelity to a detailed mock-up. Other companies may follower a more evolutionary path which uses wireframes as the skeletons for mockups. While you might hear the terms "wireframing" and "mockups" used interchangeably, they

really are two different types of documents. The wireframes lay out the structure and then texture and fidelity is injected to turn it into a mockup which acts as a model of the app or website.

According to **UXPin CEO Marcin Treder**, a detailed mockup is oftentimes a design draft or can be the actual visual design. Almost photorealistic, a well-created detailed mockup encourages people to actually review the visual side of the project. Wireframes might contain shapes, lines, and possibly some detail (if it's high fidelity), but a detailed mockup always shows specific fonts, color choices, and the overall final appearance.

Nick Pettit, designer at Treehouse, reiterates that detailed mockups are helpful as a means of design communication but shouldn't be treated as a "tossover" to development. He explains that the process of spending hours on a detailed mockup as a spec sheet for developers is no longer relevant given the rise of responsive design and Agile methodologies. Furthermore, lower fidelity wireframes can be friendlier for iterating since they require less effort while prototyping can be an easier way to bridge the functional gap.

Prototypes

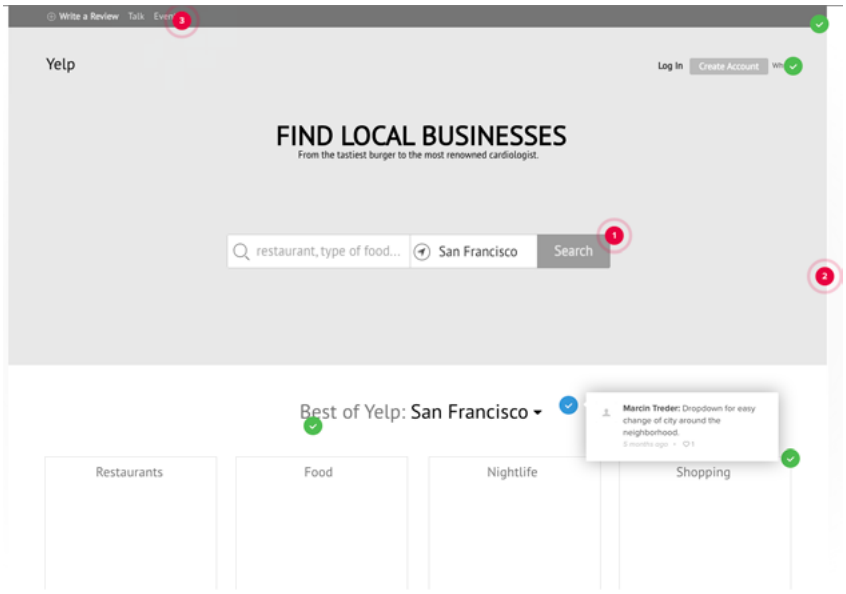
If wireframes are about structure, then prototypes are about experience. Wireframes or mockups can be linked together using an app like Invision or UXPin to create a clickable prototype.

As you can see above, there are multiple dimensions for fidelity and workflow. **Josh Porter, former Director of UX at HubSpot**, believes in a leaner workflow where you jump straight from sketching to prototyping (and skipping wireframing altogether). For him, sketches require less time but can answer the same functional questions like ”What objects go on the page, and what can we do to them?” while more effort can be dedicated to building out a prototype. This doesn’t mean that wireframes and mockups are dead – instead, it just means that more time can be reallocated from developing static assets towards interactive assets.

The real strength of prototyping is its ability to get teams to think less about deliverables and more about practicality. Some successful companies even released prototypes as their first product. In this section, we’ll discuss both low and high fidelity prototypes and their different use cases.

1. **Low Fidelity Prototypes**

   When people talk about rapid prototyping and Lean UX, they’re usually referring to low fidelity prototypes. Low fidelity prototypes are great for avoiding tunnel vision by focusing on the refinement of interaction rather than the details of visual or technical implementation. They can be created using online apps (Balsamiq, Invision, or UXPin to name a few) or coded in HTML the old fashioned way.



Credit: uxpin.com

Notable entrepreneur Andrew Chen believes that low-fidelity prototyping is one of the best ways to incorporate customer-driven design. Because you want your product to be the right one (regardless of iterations), low fidelity prototypes created in an online app may be uglier but can help you iterate quicker versus a coded or high fidelity prototype. He's described 4 particular benefits, which we've summarized below:

- **Better and more honest feedback** – People may focus on the visuals of a picture-perfect prototype rather than the value proposition. They may also feel hesitant to build on your idea since it is beyond their capability to duplicate.
- **Great for A/B testing** – A/B testing thrives off variety at the UI layer where small changes can be tried and optimized. Therefore, 10-20 rough variations in UI can provide more insights than 2-3 pixel-perfect ones.

- **Cheaper to make mistakes** – Pivoting with a low-fidelity prototype is easier since less resources are involved and the team isn't as defensive to change.

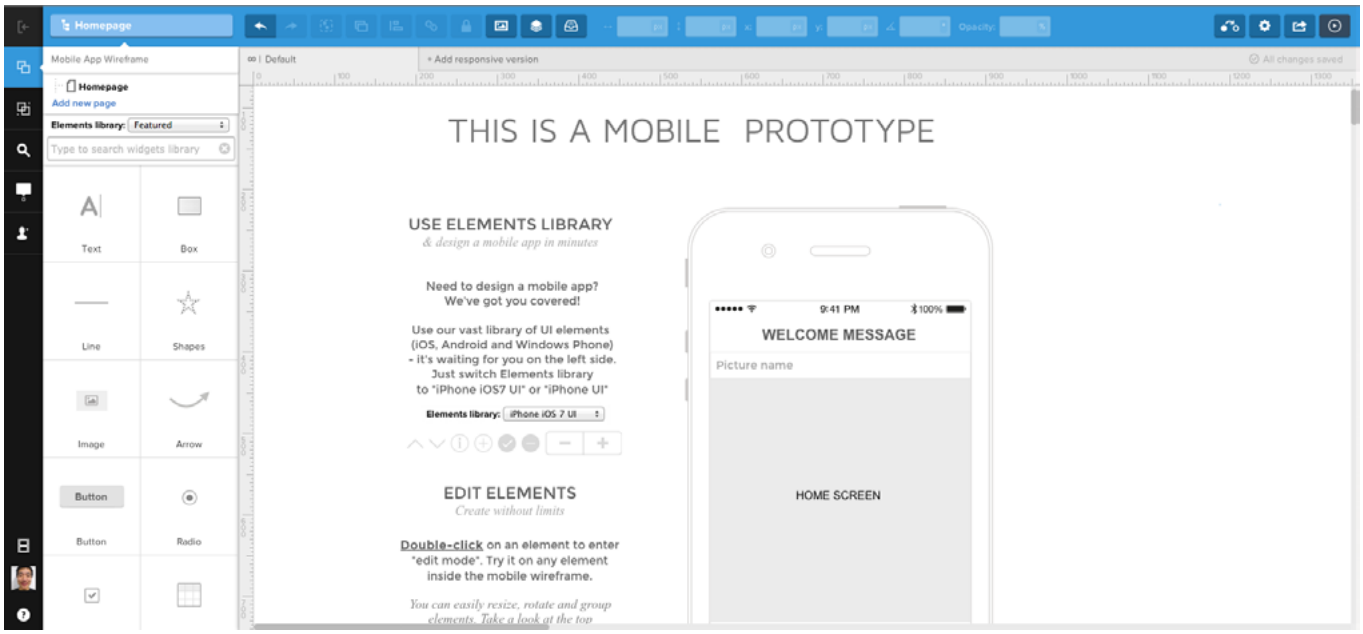
- **Focuses on flow instead of pages** – One of the most important decisions isn't what a page looks like, but what happens before and after. Low fidelity prototypes let you draw and link up lots of small pages, play with interaction, and do other things that feel natural when the environment is more sandbox-like.

Low fidelity prototypes are uglier, but help you iterate much faster.

If you're going low fidelity, a good rule of thumb is to focus on 20% of the functionality that will be used 80% of the time.

2. High Fidelity Prototypes

High fidelity prototypes are more suitable when you are in the later stages of design and thinking about things like branding, look and feel, and other details. The high fidelity prototype lets you get as close as possible to the real product but still at lower cost. Just like low fidelity prototypes, you can also use online apps or HTML coding to create a high fidelity version.



source: UXPin

According to **Marty Cagan, Partner at the Silicon Valley Product Group**, high fidelity prototypes can encourage a deeper level of collaboration between product managers, designers, and engineers to uncover what's needed for a feasible product. As Cagan describes, Higher fidelity prototypes offer such benefits as:

- **An early representation of the full product** – Marketing, sales, and business development can all come to a useful understanding of the product early enough so that they can prepare accurately
- **Reduced development time** – Validating a high-fidelity prototype with users may significantly reduce development since the product is more polished and you may have resolved many of the questions early that otherwise complicate development
- **Better idea of scope** – High fidelity prototypes provide more

detailed information for accurate engineering cost estimates early in the process (when they're most useful). This is especially helpful if your product introduces new technology.

Hi fidelity prototypes let you get the closest to the real product but at less cost.

Regardless of the fidelity, **Smashing Magazine author Lyndon Cerjeo** suggests that prototypes should be built piece by piece rather than in a single iteration. As mentioned by Andrew Chen, an effective approach is to start prototyping broadly and widely and then diving deep into selected areas of the solution with higher fidelity. For example, the first iteration of a website prototype would build out the key landing pages while further iterations could be higher fidelity and drill down into specific website sections (such as the steps you'd take to download something).

Design Specifications

While prototypes show interaction and aesthetics, design specifications describe the processes and artistic assets needed to make all that work.

Design specifications consist mostly of user flow & task flow diagrams which outline the functionality and asset & style requirements which explain the creative and technical details of the visual identity.

1. **User Flow Diagram**

   User flows, or journeys, map the entire realm of circumstances and decisions that influences how someone achieves their goal. This is highly comprehensive and includes the moment the idea forms in the user's head until when the goal is achieved.

   A user flow diagram maps out broad goals such as planning travel, or like the above diagram, hiring an employee. For example, two people seeking to purchase a record online may experience completely different journeys. One might enter bestbuy.com via the address bar, search for an album with intent to buy, and add to basket while another might search on Google, click the first result, browse reviews online, compare CDs, and dive deeper into detail before entering the buying funnel. Therefore, your user flow diagram could become quite complex.

   According to **Wireframes Magazine**, the above Speech Bubble User Flow is an effective method of focusing on the thoughts and needs of real people as you create the product interaction. As projects build momentum, it can be easy to get lost in the technicalities of the product. The Speech Bubble User Flow ensures that you don't lose sight of the personas you developed in the Analysis stage.

2. **Task Flow Diagram**

   If user flows are holistic in strategy, then task flows are microscopic in execution. Task flows describe specific and repeatable series

of actions such as setting the alarm time on an alarm clock app.

As you can see in the above example, task flowcharts are less visually sexy than user flows since they describe almost algorithmic processes. But they are essential to helping you streamline the steps that must be taken to accomplish everything your product promises.

Larry Marine, founder of the Intuitive Design Group, believes that task flow analysis is a key UX step that many people skip. Unlike use case analysis which looks at how people interact with systems, task flow analysis looks at the details of how people accomplish specific tasks. It's a subtle, but important distinction. For example, Larry went to a brick-and-mortar shop to watch the steps people took in completing the task of buying flowers before applying those learnings towards modifying the task flow of an online florist site. By thinking about tasks rather than use cases, he was able to think outside the product and see how people could solve a problem rather than how they currently solve it.

3. Assets & Style Requirements

A product style guide is often used to outline the aesthetic and technical specifications of the look and feel. Product style guides will include everything from brand rules describing what emotional states to achieve to technical specifications like specific

pixels, file formats, and overall size/dimensions of design assets. The guidelines may be brief and loose to promote creativity like Mozilla's "brand toolkit", or precise and exhaustive like Apple's "Human Interface Guidelines".

Photo Credit: Firefox Platform.

Brad Haynes, Product Designer at Salesforce, built the Salesforce style guide around the product rather than a concept. Faced with repetitive questions from his team, Brad was able to create uniformity in Salesforce's look and feel by reimagining it as a mobile app. The core of the new product style guide contained the following elements:

- **Principles** – Guidelines related to hierarchy, alignment, and simplicity were clearly laid out to explain the reasoning behind the product design

- **Colors** – A small snapshot of the color palette was shown to give just enough information without overwhelming the design team
- **Typography** – The design was kept simple by constraining to only one font and listing specific font weights
- **Iconography** – The full system and library of icons (along with technical details like pixels) were provided

At Yelp, the style guide is taken a step further as a living document that benefits designers as well as developers. Their style guide even includes snippets of code to help reduce technical debt. As a result, the collaboration between their design and development team actually helped reduce the time needed to create new features since the teams could work off of reusable lines of code and updated design pattern libraries.

For additional best practices, you can check out these product style guides from Google, MailChimp, and Salesforce.

Define, Design and Refine

As we've shown, the design phase consists of multiple stages and tactics that all help to turn your idea into an experience. Whether you go low fidelity or high fidelity, the ultimate goal of sketching, wireframing, and prototyping is delivering great product concepts – not deliverables.

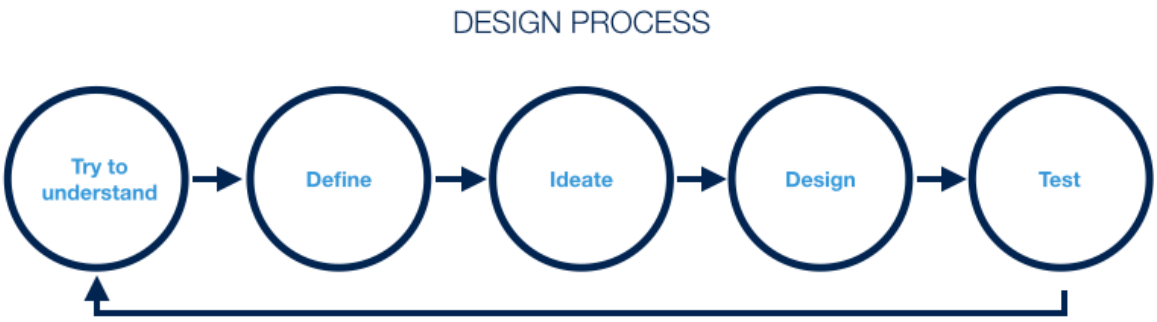


Photo Credit: Marcin Treder, UXPin

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The goal of wireframing and prototying is delivering great product concepts, not deliverables

If you've sketched something on scrap paper that looks like an actionable solution, there's no value in recreating it in a wireframe for the sake of prettiness. And while the design specifications might feel like more paperwork, an extra ounce of sweat in the design phase can save a gallon of blood during development – you just need to be strategic about why you're documenting. Don't make deliverables for the sake of it since you have much better things to do, especially as you near the next phase of Implementation.

Product Implementation Process & Documentation Essentials

An Overview Of The Process &
Documents For Implementing Product Designs

While the bulk of documentation is produced in the earlier stages, the implementation stage is perhaps the most crucial phase of collaboration.

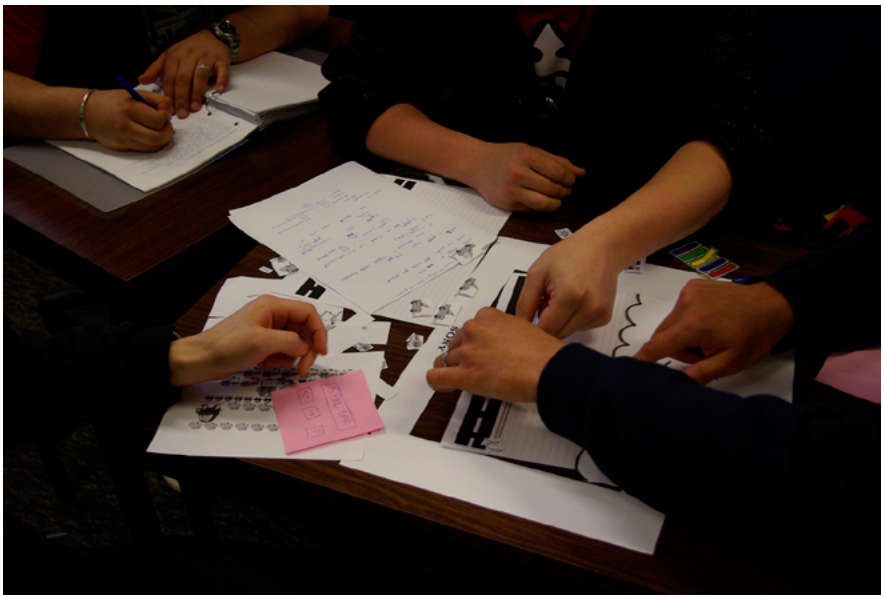


Photo Credit: Samuel Mann. Creative Commons.

We focused on concepting during the research, analysis, and design phases. Now, we get to do the heavy lifting. Developers, designers, and product owners will all work together to transform prototypes and lines of code into a living product.

We'll discuss helpful documentation you can use to stay on track as the product is built, internally tested, and beta tested before its grand unveiling.

Build It

Once you get to the "Build It" phase, the previous research and prototyping should give your team a high-level understanding of your product. Essentially, you should be able to ask any 5 team members about the overall purpose, features, release criteria, and timeline for the product and they should give you the same answer. The PRD (Product Requirements Document) and FRD (Functionality Requirements Document) are useful working documents to keep design and development aligned. In today's Lean and Agile world, these documents may be trimmed down so we will focus on just the core elements.

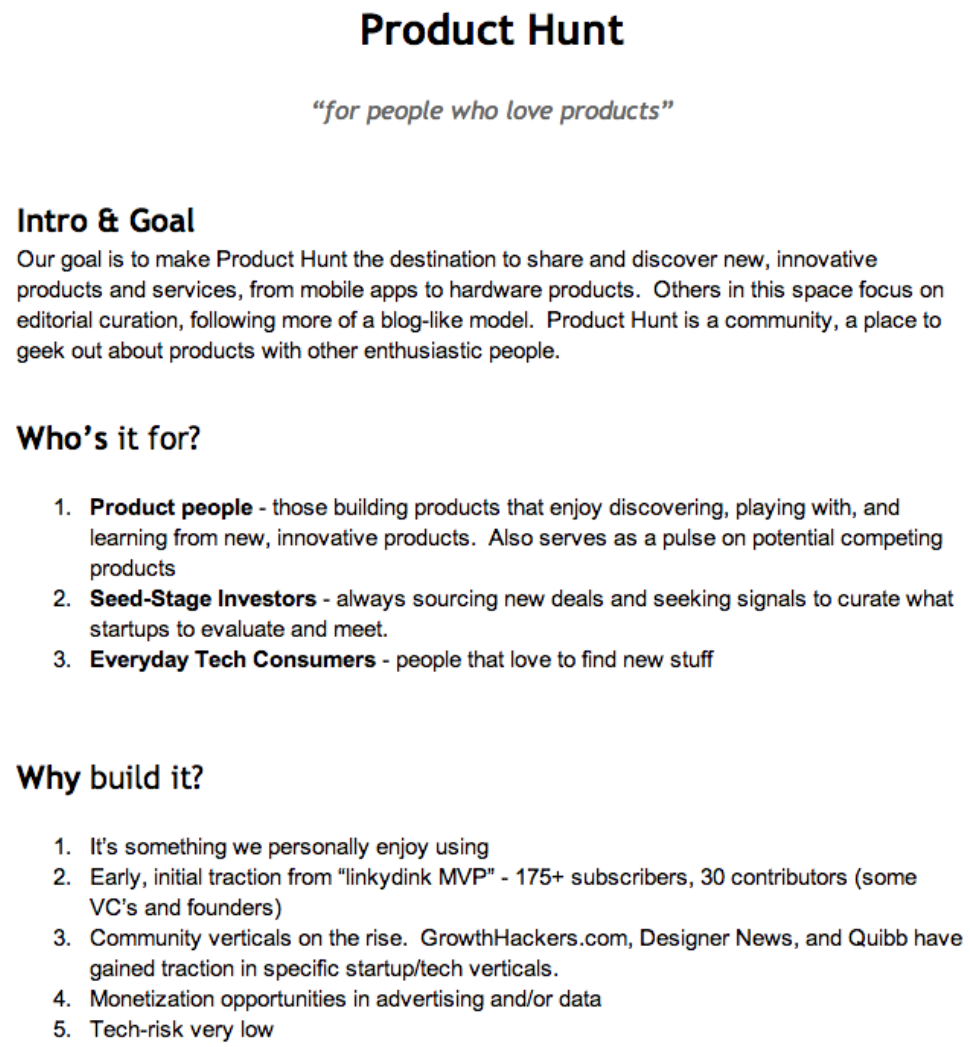
1. **Product Requirements Document**

   The PRD is the heart of your product and serves as a living document for any designer, developer, or stakeholder to understand the status and purpose of the product.

   Failure to document requirements can lead to wildly different assumptions. Because there's been debate around the danger of excessive design thinking as well as its vital role in product leadership, the PRD helps balance the design team's focus on usability

and aesthetics against engineering's functional concerns. Getting signoff from all teams on the PRD helps you avoid disaster.

For a detailed PRD, you can reference this expansive PRD template. For a more lightweight option, check out how to write a simple PRD. The product curation company Product Hunt shows that a PRD doesn't need to be 100 pages long – just define the problems the product will solve with a general description of features (and plenty of mockups from previous stages). The technical details should be saved for the FSD.



Product Hunt

"for people who love products"

Intro & Goal

Our goal is to make Product Hunt the destination to share and discover new, innovative products and services, from mobile apps to hardware products. Others in this space focus on editorial curation, following more of a blog-like model. Product Hunt is a community, a place to geek out about products with other enthusiastic people.

Who's it for?

1. **Product people** - those building products that enjoy discovering, playing with, and learning from new, innovative products. Also serves as a pulse on potential competing products
2. **Seed-Stage Investors** - always sourcing new deals and seeking signals to curate what startups to evaluate and meet.
3. **Everyday Tech Consumers** - people that love to find new stuff

Why build it?

1. It's something we personally enjoy using
2. Early, initial traction from "linkydink MVP" - 175+ subscribers, 30 contributors (some VC's and founders)
3. Community verticals on the rise. GrowthHackers.com, Designer News, and Quibb have gained traction in specific startup/tech verticals.
4. Monetization opportunities in advertising and/or data
5. Tech-risk very low

Photo Credit: screenshot of PRD by Product Hunt

According to **Ben Horowitz and David Weiden, both notable venture capitalists**, the PRD is the most important document a product manager maintains and should be the product Bible for marketing, design, and engineering. Good product managers not only keep PRDs up-to-date on a daily or weekly basis, but they view the entire PRD process as ongoing – the document is never truly complete, it simply evolves as the team iterates.

Marty Cagan, Partner at the Silicon Valley Product Group, explains the four core sections of a PRD – defining purpose, describing features, setting release criteria, sketching rough timing – which we've adapted for our purposes below. According to Cagan, the PRD's goal is to explain the "What", not the "How". In each section, remember to be clear on the problem being solved versus the solution otherwise you may lead the team to make incorrect assumptions. The engineers, designers, and UX folks are the ones designing solutions for the product – don't piss them off by making the PRD a recipe rather than a guideline. Now let's take a look at how to approach each section of the PRD.

1. Product Requirements Document

Make sure you discuss the user problems (not solutions) that must be addressed, the target demographic (companies, customers, users) and various use cases for each demographic.

While this has probably been discussed to death and even defined during the Product Definition phase, it's important to reiterate them in writing during the build phase otherwise it might get lost in the development shuffle. What separates a top 1% product manager from a top 10% product manager is understanding that the team craves purpose and context when feature tradeoffs are inevitably required, so forget the marketing jargon and only talk about "Why?", "Who cares?", and "So What?".

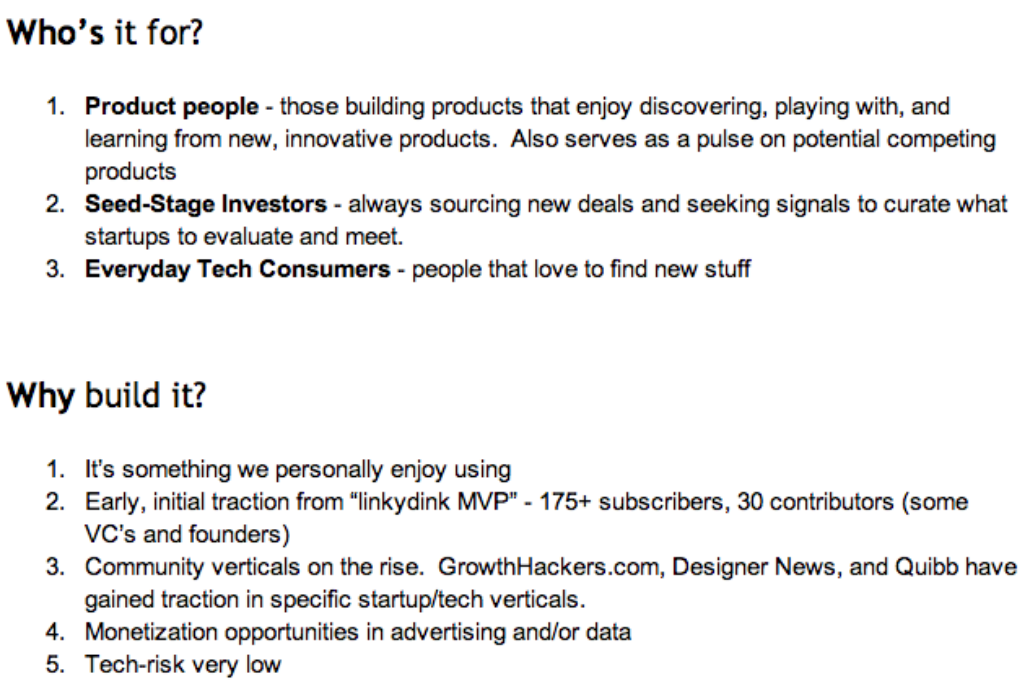


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Photo Credit: screenshot of PRD by Product Hunt

2. Describe the Product Features

The features section is the body of the PRD.

Features must be described with regards to the interaction design and user experience to give engineering the most flex-

ibility. More importantly, you must map features to product objectives (known as requirements traceability) so that the business impact can be clearly understood if someone cuts a certain feature during development. Ranking these features will also help you prioritize in case there's scheduling shifts or you discover some features should be replaced as you progress in development.

What is it?

Glossary

1. **Post** - new product hunt submissions
2. **Comments** - comments on a post
3. **Replies** - replies to comments
4. **Vote** - votes for a post
5. **Index View** - homepage of Product Hunt (all users can view this)
6. **Detailed View** - permalink page for each post
7. **Profile View** - user profile page

User Types

1. **Non-Registered Users** - people that have no yet registered
2. **Registered Viewers** - people that have registered and can vote on posts but cannot post or comment.
3. **Contributors** - registered users that can post, comment, and upvote (ie, "Hunters"?)
4. Admins

Photo Credit: screenshot of PRD by Product Hunt

3. Outline the Release Criteria

How will you know the product is ready to release for beta testing? While this section can be the most technical of the PRD, we still are just describing goals – not a means to achieve them. You'll want to outline criteria in these five areas:

- **Functionality** – Is there a baseline percentage of the original features that must be retained? What are the absolute mandatory functions?
- **Usability** – Is the program aesthetically striking and intuitive to users? What is the acceptable time to complete tasks for each use case?
- **Reliability** – What's the maximum acceptable failure rate? Are these failures predictable? Can the system recover from these failures?
- **Performance** – How fast must it be? What is the maximum response time, throughput, and memory consumption?
- **Supportability** – Is it testable, serviceable, installable, and configurable?

It's important to start the discussion around release criteria as early as possible, iterate, and formalize them as you approach the build stage. These should be reviewed and agreed by stakeholders during the early stages of development. Otherwise, if you wait, you might just set the bar at wherever the product currently stands.

4. State the Constraints & Establish a Schedule

Excruciating over exact timing is dangerous since it can hold you accountable to features that might change depending on the market. Instead, a rough window provides flexibility while

helping to better avoid feature creep since it sets stakeholder expectations. In addition, writing down any workflow constraints (for example, budgeting or resources) can also provide a more accurate picture of the factors affecting timing. With both the constraints and rough date in writing, you have a more informed way to work backwards from the end date and assign realistic sprint lengths to each feature.

2. Functional Specifications Document

If the PRD is the heart of your product, then the FSD is your product's brain – it details how everything works together in greater detail.

Unlike the PRD, which is completed by the product manager, the FSD can also be completed by business analysts or technical leads. Regardless of who completes the document, it's still important to understand its implications. The FSD picks up where the PRD left off by architecting the systems and specifications to achieve the features.

The product requirements document is your product's heart.
The functional spec document is its brain.

According to **TechRepublic**, design philosophies should be kept out of the FSD so that the document stays as relevant as possible to its technical audience. While smaller companies may combine the FSD and PRD into one document, the two should be treated

separately. Former head of product development for the Coldfusion project at Adobe, Jason Delmore provides a fleshed-out FSD template including information on what does and doesn't belong in an FSD. You can also check out former Microsoft Excel product manager Joel Spolsky's complete FSD for his startup Fog Creek Software.

Since a technical lead will usually take ownership of the FSD, we'll only look at what's relevant from a product management point of view. In a nutshell, the FSD is what's given to developers so they know what to build, what's given to testers so they know what to test, and what's given to stakeholders so they know exactly what's being created. As Spolsky suggests, while your PRD might say something like **"The app should include a product list", the FSD would say "The system will register a product using the following fields: Name (30 characters), Details (1000 characters), Price (currency), Category (pick list)."**

In the old world of waterfall development, an FSD could easily approach 100+ pages. In an Agile environment, the FSD is kept as concise as possible due to the fast pace of sprints. Regardless of length, the FSD should convey a high degree of detail regarding any externally visible behavior of the product such as:

- Exact text of error messages
- Supported web browsers, operating systems, screen sizes

- Size and allowable contents of data input fields

In Agile companies, a brief FSD can also be accompanied by using JIRA to track development against the specs of the FSD. As you can see below, custom JIRA dashboards make it easy to see who is doing what technical task.

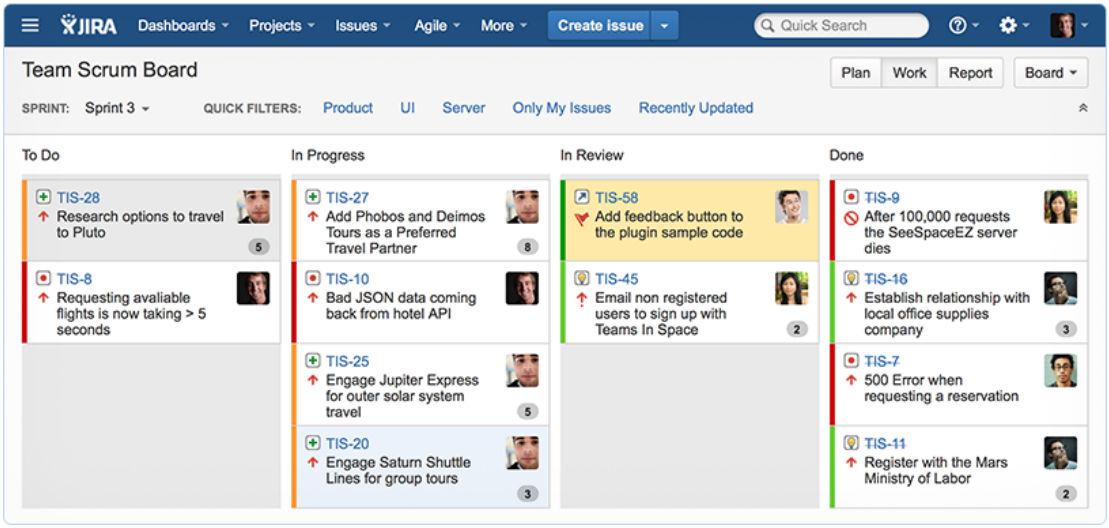

Photo credit: https://www.atlassian.com/software/jira

The technical direction of an FSD can also be embodied in a project Wiki. **Project Fedora, an open-source operating system created by Linux maker Redhat**, provides an excellent example of collaboration on functionality requirements. Although a Wiki is ideal for editing and version control (no need to tell people to delete outdated specifications documents), it can just as easily turn into a mess of tangled links. As such, either the technical lead or the product manager should help moderate the Wiki.

Once you've chosen a method to outline the technical requirements, you can use any variety of spreadsheet program (MS Project is

great if you're getting detailed) to outline timing. Unlike the PRD which included rough timing, you now have a much better idea of sprint lengths and delivery dates since the technical work is clearer. The ranking of features done in the PRD can also be included to keep scope in check.

Whether you choose lightweight or page-heavy methods, documenting your product development improves transparency and can help prevent last-minute stakeholder changes.

Eat Your Own Dogfood

Once you've iterated your product to the point where its usable, testing it with your team is a great low-cost (or no-cost) reality check.

Since the cost of defects increases the longer they stay in the codebase, this feedback loop – known as dogfooding, alpha testing, or user acceptance testing – might even get you some net gains. The importance of dogfooding might best be understood by what happens when you don't do it. For example, part of Facebook Home's failure was that its product team used mostly iPhones while the product was based on Android. As a result, the team left out important widgets, docks, and app folders needed by Android users.

At UXPin, we eat our own dogfood. We use JIRA to keep track of bugs and a highly organized Google Docs spreadsheet for each team

member to create a ”user diary” of good experiences, annoyances, and times to complete certain tasks. We also use UXPin to prototype new iterations of UXPin (a very meta process).

Compared to earlier phases, the main difference is that dogfooding may not be done in as controlled a setting. Bug tracking software, user diaries, and alpha test surveys are all great for capturing feedback in this looser environment.

1. **Bug Tracking Software**

   Most of the data you’ll get during dogfooding will likely be bug reports. While we’ve talked about the project tracking capability of JIRA, it truly shines at allowing for easy visibility and collaboration when documenting and squashing bugs.

2. **User Diary**

   User diaries are great at capturing organic information as someone uses the product freely. Using Google Docs, you can create a simple template and then include open-ended prompts such as:

   - Where were you when using the product?
   - What tasks did you hope to achieve? How long did it take you?
   - Describe something the product did to make your life easier.
   - Include a screenshot of something that frustrated you.

3. Alpha Test Survey

Using a free site like Survey Monkey, you can create a survey to gauge how team members feel about the usability and functionality of certain features and the product as a whole. This sample survey captures both qualitative and quantitative information.

2. Please respond to these statements about the look and feel of the SecureUGA training modules.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The training design is appealing.	☐	☐	☐	☑	☐
Sufficient introduction is provided.	☐	☐	☐	☐	☐
Navigation is consistent and easy to use.	☐	☐	☐	☐	☐
Navigation is difficult and hard figure out.	☐	☐	☐	☐	☐
The interface design is appropriate to the audience.	☐	☐	☐	☐	☐
I like the colors used for the backgrounds and overall slide design.	☐	☐	☐	☐	☐
I like the images used for the characters.	☐	☐	☐	☐	☐
The images used for the characters are appropriate to the training.	☐	☐	☐	☐	☐
The function of the training is good.	☐	☐	☐	☐	☐

Photo Credit: www.surveymonkey.com

According to **Luke Freiler, CEO of beta testing company Centercode**, the goal of an alpha test is to find bugs, crashes, and missing features so tailor your survey questions accordingly. The qualitative and quantitative data from an alpha test will also set the benchmarks for the product and emulate testing done with ~80% of real users.

Now that you've fed the dogfood to your own team, it's time to try it with real users in a beta test.

Feed Your Dogfood to Others

Unlike an alpha test which is designed to improve product quality, a beta test is designed to incorporate customer feedback into the product. Logging and then acting on customer feedback is one of the lowest-cost ways to prevent feature bloat. Since some bugs may still be discovered since alpha testing won't cover all edge cases, JIRA can still come in handy for documentation. Similarly, the surveys you ran during internal testing can also be adapted for real users. Below, we'll look at how other tactics like beta selection criteria, qualification surveys, and user forums can supplement your beta test.

1. **Beta Selection Criteria**

   Before finding applicants, it's important to prioritize the must-have qualifications, the nice-to-have qualifications, and subjective qualifications for testers. This will help you form a "scorecard" which you can use to filter applicants after they complete your qualification survey. Centercode has a simple selection checklist in their Beta Recruitment Kit to get you started.

2. **Beta Qualification Survey**

   Whether your beta test is public or private, you will want a send a survey to potential testers to ensure they fit the user profiles outlined in your PRD. **Centercode's Beta Recruitment Kit** also contains a quick qualification worksheet survey which you can then translate into a live survey on Survey Monkey. You can also reference this live example from McAfee or the sample below.

3. Beta Testing Forums

Using a forum not only fosters earlyvangelism by building a community, it allows your team to actually respond to beta testers. Beta testers are volunteering their time because they believe in the product, so it's important to make them feel appreciated. Furthermore, a forum will serve as a large-scale user diary of sorts for you to track the experiences of all beta testers.

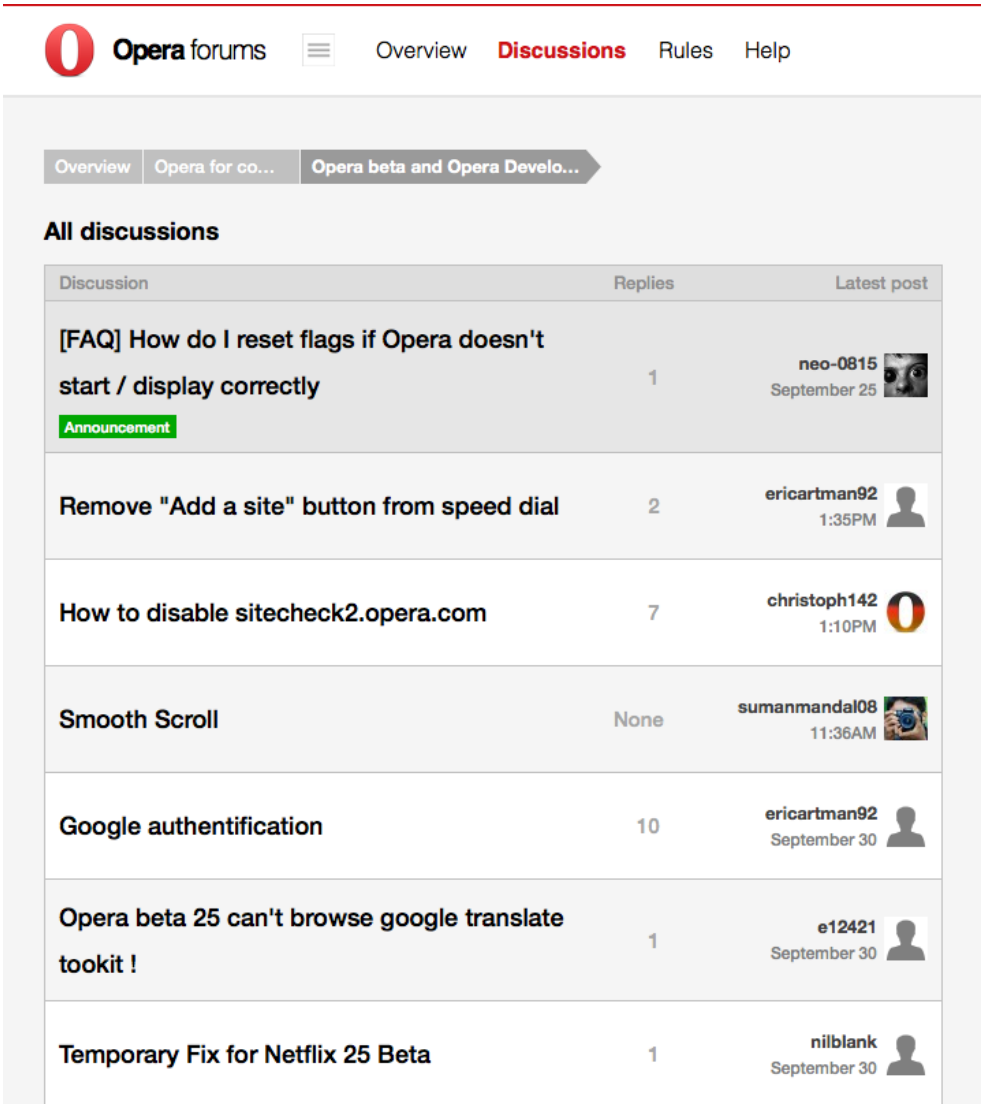

Photo Credit: forums.opera.com

Use What Works and Scrap the Rest

Building your product is an ongoing process and the last thing you probably want to do is throw more paperwork into your sprints.

But a certain level of documentation is necessary to keep some order in all the chaos. User requirements coming from product management need to be translated. Dependencies among different technical entities have to be understood. And internal and external testing feedback must be captured to justify expensive-but-necessary changes. In between all this, you'll need to answer stakeholder questions like "How is everyone staying on the same page?" and "How will we realize our goals in the set time limit?"

The templates and tactics we've listed all serve as helpful reference points as you prepare for the ultimate product test – your launch date.

Product Launch Process & Documentation Essentials

An Overview Of The Process &
Documents For Launching New Product Designs

Launching a great product can be like sending a rocket into outer space. It requires tons of research, hard work, passion, and plenty of worrying. Finally you launch, and as you watch it disappearing through the clouds, it finally hits you that it's completely out of your hands.

Photo Credit: Will Folsom. Creative Commons.

Now, larger questions loom on the horizon: When do I prepare marketing materials? How do we best train our sales reps? How can we support customers?

For some successful companies, product launches seem lightweight and effortless. For those less fortunate, they can be poorly timed, maddening, and just barely take off. Whether you're part of a large launch team or a solo entrepreneur, a documented launch process can save you time, sanity, and even your product.

Launching a product is like sending a rocket into outer space: tons of hard work, passion, and worry.

We'll explain how smart documentation can help you meet launch goals and empower your customer-facing teams and end users.

Create a Product Launch Plan

According to **Julie Hall and Joan Schneider, both Partners at Schneider Public Relations**, a lack of communication and planning can be linked to the top reasons products fail. Specific reasons included poor timing, lack of planning for post-launch, and confusing product messaging. Luckily, a carefully created product launch plan can help address all of these issues by aligning departments with both strategy and execution. For a lean launch plan with helpful pointers, check out Demand Metric's product launch plan. For more detail, Growth Technical Marketing has a launch plan that walks you through every step.

Serial entrepreneur and Forbes author, Matt Clark reiterates that every successful product launch starts with a launch plan and

calendar. To stay realistic, Clark recommends that your product plan can work backwards from the launch date to detail every step along the way. This detailed document can also be interpreted as a Go-To-Market strategy, which is the overall battle plan for your product.

According to **Michael J. Skok, serial entrepreneur & Startup Secrets** instructor at Harvard University, it's important that your Go-To-Market strategy thinks about all marketing channels with a focus on customer segmentation. Identify all buyer personas and understand who will play (Actors) what part in what stage (Scene) of the sales cycle. Therefore, your product launch document should explain your launch goals, identify the most valuable segments, and lay out a plan of execution.

1. **Define Your Launch Goals**

   For any new product launch, the goals must be clear and have a deadline. Dave Daniels, founder of product consulting firm Launch Clinic, recommends that setting the simplest goals produces the best results. According to Dave, you need the clearest picture of success since your goals frame the purpose of your product. Let's take a look at how to apply this minimalistic approach:

   - **Sales Goals** – These are probably the easiest to define since you already have sales expectations. Example: We will sell 8,250 units within 90 days of launch.
   - **Prospect Goals** – Defining the number of prospects is especially helpful if you have a long sales cycle. Example: We will find 9,000 prospects within the 90 days of launch.

- **Product Awareness Goals** – This measures how much people care about your product. Example: We expect 12000 site visits and 15 news sites to pick up our press release within 90 days of launch.

- **Customer Upsell Goals** – Companies with existing products can use this to gauge relevance of new products to existing customers. Example: 15 customers will upgrade within first 90 days of launch.

- **Product Defect Goals** – Communicate clearly with development and QA so customer satisfaction (and therefore revenue) isn't damaged. Example: Address high-priority bugs in 24 hours during first 90 days of launch.

While sales and QA goals are clear-cut, marketing goals can be more qualitative. Make sure you work closely with marketing to define prospects so the sales team gets better quality leads.

2. Define Your Minimum Viable Segment

To best achieve your launch goals, focus your launch messaging on the MVS (minimum viable segment) who have the same problems you seek to solve. The "minimum" refers to a niche small enough for you to completely dominate while the "viable" denotes that they want a product you can deliver.

At UXPin, our MVS is comprised of UX professionals who want to convert from paper sketching to HTML prototypes. Since UX and

design professionals spend a lot of time online, we launched our app in December 2011 exclusively on TechCrunch. Our product took off and we even received investment offers a few hours after the article went live.

The right MVS will give your new product the best chance at being adopted by the right people. Usually, members of the MVS are tightly knit and communicate via community forums or online groups. Therefore, this also sets up your product for a viral loop due to the ease of referral.

Once you've found your MVS, you need to figure out the right messaging. According to **KISSMetrics**, it's important to attach your launch messaging to a bigger story. For example, Google doesn't just release updates – it's changing the way the world finds information. Don't just release features, make sure you communicate how you're changing the customer's life. It's no use, after all, to plan marketing tactics when people don't even care about you.

Payment device startup, Coin, is the poster child for targeting an MVS with the right messaging to achieve rapid growth. **Matt Wolfrom, VP of Communications at ShareThis**, explains that Coin was able to go lean on marketing because they achieved superior product/market fit. They developed crisp messaging to go after a segment ignored by big payment processors – millennials tired of carrying multiple credit cards – and targeted them online where they spend the most time.

The results? Their device's November 2013 debut on crowdfunding site Kickstarter earned $50,000 in 47 minutes. Within a month, they earned 10,000 Facebook mentions and 6.8M Youtube views. And, to top it off, they also landed on the first page of Google for the keyword "coin."

The tactics don't need to be complex or expensive if your strategy is highly focused. Apply the same elegant thinking towards your overall Go-To-Market strategy and you'll trim more fat while selling more products to people who will spread the word.

Don't just release features, explain how you can change the customer's life.

3. Create a Launch Checklist

Make sure your product launch plan includes a section naming the DRI – directly responsible individual. Demand Metric has a user-friendly launch checklist that also automatically populates a Gantt chart to keep everyone on track.

According to **Chris Guillebeau, New York Times bestselling author of "The $100 Startup"**, a checklist helps make sure nothing slips through the cracks. As you approach launch, he advises signing up for all marketing and sales email notifications and buying the product multiple times to ensure smoothness. We've adapted his checklist below as a set of guidelines rather than an exhaustive list:

- **Big Picture** – Has our sales team implemented incentives and rewards for early buyers? Has marketing ensured launch messaging is consistent across all channels?
- **Next Steps** – Has QA tested every step of the order process for edge cases? Has marketing ensured all custom ads and graphics are ready for channel partners?
- **Launch Day** – Has marketing scheduled a strong launch message to all our lists? Has the product team checked that FAQs on the website reflect the latest build?

Janine Popick, Founder of VerticalResponse, ensures her company's launch checklist covers all department responsibilities down to the day. One of the most important checks, she advises, is making sure you launch on the right day. If you want to play it safe, you could do a soft launch near the end of the week and not announce until Monday (allowing yourself the weekend to resolve issues). If you want to make a big splash, consider going live with everything on a Monday or Tuesday. Once you finish your product checklist, you'll have clearer visibility to keeping your Go-To-Market strategy on track.

Create content to empower customers and sales teams

Product launch communications should be a two-way street – you need to inform your customers just as much as your internal teams. **Pragmatic Marketing** found that customers are increasingly self-sufficient as 95% of buyers purchased from companies who provided ample content, yet customers could only find relevant content 42% of the time.

Brendan Cournoyer, Director of Marketing at BrainShark, recommends creating content for product launches serves the dual purpose of informing customers and sales teams. Launch content can be a great selling tool since reps learn about what appeals to customers and can repurpose the material for lead nurturing. Below, we'll show how a launch FAQs, demo videos, and case studies help fulfill this dual purpose.

Product launches are a two-way street.
Don't forget to listen to customers.

1. **Launch FAQs**

   Compared to the traditional method of heavy manuals, a launch FAQ portal can be a much more scalable and user-friendly solution.

   According to **Marshall Kirkpatrick, CEO of LittleBird and a TechCrunch writer**, a launch FAQ should be one of your top priorities as you approach the big day. You can create the content from top

issues found during beta testing and update the content based on customer feedback loops. To assist with promotions, you can also create a subsection specifically for bloggers and media to answer questions such as ”What’s the big picture?”, ”How are we different?”, and ”What’s the business model?”. The Hulu portal example above is an excellent method to structure different questions for different audiences.

2. **Demo Videos**

   If a picture is worth a thousand words, then a video is worth a million. Demo videos are inherently multi-purpose since they easily inform the press, potential customers, and sales reps alike.

   Neil Patel, cofounder of KISSMetrics, emphasizes that the most important part of a demo video is the script rather than video quality. Just like the FAQ portal, you can base your script on beta feedback to answer recurring frustrations and objections. Neil has provided a guideline for creating the script, which we’ve adapted below:

   - **Explain the problem** – Carefully articulate your customer pain points.
   - **Create a transition** – Use beta tester and customer feedback to describe specific problems before explaining why you created your product
   - **Show off your benefits** – Show the goods and explain how they soothe customer pain.

- **Include a call to action** – Tell the viewer to sign up or buy your product so they don't need to make any intellectual jumps
- **Answer any last objections** – If any influencers or notable companies have shown interest in your product, use their testimony to ease worries

For tone and length, keep it lighthearted and under 2 minutes.

3. Case Studies

There are few things more compelling for a potential customer than seeing someone reputable already using your product. Case studies are complex and requires trusted beta testers, but can catapult your launch to a whole new level.

According to **Pardot**, today's consumer finds about three pieces of content for every piece published by marketing or sales. As you can see above, Salesforce actually launched its Sales Cloud product by focusing on how Rossignol was already using it to better connect customers to their products in social channels. When creating your case study, make sure you feature someone relatable to customers, tell your story from start to finish, and include real numbers instead of buzzwords. Regardless of the medium, well-crafted content for your launch can persuade inbound customers and gives your sales team a powerful closing tool.

Pack a punch with your product launch

When it comes to product launches, your goal is to capture the uphill momentum of adoption from innovators, early adopters, and the early majority.

The tricky part is that you really only have one shot. Fail to create momentum, and your ”next big thing” will join the pile of great products nobody cares about. Smart documentation lays out your launch roadmap and keeps customers interested and informed. Plan wisely, launch carefully, and then prepare to iterate tirelessly – that’s what will keep your product at the top of mind and market.

Without momentum, your next big thing will join the pile of great products nobody cares about.