

UX 101

What it is.
Why it's important.
How to do it.



Introduction

1 “The broader one’s understanding of the human experience, the better designs we will have”

- Steve Jobs

Why UX?

UX is short for 'User Experience'. Why should you bother with it?

Even if you care only about sales figures, ISO compliance or zero bug count – at the end of the day, you are affected by UX.

In fact, you can go as far as to say that **UX not a choice!**

"Of course it is." you might say "Just watch me cut it from the budget right now! How about that?". That is all well and good, but that is not cutting UX out of the project, but merely giving away your influence of the success of your software.

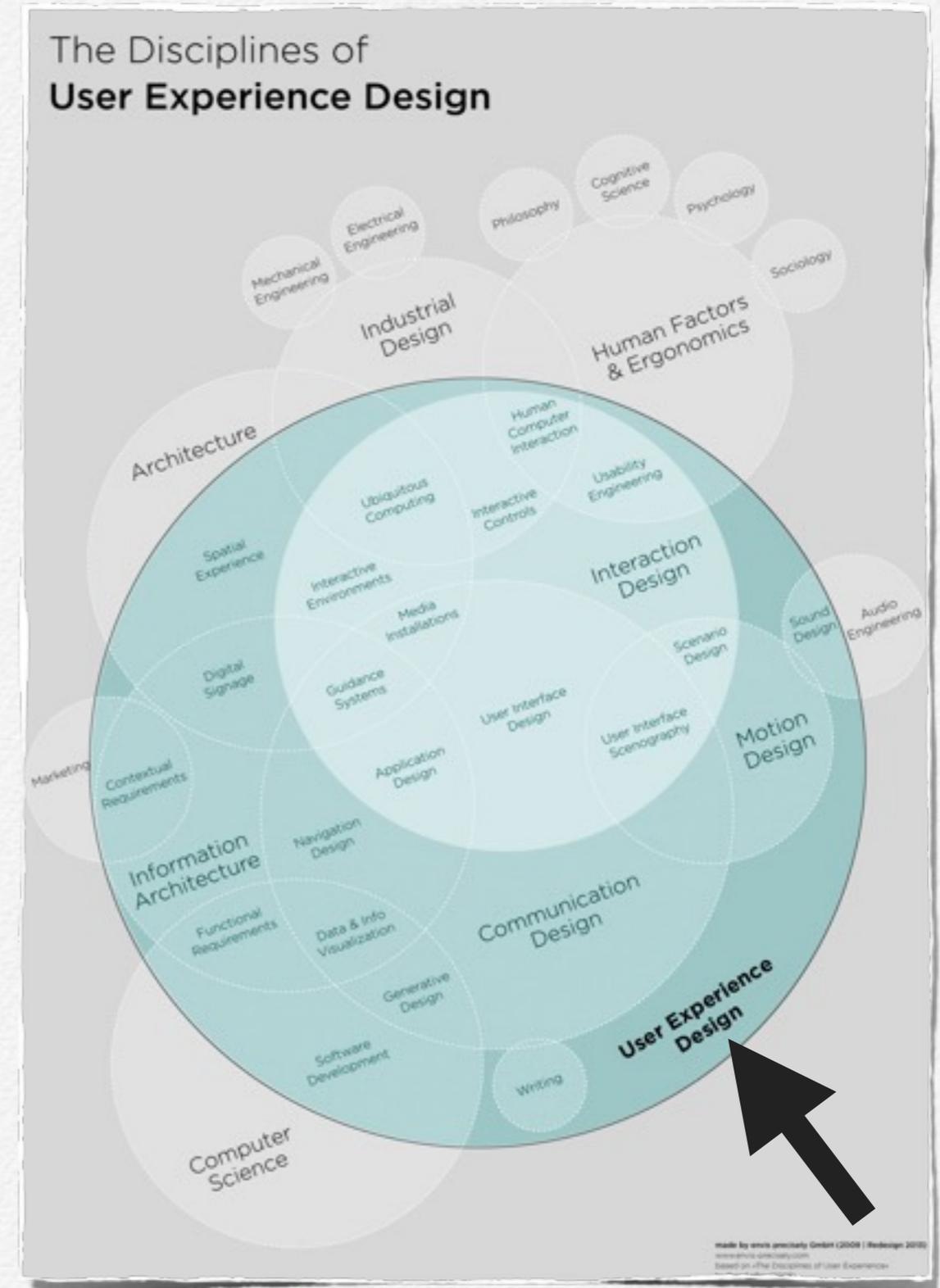
Your software will always come with a user experience, either by **default or by design**.
The user behaviour you see is the behaviour you have designed for.



UX: A Practical Summary

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1. What is UX? What is it *Not*?

“User Experience is a term used to describe the **overall experience and satisfaction** a user has when using a product or a system.”

-Wikipedia

Frankly speaking, the idea behind UX is very simple: In order to make a something that people want to use, you need to understand how people experience that something.

To do so, you need to engage in **UX research**, which is a systematic investigation of:

How people are using...
Why they are using...
How people **want** to use...

Your solution

As simple as this might seem, you'd be amazed at how easily the UX process gets deprioritized and falls between the cracks. This is often due to ordinary culprits: lack of time and funds, but also due to a lack of understanding of what UX means.

What UX is:

1.) A way to measure, create and deliver value

The tangible outcome of a proper UX process is understanding what users *value* and being able to deliver that value to them. This involves creating clear qualitative and quantitative metrics on what will be measured and improved upon.

2.)by way of using empathy

I could not stress this enough. Empathy, empathy, empathy. The ability to share someone else's feelings or experiences by imagining what it would be like to be in that person's situation is crucial in creating something that will have impact on another person.

3.)in order to fail quickly to succeed sooner

Early capture and iteration on what drives your users' experience minimises the risk of production re-work and optimises for innovation. It ensures that everyone on the project is working from the same assumptions and that show-stopping challenges are caught early.

What UX isn't:

Whitney Hess describes the [common misconceptions of UX](#)

I have paraphrased some of her points:

1.) ...UI (User Interface Design)

Interface is a component of user experience, not the experience itself.

2.) ...only a step in the process

User experience design isn't a one-off thing. You don't do it and then move on. It's a constant measuring stick that needs to be held up to everything you do.

3.) ...only about technology

It's about *people* and the way they interact with what you have created. The experience could concern just about anything; a product, service or system.

4.) ...only about usability

Clear navigation and features are crucial to a product, but UX also takes into account what makes it useful, desirable, accessible, credible, findable, and ultimately valuable.

5.) ...only about the User

While the user's needs are inextricable from the process, the goal is to create an overall experience that can meet the goals and needs of the business *and* the users.

6.) ...expensive

UX designers have a toolbox of options from which they can pick and choose methods for each project that makes sense for that particular project. The stakeholders can together discuss on what is feasible for the budget and timeline.

7.) ...easy

While the UX process contributes to sussing out the optimal path through the decision-making tree, there is no secret method that will solve all problems. It is a constant process of trying, learning and revising.

8.) ...the role of one person or department

The UX specialist may well be the driving person behind a product's user experience, but while they can help evangelize the process, it's ultimately up to all members of the business to contribute to- and adopt it in their practice.

9.) ...a single discipline

UX is still a new practice. Different people specialize in different parts of the process. Make sure that you hire people who have experience in the parts relevant to your project.

10.) ...a choice

The world is no longer a place where you can compete on features that are just up-to-par with your competitor. Whether you're a challenger or industry leader, competing only on price is a race to the bottom. To evolve, you need to learn how to innovate. Using UX as a base requirement ensures you have a good foundation for innovating yourself to the top.

2. What are the Business Benefits of UX Design & Research?

In short...

1. UX IMPROVES
PRODUCT & PROCESS

2. UX SAVES
TIME & MONEY

1.) Improves Process & Product

“No-one seems to have time to do it right the first time, but they always have time to do it right a second time”

- Author Unknown

Process

Planning:

When properly structured, shared and internalized, clear UX guidelines bring stakeholders onto the same page, and is an essential component of strategic product development. It reveals knowledge gaps and challenges erroneous undetected assumptions as well as provides a foundation on which to base features and functionality.

Design:

UX research insights should serve as one of the benchmark baselines (together with business- and technical requirements) that the design process always refers to. It helps the team define and stay focused on critical functionality that creates business- and user value. UX data should inform decisions around wireframes structure, feature and functionality priorities as well as look-and-feel.

Development:

When the development team is involved early as strategic partners in the UX process, it allows for a deeper understanding of the intent behind the proposed solutions. When developers are able to partake and provide input, it makes the development process leaner as it both internalizes the needs of users in the developers and allows for dialogue to catch critical technical issues.

Business:

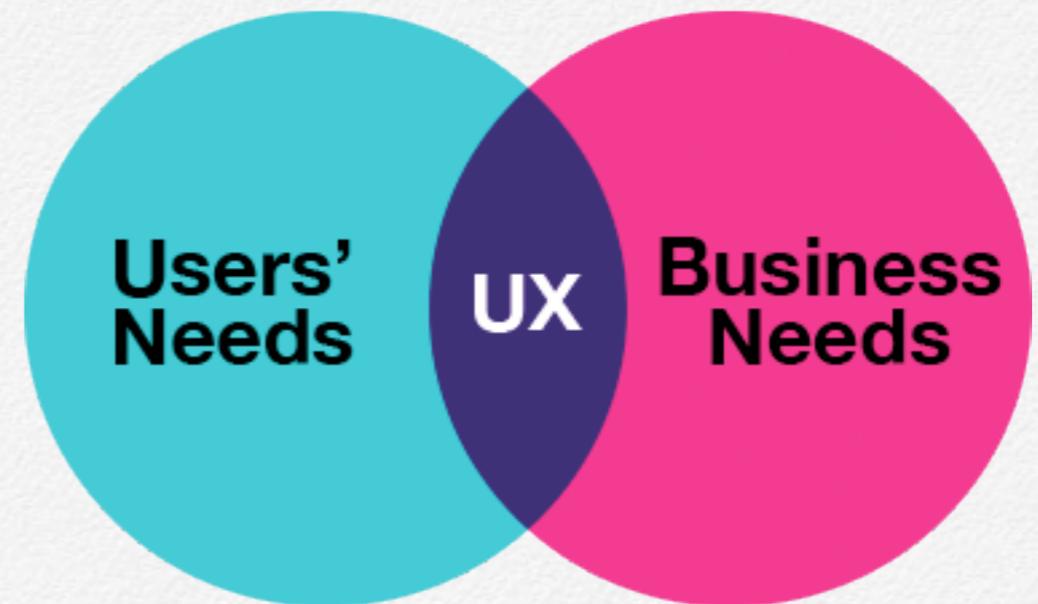
For the organisation, UX allows for thinking about how to lead through innovation. When less time is spent on playing catch-up with competitors, it allows for using the harnessed UX-insights to innovate instead of putting out fires. For the market challenger, UX helps in levelling the field with established players.

Marketing:

Knowing your users helps define your market messaging and focus. UX patterns are a way of catching the soft values that are important to build brand loyalty and an engaged user base.

Product

A product that has been properly informed by UX principles understands that technology and features are only parts of its success. A well-designed solution furthers the business and marketing objectives of the company, not merely through performing its intended functions or subscribing to the latest trends, but taking the long-term view through genuine interest and engagement with its users. The product performs well because it handles its duties in way that takes the users' needs into account at every stage of the life cycle: bringing increased user engagement, faster adoption rates, improved Net Promoter Scores and that sweet, sweet increased revenue.



2.) Saves Time

“Usability cost-benefit data shows that including usability in product development actually cuts the time to market and increases sales because usability and ease of use build quality into products and catch many expensive problems early on in the cycle when they can be addressed at lower cost.

Finally, working with users from the beginning of a product cycle ensures that the product is being designed so that users will be satisfied.”

Claire Marie Karat, “A business case approach to usability cost justification.” In, R. Bias and D. Mayhew, Eds. Cost-Justifying Usability, Academic Press, NY, 1994.

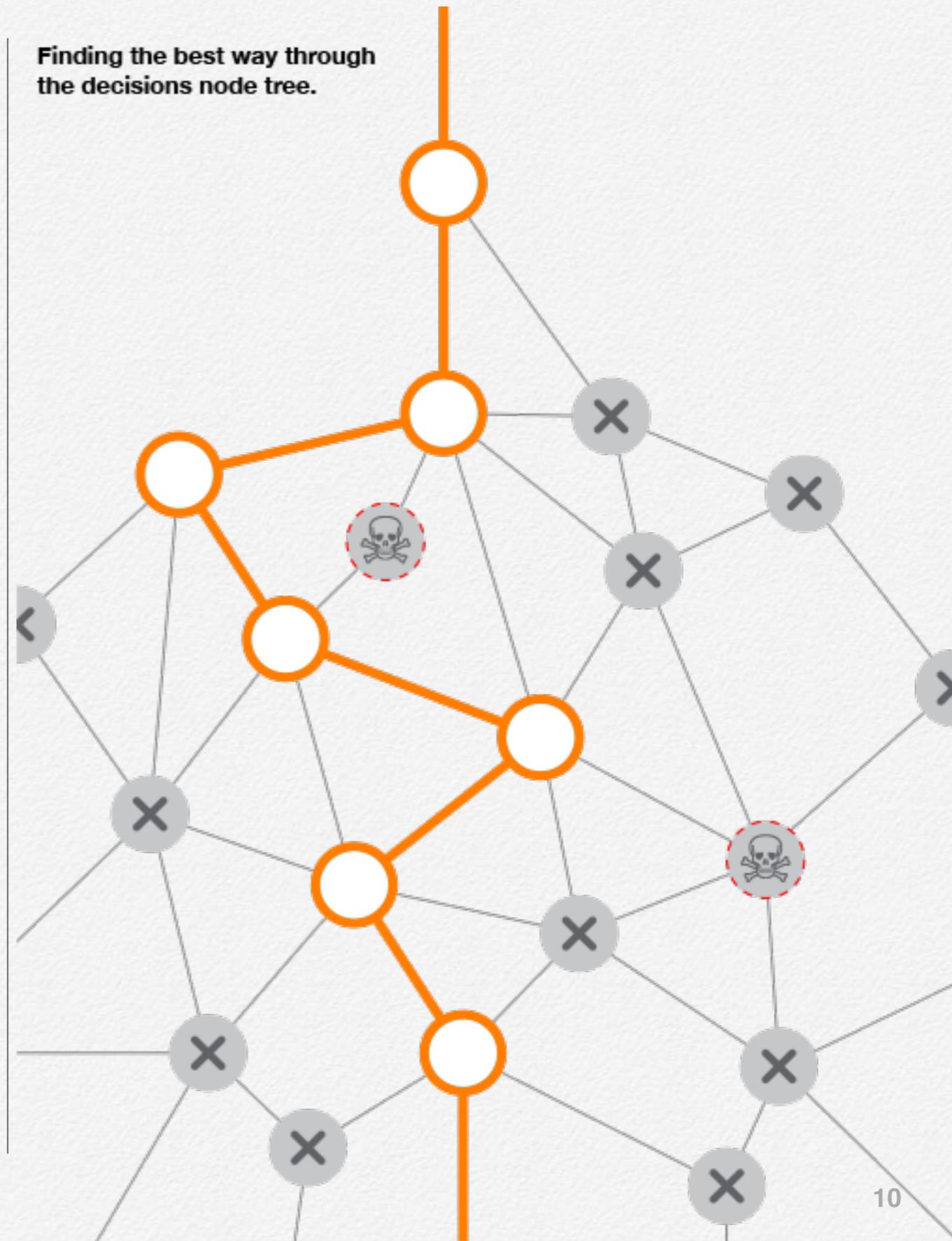
All projects - particularly ones focusing on innovation - will have to deal with decision-making that can not be accounted for ahead of time: limitations of technology, priority changes, communication challenges, time issues, stakeholder feedback etc. Although every effort has been taken to minimise risk, one can count on that there will be challenges. The question is how your team will deal with these changes when they happen.

Think of the project process as node-tree (a transforming one, at that). As you travel down each node, several more unfold. How do you choose the next one? Analytics and past experience will tell you the existing node-path you have been down, but will not tell you how to discover a better path.

Engaging in UX research and design will not only give you a general direction for where you should take your product but gives you tools with which to approach every new node to make the best of it.

Having UX data to make informed decisions as you travel forward with your team saves valuable time in the form of decreased miscommunication, expectation management, and quicker decision making. It also assists in detecting and avoiding going down those dead-ends that can be fatal for any project.

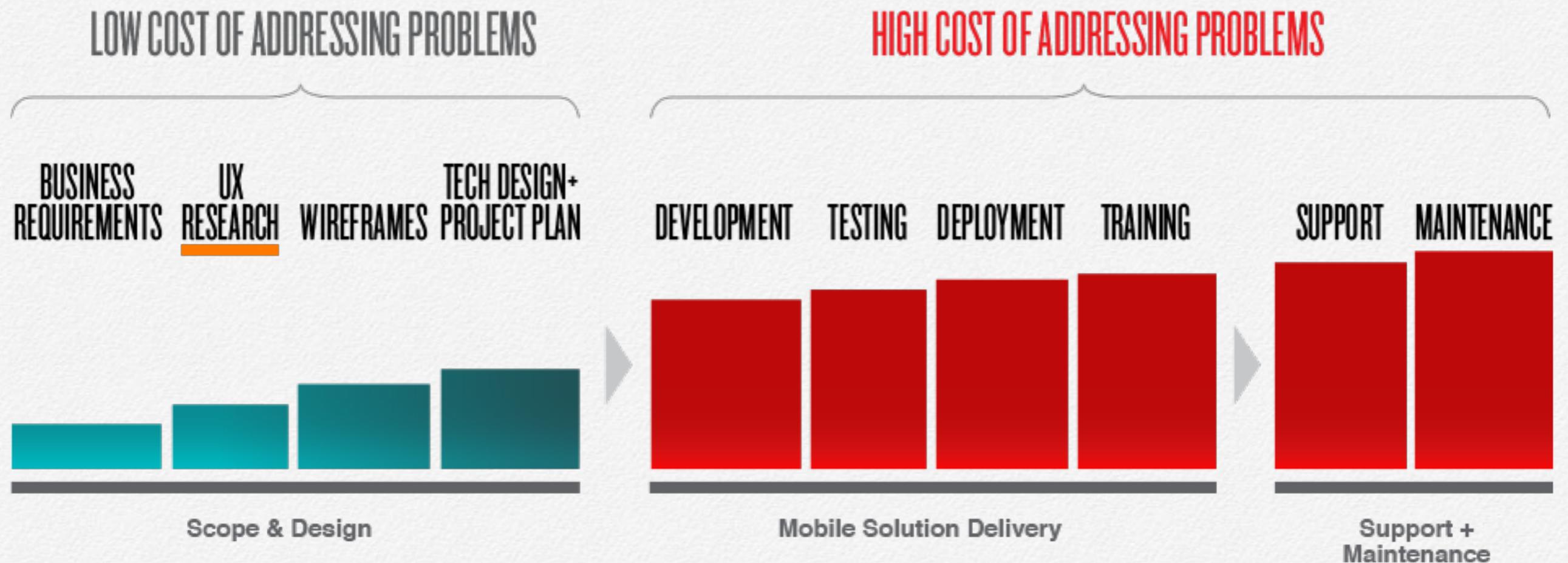
Finding the best way through the decisions node tree.



Saves Money:

While many product owners see UX as a worrisome line item dilating the scope and cost of the project, it will actually save everyone time in the long run.

How? By understanding how it contributes to the larger timeline:



“For each dollar a company invests in developing the usability of a product, the company receives \$10-\$100 in benefits and wins customer satisfaction and continued business.

Furthermore, industry data shows that for each dollar spent to fix a problem during product design, \$10 are spent to fix the same problem in product development, and \$100 or more are spent to fix the same problem after product release.”

Claire Marie Karat, “A business case approach to usability cost justification.” In, R. Bias and D. Mayhew, Eds. Cost-Justifying Usability, Academic Press, NY, 1994.

3. What Are the Pains of *not* Doing UX?

Internationally renowned analyst and strategy advisor [Michael Krigsman](#), lists the top three underlying reasons for IT project failure as:

- 1. Unrealistic and mismatched expectations**
- 2. Poor communications**
- 3. Conflicts of interest among customers, vendors and integrators**

Krigsman writes that even though IT project failure rates are “notoriously difficult to measure”, he says most studies report failure rates between thirty to seventy percent.

“[...]It's a universal problem: setbacks span the public and private sectors, occur in all industries, and often result in substantial economic and productivity losses.”

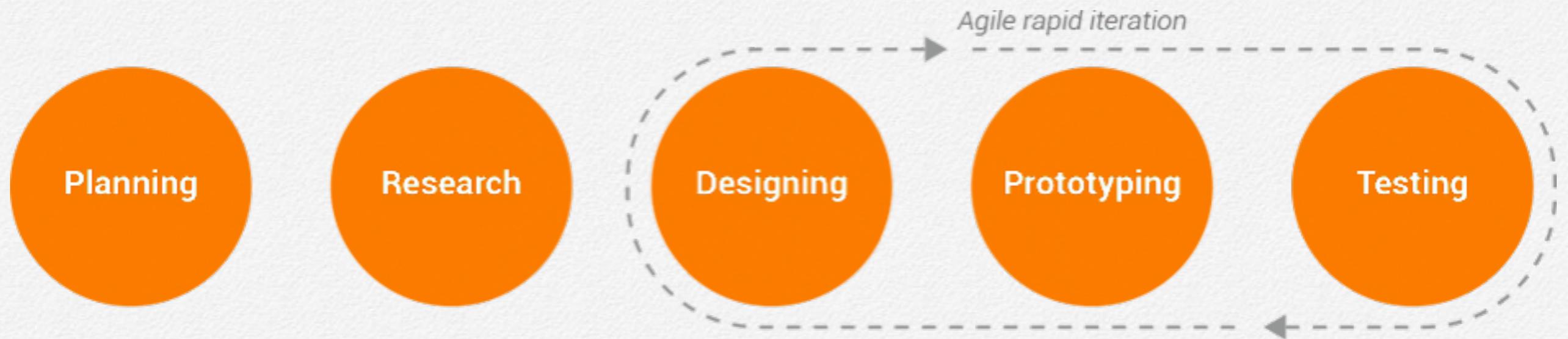
UX helps structure team interactions to cultivate greater inclusiveness, foster creativity, and align participants around specific goals and results. When done correctly, it brings stakeholders onto the same page, and avoids the common pitfalls that can bring a project to its knees – including but not limited to – unclear, contradictory or ambiguous requirements, lack of agreement, lack of priority, resource conflicts, poor planning, too tight schedules, unrealistic schedules, overly optimistic schedules, planning based on insufficient data, missing items, insufficient details, poor estimates, unidentified, assumed, or not managed risks.

Without UX being woven into the structural fabric of the application design process, the introduction of “UX debt” occurs and accumulates at an exponential pace through each release. “UX debt” is the erosion of user satisfaction over time making it increasingly difficult and expensive to provide and agile response to ongoing user- and business needs.

At a glance: the pains of *not* doing UX



4. What are the Practical Steps Involved?



The UX process generally follows a pattern that coincides with the general software development process as outlined on the previous page:

1 Planning

Here, the project team sits down with the stakeholders and identify the business problem/opportunity after which there needs to be a prioritisation of which gaps or opportunities to focus on. This could be done through various exercises where team members can present their vision or do "lightning demos" of other companies' solutions to the same problem. If it is established that research is needed, the team can choose between a variety of research methods to fill in the knowledge gaps.

The team then aligns on how to plan the research into the project through a written proposal, deciding:

- Objectives
- Audience
- Locations
- Methods
- Schedule
- Outcomes

2 Research

After having synced with the project team on research methods, goals, progress reporting and deliverables, if it is deemed that more research is needed, the UX team embarks on capturing new user data. Through the agreed-on research methods, large amounts of "rich" (offering multiple facets of a user's experience) content is captured. The content is a mix of quantitative (*what, where, when*) and qualitative (*why, how*) data. Quantitative data is captured through strategically placed code throughout the software, measuring metrics such as time spent on task, number of errors etc. Qualitative data points to the reasons behind user behaviour and can include such methods as screen-capturing users' paths through your software as they narrate their experience, or a tag-along during normal day in the user's life, observing how they use (and don't use) your product.

Then comes isolating, collating, comparing, focusing, analyzing, mapping out, and translating the data into insights. What are the high-level patterns? Which areas make sense to focus on? How does the data translate into user needs? How do these user needs translate into operational information? The data is sorted and displayed along different categories and axes to inform the other stakeholders for next step.

3 Designing

After having reviewed the insights with the project team and compared them with the business goals, the data is mapped to correspond to actual deliverables. Goals are set to clarify each deliverable and its metrics for success. Does the component work but needs a bit of tweaking, or does it

need to be redesigned from scratch? Depending on the situation, the design team will have to engage in re-examining the product, or go into brainstorming mode. Either which way, you need a hypothesis: a theory that you will design according to, so that you have a clear purpose and a way to measure success or failure.

Hypothesis:

What you expect to happen if you do a specific thing.
(In concrete terms, and testable):

We believe _____
(Design idea, expectation)

Success means we'll see _____
(Metrics, testability)

4 Prototyping

Rapid-iteration implementation starts here. Beginning with low-fidelity sketches, the team moves higher up the fidelity scale from sketching wireframes to mockups to crafting functioning prototypes. Weekly- or semi weekly check-ins with stakeholders keep the design- development and management teams on the same page. All the while keeping an eye on the base-line objectives that came out of the research and basic usability heuristics.

5 Testing

This stage happens in parallel with the design stage, and is part of the design-prototype-test loop that eventually produces the final product.

The early stages consist of testing the product internally for proof-of-concept and basic primary functionality. Critique on high-level features is still allowed. A test protocol and moderator's script for cognitive walkthroughs are created in the early stages.

In the Alpha stage, the product should be feature complete with a fleshed-out UI and ready for the cognitive walkthrough. Initial testing can be done internally do catch basic bugs and usability issues.

In the Beta stage, any crucial UX/UI issues should now have been fixed.

The product is then shared for external and on-site testing.

At the time of release, the UX issues that have yet to be addressed/fixed should have made it into a report.

Best-case scenario includes a monthly/quarterly improvement program as part of technical support and maintenance.

5. What are Some Case Studies I Can Look At?



IDEO: “Keep the Change” Account Service for Bank of America

[Link to case study](#)

Facing the challenge of enticing people into opening new accounts, Bank of America came to IDEO in search of ethnography-based innovation opportunities.

They discovered that many people in both the target audience and the general public would often round up their financial transactions for speed and convenience. In addition, the team found

that many moms had difficulty saving what money they had, whether due to a lack of resources or willpower. After bringing these observations into a series of brainstorming sessions, the team arrived at a solution that uses the habits existing on one hand to resolve the problems persisting on the other. Ultimately dubbed “Keep the Change,” the service rounds up purchases made with a Bank of America Visa debit card to the nearest dollar and transfers the difference from individuals’ checking accounts into their savings accounts.

After Bank of America’s extensive testing, refinement, and validation of prototypes, Keep the Change launched in October 2005. In less than one year, it attracted 2.5 million customers, translating into more than 700,000 new checking accounts and one million new savings accounts for Bank of America.



Deborah Adler Design: “ClearRx” Medication Label Redesign for Target

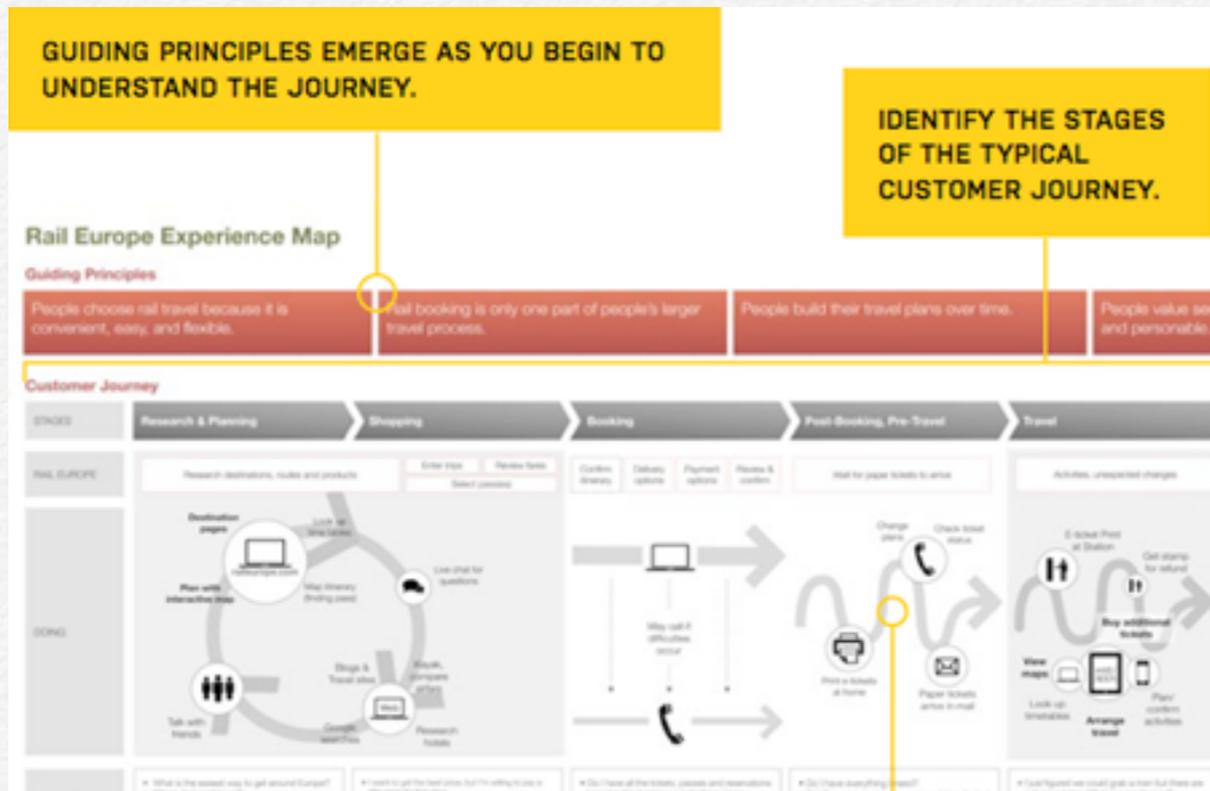
[Link to case study](#)

Deborah Adler’s grandmother mistook her husband's medication for her own. Aside from their first names - which start with the same two letters, and the dosage strength - the bottles looked identical. Numerals were printed without explanation. The number 10 was floating in empty space and could be read as ten pills or “take ten times a day.” The first and largest piece of type on a label were often the drugstore’s logo and address—not the name of the drug and instructions on how to take it. The list went on.

Reading the labels were extraordinarily difficult, not just because of small type size and poor print quality. The user had to turn the bottles in a circle in order to read information which lead to poor comprehension and retention.

Luckily, the effects on Deborah’s grandmother were minimal, but the systemic problem was real: according to a poll conducted for Target, 60 percent of prescription-drug users have taken medication incorrectly.

In a collaborative effort with Target's Technology Services, pharmacy team, Pharmacy Operations, Pharmacy Training, marketing team and an industrial designer, Deborah Adler refined her concept. They developed label, bottle, and card designs that achieved the goals of minimising harmful intake of medication due to mistaken containers, meeting the real-world needs of patients and pharmacists.



Adaptive Path helped its client create an “Experience Map”. Derived from this overall “diagnostic” evaluation, of which the map was just one part, were a number of recommendations for focused initiatives. The experience map helped create a shared empathic understanding of the customers' interactions with the Rail Europe touchpoints over time and space.

Rail Europe used the map for organizational planning, surfacing and prioritise initiatives, providing guiding principles that inform their design of services and touch points.

Adaptive Path: “Rail Europe” Experience Map for Rail Europe

[Link to case study](#)

The experience map highlighted above was part of an overall initiative for Rail Europe, Inc., a US distributor that offers North American travelers a single place to book rail tickets and passes throughout Europe, instead of going to numerous websites. They already had a good website and an award-winning contact center, but they wanted to get a better handle on their customers' journeys across all touchpoints, which would allow them to more fully understand where they should focus their budget, design and technology resources.

6. Resources

Thought Leaders

Jakob Nielsen, Don Norman (Usability mostly)

<http://www.nngroup.com>

Steve Krug

<http://www.sensible.com>

Jared Spool

<https://twitter.com/jmspool>

Kerry Rodden

<https://twitter.com/kerryrodde>

Blogs

UX Magazine

<http://uxmag.com>

UX Booth

<http://www.uxbooth.com>

52 Weeks of UX

<http://52weeksofux.com>

Design Staff

<http://designstaff.org>

Books

[Don't Make Me Think](#)

Steve Krug

[Rocket Surgery Made Easy](#)

Steve Krug

[The Design of Everyday Things](#)

Don Norman

[Communicating the User Experience](#)

Richard Caddick & Steve Cable

[Change by Design](#)

Tim Brown

Papers

A Behaviour Model for Persuasive Design

BJ Fogg

Measuring the User Experience on a Large Scale

Kerry Rodden et al

Guide to Experience Mapping

Adaptive Path

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