



THE

*Ethical
Design*

HANDBOOK

Trine Falbe Kim Andersen Martin Michael Frederiksen

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What to expect from this book

The *Ethical Design Handbook* has been an interesting and challenging book to write. We set out to develop a new type of working framework to empower people to practice ethical design in their business, on their teams, and with their products.

Ethical design could potentially be a discussion point for everything that relates to tech. This means that we had to scope the content area quite specifically, and it means we have had to exclude some areas, like artificial intelligence and the dark web. The main reason is that these fall outside of our area of expertise, and we quite simply don't have answers to give on questions like, "How do we make ethically designed AI?" and "What do we do about the dark web?"

The content of the book is for professionals, not consumers, meaning that we won't cover how consumers can protect themselves against unethical design. While this is also a super-relevant area, it falls outside the scope of the book.

This book is written for everyone who works in the digital industry, regardless of their role. Our focus is on ethical design from the perspective of business, management, and design and development.

We, as the authors of this book, have combined experience in the field of digital development, design, UX, and business-critical IT, and we've shared our body of knowledge to the best of our abilities. Because of this, you'll get to read a lot of stories about projects we've been involved with — without compromising the companies involved.

External perspectives and case studies

Ethical design online is still a young discipline. This means we had to search high and low to find some good examples for this book. We are fortunate to have found a handful of them, and we have also asked a few of the smartest people we know to write their perspectives on ethical design.

We would like to extend our gratitude to Ling Valentine (LINGsCARS), Laura Kalbag (Small Technology Foundation), Holly Habstritt Gaal (DuckDuckGo), Lara Mulady (Goodwings), Tobias Haug (SAP), Aral Balkan (Small Technology Foundation), and Bruce Lawson for their contributions.

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Chapter map

Below is a brief outline of what we'll cover in the book.

The **Introduction** describes the necessity of incorporating ethical design in the way digital businesses are run. It also defines some key terms that will be used throughout the book.

The Need for Ethics in Design (chapter 1) outlines some core consequences of unethical design, and it also explores some of the existing ethical design frameworks and introduces the notion of ethical transformation.

Creating Positive Change (chapter 2) explores how positive change can be introduced in companies, teams, and processes, which includes how to challenge decisions, dealing with ethical team governance, and how to bridge ethics with risk assessment.

Respect-Driven Design (chapter 3) discusses and challenges you on how to involve end users in projects, and it includes guidelines on how to design for the most vulnerable. Finally, it highlights some business perspectives of human-centered design.

The Business of Ethical Design (chapter 4) is all about business. It establishes why ethical design works as a business concept, and how to use the traditional ways of measuring success to measure the impact of ethical design.

Ethical Design Best Practices (chapter 5) provides a set of practical guidelines on how to design good cookie disclaimers and strong terms and conditions, and how to handle data collection ethically. It also provides a set of specific examples of how to design user interfaces with ethical design in mind.

Getting Started (chapter 6) wraps up the content of the book by offering a set of practical tips and specific blueprints to help you get started on your first ethical design project.

Additional resources

This book's website, www.ethicaldesignhandbook.com, contains a worksheet version of the ethical design scorecard from chapter 4. It's free to download and use. It also contains the blueprints from chapter 5, including files for download to make your design process a bit easier.

Introduction

We live in an increasingly hectic world. We lack time for contemplation and time to spend with friends and family. At the same time, digital media has taken over with the rise of the smartphone. We can reach out to faraway friends and family with our phone, and the little time we have is now divided into even more focal points.

Companies, organizations, and the public sector have also become online services, so much so that everything we do is, to a greater or lesser extent, digital activity. In some countries, you can get a divorce online, which must be the most impersonal way to end the most personal relationship you can have with another human being.

A look around the world shows consistent trends – megatrends – with local variations. Megatrends are best described as currents: consistent, transformative forces that drive smaller trends. Among global megatrends, we find the following:

- **Digital detox**

It can be healthy to completely remove yourself from the internet for a period of time and cleanse your soul.

However, the challenge is that it might not be able to be done in practice.

- **Time versus money**

For many of us, our time has become so scarce that it trumps the value of money. Fewer cook their own food, deciding to go out to eat instead. We shop online, not only because there are more choices, but also because it takes less time and the delivery methods have improved.

- **Sustainability and responsibility**

In a world of pollution and climate challenges, there is an increasing focus among everyone, from governments to individual citizens, to take a greener direction. For companies, corporate governance and corporate social responsibility are also in focus.

And here's the thing: consumers are increasingly fed up with the lack of ethics. Combine the megatrends with the decreasing trust in Facebook and Google, the stories about hacking that keep surfacing, and cases like Cambridge Analytica, and it's not difficult to spot the patterns. Granted, we are still in the early days of the ethical transformations that we foresee will follow in the slipstream of these megatrends, but our hope is that this book will speed up the process.

*Walter Mossberg
pioneered the modern,
consumer-focused
technology review
and commentary.*



In the scope of this book, an ethical transformation involves a shift in the way a company plans and executes digital projects. A successful ethical transformation is evident once ethical behavior – fundamental fairness and respect – is ingrained in all digital projects in the company.

Over the past 20 years, euphoria has grown for everything we can collect from users. Employees in management, sales, marketing, and product management have gone into a collective positive feedback loop over the idea that all data can be sold to the highest bidder and create wealth.

The truth is that most companies have more data stored than they'll ever use. That's a bad idea. In addition to the energy and money spent collecting and storing unnecessary data, there is also a security risk and responsibility associated with owning and carrying data on others. With the European General Data Protection Regulation (GDPR), that problem has been expanded with an increased legal responsibility.

Bonus pater familias is a term from Roman law. It means good family man or reasonable man. In a lawsuit, you can ask yourself, "What would a good family man do?" This is a good standard for reasonableness. When designing the digital platforms of the future, we should ask ourselves the same question. When we collect data on a user, are we collecting what we need, or everything we can get our hands on?

For all of us working with digital platforms, it's a good idea to rethink how we approach projects. Either you can choose to do so out of fear of a bad reputation, lawsuits, or fines, or you can do it because you want to be the reasonable person.

Those of us who work with digital products answer to three courts of law:

- We can be tried and convicted by a judicial court.
- We can be scorned by the press.
- We can be ridiculed and abandoned on social media.

This is quite serious, but not unfair. We have reached a time where professionalism, respect, and common courtesy are increasingly expected, and failure to comply is punished.

In some industries with low competition, a few dominant players can essentially share the market space and do whatever they want. That's what we're seeing in the online hotel-booking space. But the situation is different if you operate in other markets. Companies can switch to another email marketing tool in a heartbeat, and the same goes for consumers to switch banks, television providers, internet providers, real-estate agents, opticians... you can continue the list indefinitely.

Yes, the bad actors will stick around in any industry, but for the rest of us, there are other options. Legal fines and press attention have gone up. It's time for a change. We must learn from the past to stop making the same mistakes.

Working with ethical design is a lot like navigating a maze: there is more than one route to the end goal. It requires a great deal of logical sense. And sometimes you end up in a blind alley and have to find another path to move forward.

The Ethical Design Handbook will help you get through the maze.

We would like to wish everyone good luck on their journey, and we hope you find the book to be inspiring and to the point. *Happy reading.*

Read this book and get rich quick

No.

It doesn't work that way. There is no secret method to becoming a billionaire in a week by using ethical design.

An ethical design strategy will not make you rich quick, but at the same time, it won't give you fewer conversions or lower profitability in the long term either — unless, of course, you operate under a business model of tricking people with dark patterns (i.e. design created with the purpose of making people do things they don't necessarily want to do, like signing up for a subscription without noticing it). In that case, you might see a conversion drop if you choose to remove, say, hidden costs from your checkout flow.

From an ethical and long-term strategic standpoint, removing the pattern is still a good idea, even if you take a short-term hit on conversion. It will bounce back, and the upside is that, in the process, you will gain loyal customers who appreciate your increased transparency.

The conventional approach to websites, e-commerce, apps, and other digital services is to deliver something valuable, be fair to users, and grow a sustainable business.

Using ethical design, you can grow a sustainable business in the following ways:

1. If you treat your audience well, they'll stay loyal to your brand and your company.
2. Your conversion rate might go up. When you declutter your interface design, the result is often a higher return on investment. Don't take our word for it. Try a split test and see the result.
3. Have you heard of GDPR? It's kind of funny that one of the best arguments for design ethics is a team of lawyers in the EU, but it's true nonetheless.
4. Not being subject to a media shitstorm is another compelling argument. Consumers are fed up with the misuse of their data; privacy is important to them, and it's a growing concern.
5. It feels better.

Of course, it is not that easy. We know that skeptics will say that it is more profitable to allow teams some freedom to improve conversions.

Many successful websites use dark patterns, and business is going well for them. The owners reason that the fuss about

users concerned about their privacy might go away next week, and the world will go back to normal.

We don't believe this to be true. First of all, the growing concern is mirrored in new legislation, such as the GDPR. There are several new services, such as Legal Monster, whose business model is to help teams develop compliant software. Products for UX testing, like Hotjar, invent features to support data safety, privacy, and security.

The skeptics are right in one thing. There will always be a business for those who want to make money fast. Designers from the dark side read other books, not this one, and let us leave it at that.

There you have it. You will not get rich quick.

With a bit of luck and skill, you will save money on IT projects. Deceptive interfaces have hidden costs in customer service, maintenance, support, return processing fees, and social media backlash. When we design with dark patterns in mind, we usually don't account for these costs. But we should.

Designing less complex systems will cost less, and the benefits from more loyal users, higher conversions, and lower legal fees will help your business grow.

Definition of ethics

Chances are high that you've had to deal with the notion of ethics at some point in your career. While, for many of us, ethics is a fuzzy and overloaded term, there isn't much room for misinterpretation when we look into the classical definition of ethics.

According to Merriam-Webster, ethics is “the discipline dealing with what is good and bad and with moral duty and obligation”. Furthermore, “...ethics tends to suggest aspects of universal fairness and the question of whether or not an action is responsible.”¹

The word “ethics” originates from the Ancient Greek word *ēthikós*, which means “relating to one's character.”² Lexico offers this explanation:



*Schools of ethics in Western philosophy can be divided, very roughly, into three sorts. The first, drawing on the work of Aristotle, holds that the virtues (such as justice, charity, and generosity) are dispositions to act in ways that benefit both the person possessing them and that person's society. The second, defended particularly by Kant, makes the concept of duty central to morality: humans are bound, from a knowledge of their duty as rational beings, to obey the categorical imperative to respect other rational beings. Thirdly, utilitarianism asserts that the guiding principle of conduct should be the greatest happiness or benefit of the greatest number.*³

1 <https://smashed.by/ethicdefinition>

2 <https://smashed.by/ethicsorigin>

3 <https://smashed.by/ethicsdefinition>

If we extract the important words from these definitions, we can say that ethics is tied to one's conduct in relation to:

- fairness
- responsibility
- duty
- respect
- character

The word “obligation” is also important. It dictates that, if we are to uphold ethical standards, we are expected to conduct ourselves with fairness, responsibility, duty, and respect.

So, if we are to make a distilled definition of ethics, it would be:

The duty and responsibility to treat others with fairness and respect.

Ultimately, our ability to uphold that defines our character.

Definition of ethical design

So, if ethics, broadly speaking, is “the duty and responsibility to treat others with fairness and respect”, then ethical design would also – naturally – require us to do so.

There are a range of definitions of ethical design out there, as you will see in the section about existing ethical frameworks.

Some relate to the conduct of the designer, which can include a code of conduct related to research practices, interaction with clients, environmental impact, and so on. Other definitions focus more on the product and end-user side of things. In these cases, ethical design might be defined as creating products that respect the people who use them, with everything that that implies.

Exercising ethical design means creating products and services in a way that treats everyone involved with fairness and respect, regardless of their role (end user, teammate, manager, partner, etc.). But whereas ethical design is often linked to the design and development process, we find it relevant to include the business side. In fact, we believe that if the business people in the organization succeed with ethical design, then the designers and developers would have a much easier time succeeding with ethical design too.

Are we being fair? Are we showing respect? These are two questions that can be asked in the context of people, products, and business alike. To us, ethical design is, therefore:

Businesses, products, and services that grow from a principle of fairness and fundamental respect towards everyone involved.



CHAPTER 1

The need for ethics in design



IT DOESN'T TAKE MUCH EFFORT

to see that the digital industry is challenged when it comes to ethics. It seems like a month can't go by without another tech disaster being revealed. In this chapter, we will dive into some of the reasons why ethics are so desperately needed in design.

Mass surveillance

For better or worse, we live in a deeply connected world. Connectivity has brought us so much good: the freedom to work and live where we want, staying in contact with our loved ones from afar, getting to know distant cultures and places that we can't visit physically.

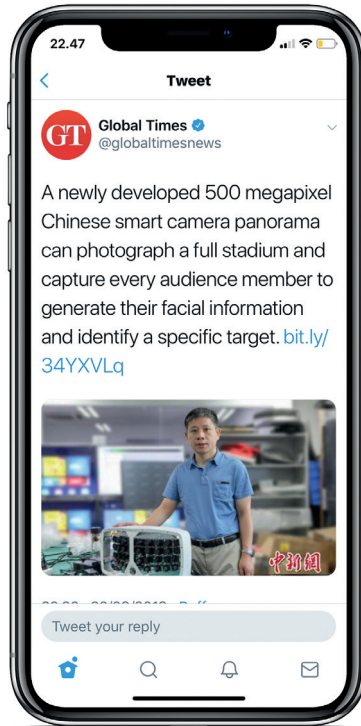
What it has also brought us is surveillance on a massive scale. If we thought CCTV in the United Kingdom represented mass surveillance, we had another think coming.

Internet of Things (IoT) devices invisibly connect us and, thereby, our data to large corporations, that use our data to... well, we're not really sure how they use it, are we?

We are only seeing the tip of the iceberg. We are mostly exposed to the parts of surveillance that are helpful, such as our Garmin watch reminding us to move, because we've sat still for too long.

Most of what goes on with our data is hidden from us, and probably with good reason, because while data-driven design can be used to do good, it can be, and sometimes is, used with monetary intent, also known as surveillance capitalism.

*Not invented in 1984,
but we know where
they got the idea.*



Surveillance capitalism is a business model built around tracking user data and selling the knowledge gained from it to advertisers and data brokers. Surveillance capitalism as a term was popularised by sociologist Shoshana Zuboff in 2014.

And we know that this data is being used in ways that can only be seen as deeply unethical. As Aral Balkan, ethical designer and founder of Small Technology Foundation, puts it:



When a company like Facebook improves the experience of its products, it's like the massages we give to Kobe beef: they're not for the benefit of the cow but to make the cow a better product. In this analogy, you are the cow.

Data trade and data tracking are big business. According to the report “Corporate Surveillance in Everyday Life”,⁴ Oracle provides access to 5 billion unique user IDs. The number is confirmed on Oracle’s website.⁵

Large Online Platforms			
Facebook	has profiles on	1.9 billion	Facebook users
		1.2 billion	Whatsapp users
		600 million	Instagram users
Google	has profiles on	2 billion	Android users
		1+ billion	Gmail users
		1+ billion	YouTube users
Apple	has profiles on	1 billion	iOS users
Credit Reporting Agencies			
Experian	has credit data on	918 million	people
	marketing data on	700 million	people
	„insights“ on	2.3 billion	people
Equifax	has data on	820 million	people
		1 billion	devices
TransUnion	has data on	1 billion	people
Consumer Data Brokers			
Acxiom	has data on	700 million	people
		1 billion	cookies and mobile devices
	it manages	3.7 billion	consumer profiles for clients
Oracle	has data on	1 billion	mobile users
		1.9 billion	website visitors
	provides access to	5 billion	“unique” consumer IDs

An overview of the amount of profiles held by online platforms, credit-reporting agencies, and consumer data brokers as of June 2017. (Image credit: Cracked Labs, CC BY-SA 4.0)⁶

4 <https://smashed.by/corporatesurveillance>

5 <https://smashed.by/dataproviders>

6 <https://smashed.by/datatrade>

But there's also the perspective that a free service comes with a cost, that people willingly give their data in exchange for a powerful service. The problems start when it's unclear whether there's a fair exchange or not.

Segregation

In China, citizens are rated on a set of complex parameters and profiled. How they score affects their creditworthiness, among other things.

It's a consequence of the heavy mass surveillance that takes place in the country. But this kind of segregation doesn't happen only in China. In the fall of 2018, it came out that John Hancock, one of the largest life insurers in North America, would no longer be selling traditional life insurance. From then on, it would only sell so-called *interactive policies*. And to buy interactive life insurance, you must wear an IoT device that monitors and sends your fitness and health data to John Hancock.⁷ And segregation is not the only consequence of mass surveillance.

7 <https://smashed.by/insurance>

Personal safety

According to The National Safety Council of the US, 14% of all fatal car accidents and 7% of non-fatal car accidents in 2016 involved mobile phones.⁸

While some of the phone usage was caused by talking while driving, using a phone while driving also includes texting.

It's highly problematic that a mobile device's UIs and interaction patterns are designed in ways that convince people to pick up their devices in situations like when they're driving a car. A notifications framework can be intentionally designed to do so, but it could also have been designed differently.

One could argue that customers could always turn on airplane mode or do-not-disturb mode when driving. But the people who design the notifications ultimately have the responsibility to design a framework that is useful. This could be done through aggregation or reduction of quantity. We do see a number of users who turn off all kinds of notifications, alerts, and badges on a new phone or computer. Often, there's not an easy way to do so.

8 <https://smashed.by/distracteddriving>

There are also examples of sensitive data being used inaccurately and thereby having grave consequences. The digital contraceptive Natural Cycles⁹ claims to be safer than the pill when used regularly. However, a large group of women found themselves pregnant despite using the app correctly, because of irregularities in temperature (which is the data used by the app to determine the fertile period of the month). The consequences for these women are not just physical, but also psychological and long term. And that responsibility falls on the creators of the app – regardless of whether the pregnancies happened owing to “honest mistakes”.

And it gets even worse. When the data of an app or website that registers user locations is compromised because of data storage vulnerabilities, or when the data is intentionally sold, people are put at great risk. It doesn't take a rocket science degree to see the potential danger that individuals (children, stalking victims, and minorities, to name a few) would be in if the wrong people were to get access to their location.

There are plenty of examples. AT&T, Verizon, Sprint, and T-Mobile are facing lawsuits for selling geolocation data on a total of 150 million customers(!) to a data broker.¹⁰ Live tracking at its best!

9 <https://smashed.by/naturalcycles>

10 <https://smashed.by/locationdata>

According to the lawsuit filed against it, T-Mobile sold live location data¹¹ (yes, live) to partners without any knowledge of how the “partners” would use the data. You could purchase access to the live tracking through T-Mobile partners and get the location of your spouse in real time on your phone. This is not only mass surveillance, but mass surveillance for sale to the highest bidder through a third party.

Bloomberg has revealed that internal reviewers on the Amazon Alexa team can access individual Alexa users’ geolocation, which makes them capable of easily finding the home address of the users.¹² Outrageous from an ethical and safety perspective.

These were just a few select examples. The list of examples is almost endless.

And the people who claim that someone shouldn’t worry unless they have something to hide are far off the mark. Privacy isn’t about having something to hide; it’s about a sense of personal space, intimacy, and safety, without having a digital Big Brother listening in.

¹¹ <https://smashed.by/locationdata>

¹² <https://smashed.by/homeaddress>

Behavior change

Surveillance capitalism is unethical by nature because at its core, it takes advantage of rich data to profile people and to understand their behavior for the sole purpose of making money.

The most chilling thought of all is how data is being used not just to predict and manipulate current behavior, but also

Imagine the uproar if a national parliament had AI cameras and brain wave trackers, and it could follow the activity of every person using the app. Oh, but let us try it on kids!



to profile our future selves through machine learning, ultimately giving companies the power to influence our future decisions and behavioral patterns.

As Cracked Labs, an independent research institute and creative laboratory, states in its report about “Data Against People”:¹³



Systems that make decisions about people based on their data produce substantial adverse effects that can massively limit their choices, opportunities, and life-chances.

This happens on a daily basis to everyone who uses Facebook, whose individualised feed is carefully filtered to show the posts most likely to trigger engagement and activity. Pricing is also becoming increasingly individualised because companies are able to use rich data to assess the long-term value of customers, also known as data-driven persuasion.¹⁴

One can only imagine how companies will be able to use data to profile which of us are more likely to develop mental health or physical issues, thus labeling us a liability for future employers, insurance agencies, and banks.

¹³ <https://smashed.by/dataagainstpeople>

¹⁴ <https://smashed.by/datadrivenpersuasion>

Unethical conduct in products causes addiction

In addition to a wide range of consequences related to mass surveillance and surveillance capitalism, there is also a serious consequence to using products that have been made by companies with unethical conduct.

People who get addicted to their devices are essentially enslaved by the mechanics in the engagement features. Social media platforms such as Facebook and Snapchat take advantage of our fear of missing out (FOMO), as we don't like to miss out on things that seem important to us. They also take advantage of our urge for social validation. We like to feel loved, acknowledged, and respected.

The success of social media platforms and their engagement mechanics have been widely accepted and picked up by other digital products. It's illegal at the operating system (OS) level to send out notifications without consent, but there are workarounds. Apps such as Facebook and Twitter invent new notification types and turn them on by default, so that we get new alerts after we have turned the others off. Once that new notification is turned off by the user, the platform will change the feature, split it into two minor features, and turn on notifications for both of them again. And this adds to the many problems related to device addiction.

Research is not conclusive on how often people check their phones on average, but numbers range from 75 to 150 times per day.¹⁵ That is roughly anywhere between five and ten times per hour, if we assume that the average person is awake for 16 hours per day.

According to the World Health Organization, the mere presence of a smartphone significantly reduces our cognitive capacity. Using a smartphone or tablet just before bedtime affects our sleep negatively because of the blue light from the screen. And the omnipresent access to Google search is suspected to make us into lazy thinkers less capable of analysis and reflection.¹⁶

So, it's clear that while the many positive changes that smartphones have brought to our lives should not be diminished, there is a flip side.

It might feel like that's just the nature of how humans are and how apps work, trying to capture our attention at all costs. Both of these statements are probably true, yet when we use manipulative techniques to create habit or addiction, as designers and developers, we are designing a path to manipulative, dishonest, disrespectful behavior. Once people realize that — and that's what's happening with legislation and society fighting back with ad blockers and Facebook blockers — your company will have to fight hard to regain

¹⁵ <https://smashed.by/cellphoneaddiction>

¹⁶ <https://smashed.by/lazythinkers>

customers' trust and to rebuild your reputation. It's not a good time to gamble all your hard work for quick wins at the costs of manipulation.

Manipulative design

When we're online, we are constantly bombarded with messages trying to persuade us to believe, buy, or do something. The majority of these messages have been designed with intent.

Persuasive design includes mechanisms designed to motivate and manipulate people into clicking, reserving, buying, signing up, or whichever "action" has been deemed the primary goal of the given website you happen to visit. You can replace "website" with any digital product or marketing message. The mechanisms are the same.

And they work.

First: trust

Persuasive design often starts with trust. A website will do everything it can to establish the company or brand as trustworthy, because once we trust it, we are more likely to

interact with it and hand over our time, money, and personal data (which is a currency in today's economy).

Trust can be established through a variety of elements, such as authority, popularity, recommendations, knowledge, and perceived security, all of which we will demonstrate through some very good, bad examples.

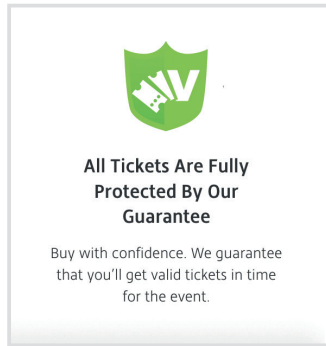
One particular website, viagogo.com, caught our attention because it uses pretty much every trick in the book. Some would claim that viagogo.com is unethical due to its heavy use of persuasive patterns. Viagogo is a so-called secondary marketplace that sells tickets to music and sports events. Boiled down to the basics, they buy tickets and resell them at a higher price. Let's look at how Viagogo tries to establish trust.

AUTHORITY

Viagogo wants us to trust it. It tries to persuade us to do so by using authoritative wording on the main landing page and telling us that "All tickets are fully protected by our guarantee."

Guarantees are also an effective way to establish trust because people think they are in fact protected by them.

Viagogo not only protects; it fully protects you. It even has a cute little certificate seal to prove it!

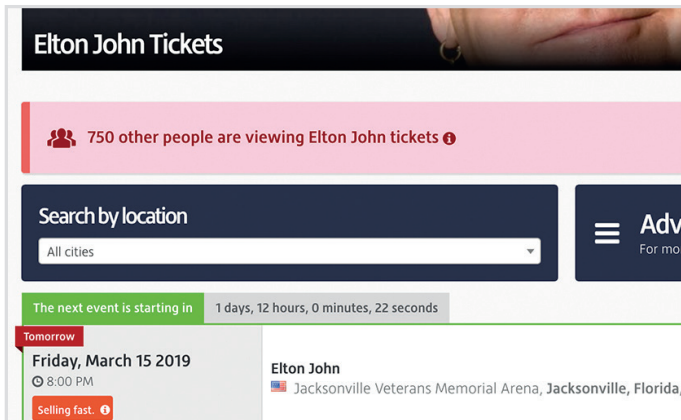


*Homemade certification stamps are used
to increase the perceived authority of the brand.*

POPULARITY

We tend to take popular people and companies seriously, because so many others seem to do so.

Popularity is often established through ratings and social proof such as “star ratings” and Trustpilot reviews. Other websites surface view counts to establish popularity, which is the case with Viagogo. After all, when 750 other people are viewing the exact same event as you, surely it must be popular, right?



The screenshot shows a ticket page for Elton John. At the top, it says "Elton John Tickets". Below that, a pink banner indicates "750 other people are viewing Elton John tickets". There is a search bar labeled "Search by location" with "All cities" selected. A green banner shows "The next event is starting in 1 days, 12 hours, 0 minutes, 22 seconds". Below this, the event details are listed: "Tomorrow Friday, March 15 2019 8:00 PM" and "Elton John Jacksonville Veterans Memorial Arena, Jacksonville, Florida". A red banner at the bottom left says "Selling fast."

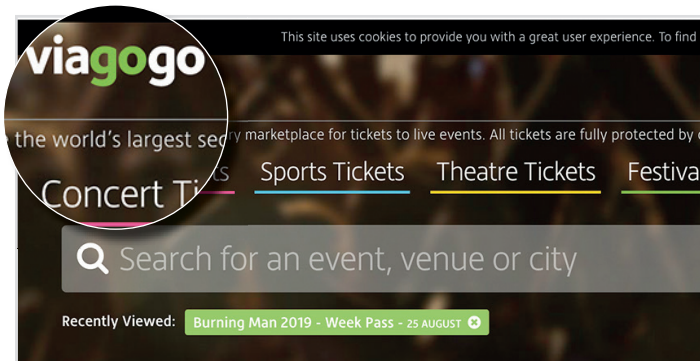
View counts can be used to indicate popularity.

EXPERTISE

Branding a company as an expert is a good idea if the goal is to establish trust. This can be done in various ways, like an elaborate FAQ section or a blog in which the company shares expert knowledge. It can also be done by indicating one's position in the market.

Viagogo lets us know that it's "the world's largest secondary marketplace for tickets to live events."

Establishing yourself as the world's largest anything is bound to make a compelling case that you're an expert in your field, that you know your stuff, that we can trust you.



Viagogo makes it clear to users that it's a serious player in the field.

Second: Sense of urgency

Once trust has been established, some websites choose to roll out the big guns: urgency, often activated through calls to action.

Urgency is an incredibly powerful state of mind, one often taken advantage of by people who work in marketing and by those who want to improve their conversion rates, because a sense of urgency entices us to take risks and reduces our capability to reflect in the moment of action.^{17 18}

In short, urgency makes us impulsive.

¹⁷ <https://smashed.by/urgency>

¹⁸ <https://smashed.by/risktaking>

A DuckDuckGo search for “sense of urgency” results in primarily marketing-focused articles and blog posts all dedicated to enlightening us on how to increase the sense of urgency within our user base.

CREATING A SENSE OF URGENCY

“Buy now!” “Hurry up!” “Last one in stock!” and whatever else are commonly used in calls to action all trigger a sense of urgency. While they’re hard to differentiate, since they tend to overlap, we can look at three core tactics that all add up to establishing a sense of urgency.

SCARCITY

Surfacing a shortage of whatever people are on the lookout for, whether it be a hotel room or a T-shirt in size XL, plays on scarcity. Scarcity can be real or fake (which has been proved to be the case with many airline and hotel websites) – it works either way.

Perceived scarcity leads to a feeling of a fear of missing out, which in turn triggers us to act impulsively.

Viagogo makes use of not just one but several elements to indicate scarcity, including the very common notion of

“only 2 tickets left”, and several other seating sections are sold out, so “someone else is going in your place”.

Section: 103 | Row m Recently sold. Someone else is going in your place. \$336 per ticket

Section: 311 | Row j
2 Tickets Left
 E-Ticket
 🟢 Unrestricted view.
 🟢 You'll be seated together.

\$181 per ticket Select

Scarcity is indicated through a variety of elements, all of which trigger impulsive behavior.

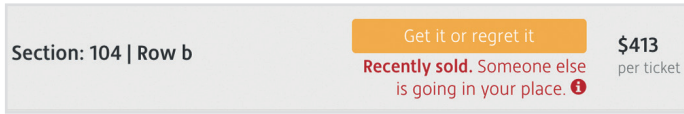
LOSS AVERSION

We know from cognitive psychology that loss aversion is the feeling that, for example, you'd rather not lose \$10 than receive \$10.¹⁹

Loss aversion is an emotion that's commonly played upon in sales pricing.

Viagogo tells us to “get it or regret it” in a call-to-action button. Someone in marketing had a very good day when this phrase was thought up.

¹⁹ <https://smashed.by/lossaversion>

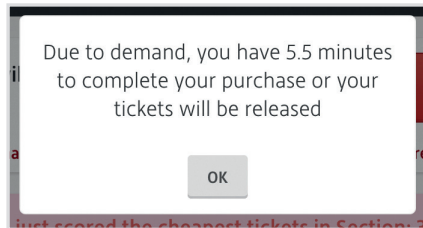


Powerful wording can be used to trigger our loss aversion.

COUNTDOWNS AND TIMERS

When a website indicates that an offer is somehow time-limited, either by showing a countdown or a timer, it sparks fear of missing out.

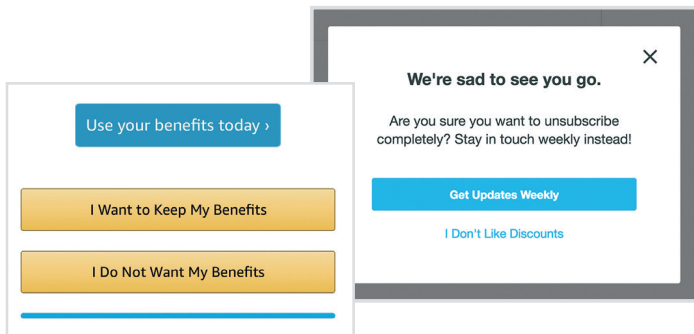
To indicate high demand, Viagogo uses a timer once we've added tickets to our shopping cart. We only have five minutes to complete our purchase, or someone else will get our tickets! Oh no!



A countdown is used to indicate high demand and triggers users to act fast.

A final word about wording. Using shady copy like "I don't like discounts" (that would be you, Wish) or "I don't want my benefits" (looking at you, Amazon Prime), when you could

have written “Yes, please unsubscribe me”, is simply mischievous. It’s also incredibly bad for accessibility because it makes it hard for people with lowered cognitive abilities to understand what will happen when they click the button, and it can be confusing for people who use a screen reader to identify the function of the button.



Shady copy is a no-go if you want to improve your ethics and accessibility ratings.

Persuasive pricing

There is a commonly known trick to pricing products to make them sell more effectively. It’s not known exactly when the trick came about... but it works.

The trick is to price a product at \$29.99 instead of \$30. In currencies where .99 is not used, .95 works.

The theory is that we read from left to right and therefore don't actually notice the numbers at the end of the price tag. So, comparing \$29.99 to \$30 is actually a mental comparison between 29 and 30.

The number 9 seems to have a lot of power. One study shows that increasing the price on a dress from \$34 to \$39 actually increased sales by one third!



*“Order your shoes now!
We are out of stock!”
You may wonder why they
are offering a 10% discount,
instead of selling at a higher
price. Perhaps that would
make all the unhappy
emoticons go away?”*

FUD, or fear, uncertainty, and doubt, is a marketing strategy often used to cast a shadow over a competitor's product. Combine it with FOMO, the fear of missing out, and you have a recipe for advertising we hate. Really.

Persuasive patterns and illness

Manipulative design patterns not only affect people in their decision processes. To people with certain illnesses, these patterns can affect their physical and mental well-being.

The following is an interview with Bruce Lawson on how persuasive patterns affect a person with multiple sclerosis:

Twenty years ago I was diagnosed with multiple sclerosis which is an incurable disease “in which the insulating covers of nerve cells in the brain and spinal cord are damaged. This damage disrupts the ability of parts of the nervous system to communicate, resulting in a range of signs and symptoms, including physical, mental, and sometimes psychiatric problems.”²⁰ For me, one of the manifestations of MS is anxiety.

1. What symptoms do you experience when you're exposed to these aggressive persuasive design patterns?

If my MS is playing up, when I'm confronted with intrusive

²⁰ <https://smashed.by/multiplesclerosis>

nags (“only two rooms left”, “900 people are looking at this right now!”, et cetera), I actually feel like I’m panicking; my heart races, adrenaline kicks in, and it leaves me feeling shaky and tired. Given that fatigue is also a very common symptom of MS, I don’t need extra help in becoming tired. Sites like these can leave me exhausted. (The same is also true of incessant bleeps and bloops from Slack, Facebook, Skype, WhatsApp notifications. I turn them off when I’m anxious.)

2. How much or little would you say it takes for the symptoms to kick in?

It doesn’t take long. Or rather, it didn’t take long. I completely avoid purchasing anything on sites that employ these tactics. If I can’t avoid it, I’ll ask someone else to buy on my behalf.

3. What does science have to say about it?

Science says: “Don’t bully Bruce in order to make a fast buck. Because you’ll get nothing from him.”

4. Which types of sites would you say are the worst when it comes to using persuasive design patterns?

Travel- and hotel-booking sites are notorious for these patterns. They are the double-glazing salesmen of the digital age.

Dark Patterns

“Dark patterns” as a term was invented by Dr. Harry Brignull (see darkpatterns.org). A dark pattern is a deliberately misleading design pattern created with the purpose of getting the user to do something unintended.

To many, the majority of dark patterns might not fall in the “unethical” category. But if we revisit our simplified definition that ethics is “the duty and responsibility to treat others with fairness and respect”, then it’s not difficult to understand why using dark patterns is bound to affect people’s perception of your brand, product, or company. That’s why eliminating dark patterns in your products is crucial to improving your company’s ethical score.

Dark patterns are, sadly, quite common. But why are they around? The short answer is: because they work.

Dark patterns claw themselves into a digital product when a designer or developer is told by someone higher up in the hierarchy to “fix” something. And by “fix”, they usually mean “improve conversion”.

After all, if we make it impossible for users to dismiss the newsletter signup form, we’ll increase the number of signups, right? Problem solved! (Irony may occur.)

Some of the worst dark patterns include:

- charging advertisers for the display of ads shown outside the viewport;
- placing ads in the background and making money on unintentional clicks;



In this fairy tale, Bluetooth is playing the roles of Hansel and Gretel, and Facebook is the cannibalistic witch living in the gingerbread house.

- online news websites gathering video clips created by others and then making money from selling pre-roll and post-roll ads;
- selling customer data that's being collected without explicit permission (hard to prove);
- online ad retargeting;
- confusing consent in signup flows, such as intentionally mixing up consent to “terms and conditions“ and “sign up to receive our newsletter”;
- silently adding products to the shopping cart on behalf of the user.

Huel uses the “sneak into basket” pattern on some of its products. As soon as you visit a product detail page, it automatically adds a selection of its most popular products,

Huel Our Products ▾ Nutrition ▾ About Huel ▾ Guides & Articles 🇺🇸 Forum My Account 🔍 🛒

Huel Powder v1.1

The most nutrition in the least time

Nutritious food is vital for a happy, healthy life, but we are all leading increasingly busy lives. So what we need is a meal that is both nutritionally complete and convenient. A food that has just the right amount of protein, essential fats, fiber, carbohydrates, and all 27 essential vitamins & minerals. Huel Powder is all this and much more. It's vegan, lactose-free, soya-free, GMO-free, high in protein and contains less than 2% sugar.

FREE SHAKER AND FREE T-SHIRT WITH ALL FIRST ORDERS OF HUEL POWDER.

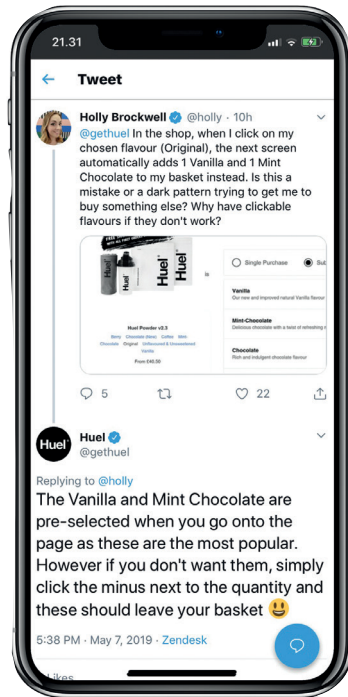
Single Purchase Subscribe **10% off**

Chocolate Rich and indulgent chocolate flavor	- 1 +
Vanilla The original Huel vanilla flavor	- 1 +
Berry Sieved strawberry, raspberry and blueberry flavor	- 0 +
Unflavored & Unsweetened No flavor and no sweetener	- 0 +
Natural Flavor Boost 6 Tester Pack Try all 6 of our flavor samples at half price!	\$5.00 \$2.50 <input type="radio"/>

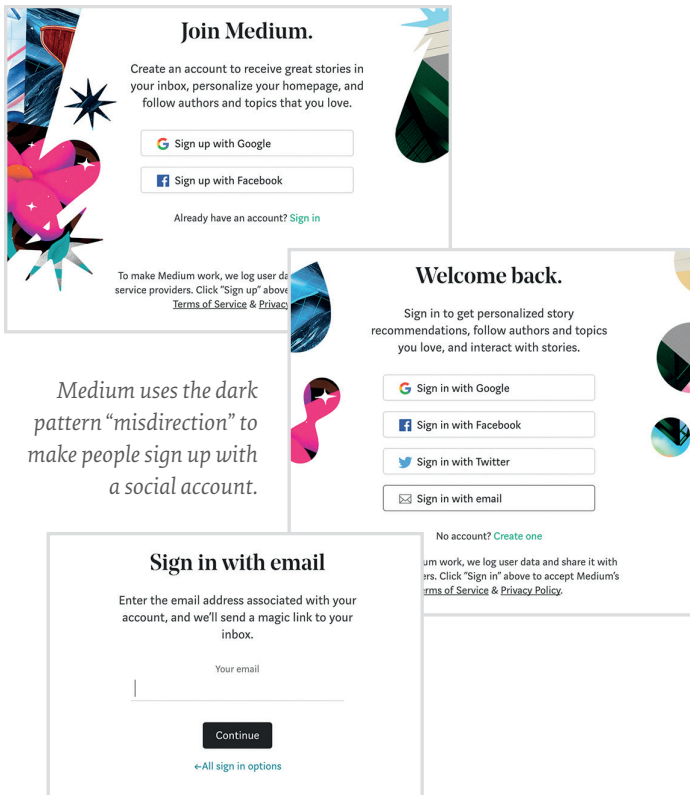
An example of the dark pattern “sneak into basket”.

which you have to manually remove if you don't want the products added to your basket.

Huel doesn't seem to think it's a big deal:



The “misdirection” pattern is used by Medium in its signup flow. According to darkpatterns.org, this is a design that “purposefully focuses your attention on one thing in order to distract your attention from another.”



In this case, Medium wants you to use social sign up, and it effectively hides email signup behind an “Already have an account? Sign in” link. When you reach the sign-in page, you have to click “Sign in with email”, which will prompt an email with instructions on how to sign up. This deliberately misleading language is all designed to make people sign up with their social account.

Why dark patterns are bad for business

Some companies are bound to be able to prove that dark patterns convert better than ethical design patterns. However, what happens when a dark pattern is discovered by users and afterwards shared publicly is that conversion drops.

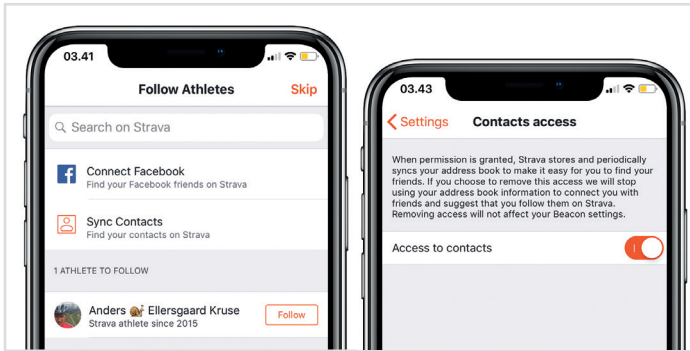
Another consequence of dark patterns is that complaints will flood customer service, which in turn generates higher costs and increasing headaches in the support department.

At this point, we wish we could share some stories with you about companies whose conversion dropped, and that were flooded by support calls and emails. But we haven't found anyone who would be willing to admit their mistakes in public.

A recent large research study²¹ with more than 2,000 British adults showed some interesting results about people's reactions to so-called "behavioral interventions" – or manipulative, persuasive design tricks, as they are referred to by some.

The study showed that 49% of the people in the study were likely to distrust websites that use manipulative design tricks. And 34% had a downright negative emotional reaction, and used words like "disgust" and "contempt". The study concluded that certain manipulative tactics have been so over-used that their power is diminished in the context of websites.

²¹ <https://smashed.by/darkpatternsstudy>



When you install Strava, you might get a recommendation to follow a very close friend – even before you've given Strava access to your contacts.

What a lucky guess from Strava... or are they cheating?
 Every time you design a new digital feature, please ask yourself, “Will this be cool for users, or will it be creepy?”

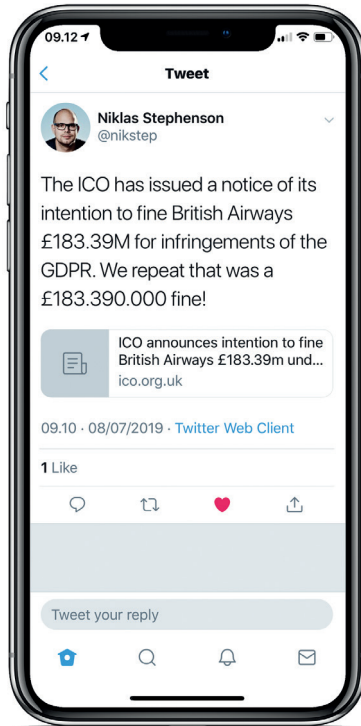
GDPR

The General Data Protection Regulation (GDPR) is a regulation in EU law on data protection and privacy for all citizens of the European Union, regardless of where you collect and store the data.

Does GDPR matter if you do business outside of the EU? Maybe. It also addresses the transfer of personal data outside the EU. If you collect data in the EU and process it somewhere else, then it matters to your business.

Furthermore, if you only operate outside of the EU and you're considering changing that, it would be kind of silly not to take GDPR into account. The cost to change the system's design and security model would be high.

GDPR aims to give control to individuals over their personal data. The advantage for any business operating within the



*The Times They
Are a-Changin'
(Bob Dylan)*

EU is uniformity – the same set of rules apply to all countries within the EU.

Non-compliance can cost companies dearly. However, much is left to interpretation. Companies must provide a reasonable level of protection. A business process that handles personal data must provide safeguards to protect data, and must use the strictest privacy settings possible by default.

Datasets must not be publicly available without explicit informed consent, and they must not be used to identify a subject on their own. You will have to store elsewhere any additional information that in combination could identify the subject. Also, the data subject has the right to revoke this consent at any time.

This is great.

90% of consumers are willing to share behavioral data if they get additional benefits that make shopping cheaper or easier. 63% say they would stop purchasing products and services from companies that take “creepy” marketing too far.

These numbers come from a study by SmarterHQ,²² which surveyed 1,000 consumers on their privacy concerns, channel affinities, brand experiences, and personalisation

²² <https://smashed.by/smarterhq>

preferences. The study also shows that 86% of consumers are concerned about their data privacy, and 79% believe that companies know too much about them.²³

GDPR aims to solve the trust issue between brands and consumers. In some cases, all the clicking of cookie alerts and giving consent in pop-ups, emails, and apps are creating a false sense of security. Either we click-click-click and don't read anything, or we input incorrect information.

The go-away strategy (i.e. quickly dismissing a pop-up or granting consent without even reading the notice) means that bad actors can exploit us because we are unintentionally submitting data. The false information strategy will expose us to even more irrelevant marketing.

GDPR compliance is not a competitive advantage. It's a starting point, and what comes after GDPR is transparency. GDPR compliance will ensure that you keep data safe and only use data with permission. Transparency will show the user what data you store and where you store data, and the user can interact with the dataset and even delete data. GDPR compliance allows users to get their data deleted on request. If you were to design a transparent platform, an improvement would be to add a feature where the user can delete all or selected data directly in the interface.

²³ <https://smashed.by/smarterhq>

A similar law is becoming official in 2020 in California. The interesting effect we see here is that the highest standard will impact legislation everywhere. Consumer protection has become mainstream.

That's your competitive advantage.

The seven key principles of GDPR

The General Data Protection Regulation (GDPR) took effect in the EU in May 2018, and since then, many significant changes have been brought about as to how companies collect, store, and treat personal data. Below you can read some core aspects of the regulation as defined by the EU Commission.²⁴

According to the original wording of the regulation:



personal data means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

GDPR rests on seven key principles as seen below.

²⁴ <https://smashed.by/gdpreu>

1. Lawfulness, fairness, and transparency

Personal data shall be “processed lawfully, fairly and in a transparent manner in relation to individuals.”

2. Purpose limitation

Personal data shall be “collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes; further processing for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes shall not be considered to be incompatible with the initial purposes.”

3. Data minimization

Personal data shall be “adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed.”

4. Accuracy

Personal data shall be “accurate and, where necessary, kept up to date; every reasonable step must be taken to ensure that personal data that are inaccurate, having regard to the purposes for which they are processed, are erased or rectified without delay.”

5. Storage limitation

Personal data shall be “kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed; personal data may be stored for longer

periods insofar as the personal data will be processed solely for archiving purposes in the public interest, scientific or historical research purposes or statistical purposes subject to implementation of the appropriate technical and organizational measures required by the GDPR in order to safeguard the rights and freedoms of individuals.”

6. Integrity and confidentiality

Personal data shall be “processed in a manner that ensures appropriate security of the personal data, including protection against unauthorised or unlawful processing and against accidental loss, destruction or damage, using appropriate technical or organizational measures.”

7. Accountability

“The controller shall be responsible for, and be able to demonstrate compliance with” lawfulness, fairness, and transparency.

The relationship

What is the relationship between GDPR and ethics in software design?

One could argue that GDPR is a legal approach to software design, and ethical design standards are a moral approach.

We like to see it this way because the moral approach can be used without the legal bindings. However, connecting the legal and moral sides of software design makes a lot of sense, because you're not developing one product that complies with legislation and developing another that meets ethical standards. You are developing a single product that would ideally meet both sets of guidelines. And for that reason, it's convenient to solve both legal and ethical issues at the same time.

Existing ethical frameworks

A range of frameworks deal with ethical design already. We'll look at a few of them now.

The Ethical Design Manifesto by Indie

Indie, a company founded by Aral Balkan and Laura Kalbag, describes ethical design as technology that respects human rights, human effort, and human experience:²⁵



Technology that respects human rights is decentralized, peer-to-peer, zero-knowledge, end-to-end encrypted, free and open source, interoperable, accessible, and sustainable.

²⁵ <https://smashed.by/indie>

It respects and protects your civil liberties, reduces inequality, and benefits democracy.

Technology that respects human effort is functional, convenient, and reliable.

It is thoughtful and accommodating; not arrogant or demanding. It understands that you might be distracted or differently-abled. It respects the limited time you have on this planet.

Technology that respects human experience is beautiful, magical, and delightful.

It just works. It's intuitive. It's invisible. It recedes into the background of your life. It gives you joy. It empowers you with super-powers. It puts a smile on your face and makes your life better.

Indie's "Ethical Design Manifesto" covers design holistically. It doesn't only focus on the design of the product or on the business model. It takes it a step further and includes the environment, our rights, and democracy.

The latter is what makes Indie's "Ethical Design Manifesto" political, which is a necessity if we are to truly make changes to benefit our digital life and society.

Ethical by Design: Principles for Good Technology by The Ethics Centre

Dr. Matthew Beard and Dr. Simon Longstaff AO defined the “Principles for Good Technology”, which is published by The Ethics Centre. The Ethics Centre is an Australian not-for-profit organization that works to bring ethics into businesses and practices.²⁶

“Principles for Good Technology” consist of eight principles:

Ought before can

The fact that we can do something does not mean that we should.

Non-instrumentalism

Never design technology in which people are merely a part of the machine.

Self-determination

Maximise the freedom of those affected by your design.

Responsibility

Anticipate and design for all possible uses.

²⁶ <https://ethics.org.au/>

Net benefit

Maximise good, minimise bad.

Fairness

Treat like cases in a like manner; different cases differently.

Accessibility

Design to include the most vulnerable user.

Purpose

Design with honesty, clarity and fitness of purpose.

There are plenty of good intentions in this framework, and we don't disagree with any of them. But they're not very specific and actionable. The next framework we'll look at has a more practical nature.

Privacy by Design

The Privacy by Design framework is developed by Ann Cavoukian.²⁷ It consists of four core principles:

- 1. Privacy must be proactive, not reactive, and must anticipate privacy issues before they reach the user.**

These issues are not issues that we want to deal with after a problem has come to life but are instead issues we want to prevent entirely, if possible.

²⁷ <https://smashed.by/anncavoukian>

2. Privacy must be the default setting.

There is no “best for business” option in regards to privacy; this is an issue that is about what’s best for the consumer, which, in the long run, will be better for the business. We can see what happens when coercive flaws are exposed to the public through what happened to PayPal and Venmo in August 2018 when Public by Default was released to the public, bringing a smattering of bad press to the brand. More of this is sure to come to the businesses that wait for something bad to happen before making a change.

3. Privacy must be positive sum and should avoid dichotomies.

There is no binary relationship to be had with privacy; it is a forever malleable issue that needs constant oversight and perpetual iteration. Our work doesn’t end at the terms and service agreement, it lasts forever, and should be considered a foundational element of your product that evolves with the product and enables consumers to protect themselves — not one that takes advantage of their lack of understanding.

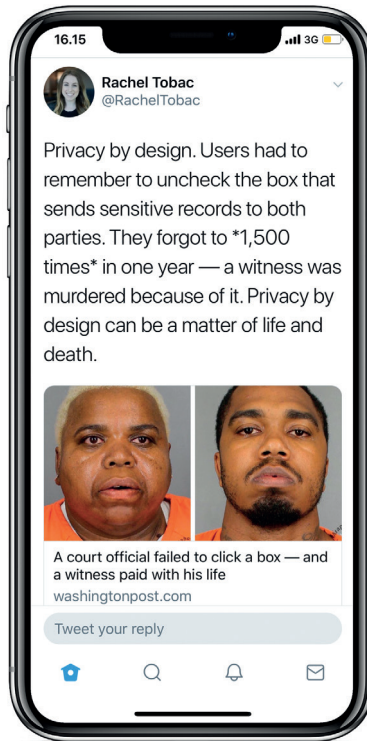
4. Privacy standards must be visible, transparent, open, documented, and independently verifiable.

There’s no great way to define a litmus test for your privacy standards, but there are a couple of questions we should all ask ourselves as business people. First, if the press published your privacy agreement, would it

be understandable? Second, if it were understandable, would consumers enjoy what they read? And last but not least, if not, what do you need to change?

The Privacy by Design framework offers very tangible guidelines that serve as a good addition when building an ethical design framework.

Usability is just as important as any other part of software design. This is a heartbreaking story.



However, frameworks don't work unless people are capable of applying them. What we will do from this point on in the book is to translate the ideas and principles of ethical design into action. A good place to start is by looking at how a transformation can be enabled.

Transformation of ethics

We have seen numerous projects about digital transformation in recent years. It is a buzzword and for good reason. Some say that an old organization with new technology turns into an “old expensive organization”.

The business case improves vastly if the old organization learns new tricks while introducing new technology, and this is where the transformation comes into play.

The same principle applies to ethical design. It is not about writing up a manual for consumer protection, but about changing methodologies to build ethical standards and practices into daily work life.

Digital transformation happens when we use digital technology to solve classic problems. Instead of simply improving existing methods, new technologies are used in combination with creativity in an innovation process that can create completely new methods.

Companies with a long history and tradition are increasingly being challenged by brand new digital businesses. Old companies like that can either completely or partially transform themselves towards a more modern mindset, or they can – as is often the case – watch their entire business model crumble in just a few years.

The list of global companies that were not yet founded in 1995 is quite long.²⁸ The taxi industry is having a hard time with Uber, hotels are both friends and enemies with Hotels.com, and Amazon created a new way of selling books that challenges the physical bookstore.

Behind the well-known stories is a much longer list of lesser-known stories of companies that have started digitally within retail, industry, transport, tourism, and other industries.

All digital companies create new solutions to well-known challenges. They're also challenged by old businesses that are able to keep up and undergo a digital transformation and that understand how to combine the new with the old.

There's also a group of companies that never reach the digital transformation point. Some of them don't survive. Survival of the fittest is, as we know, about being good at surviving change.

²⁸ <https://smashed.by/top100>

Ethical transformation is similar to digital transformation, but before we dive further into that area and explain what it's about, let's take a closer look at the classic challenges.

Challenges along the way

Digital transformation is not an easy practice. Some industries haven't even started, and the pace of the transformation is also different from country to country.

There are typically a number of challenges for the companies that start this process.

Lack of experience in managing digital transformation is a major problem. The management (and the boards) of many companies are at an age that immediately tells us that they are not digital natives. If you don't know what to do in order to lead the change, the process is especially difficult.

It's also a problem if the management doesn't ask for help. Some choose to make decisions based on a gut feeling. Others choose to pretend that everything is under control. Some don't want criticism or resistance when the decision on how to proceed has been made. There are many obstacles, and it's very human to go for any of these solutions to the different problems.

The same applies to employees, as you can experience employee pushback. Many of us love routines and familiar processes. There's a reason why we have something called a "comfort zone".

If management is good at creating the framework for a transformation that can ensure survival in a changing market, they must ensure that this is communicated properly to employees. Otherwise, it will be a hard and difficult journey for everyone in the company.

Therefore, the organizational model can be an obstacle. Have you ensured that teams have the skills they need and that the organization of teams is appropriate, and will the culture allow team members to fail and improve?

If the IT department has always worked with the operation of internal systems, they will be of the opinion that there's a risk with any new IT project. That's true. New systems will certainly disrupt existing operations. The current team of operational staff might not be the optimal team to lead the innovation.

Successful digital transformation may require outside help. This applies on many levels. There might be a need for spar-

ring partners for the board, management, team managers, and other employees.

The financial sector is a great example of the challenges in digital transformation. New players challenge the old banks, and the old banks are divided into two groups. Some do too little and are getting hit by the bold new competitors. Other banks make special task force teams that develop new digital products on the side of the existing IT department.

That also requires a large budget, which is often absent. The challenge is not in itself a competition about who can spend the most money, but steering an entire business in a new direction is a huge project. It takes several years, and it includes a lot of costs.

Digital transformation cannot be left to a single department. It's not an office on the third floor of building 7 that can create the future of the business. To make a difference, an all-encompassing change of all work processes is needed. Implementation will most likely happen in stages, but that's necessary when dealing with living, breathing humans.

Global megatrends are the driving force behind the ethical transformation

Ethical transformation – what is that, anyway? There is an increasing focus on sustainability, transparency, and corporate social responsibility and, quite generally, on the fact that an organization should behave nicely. The lack of niceness in digital platforms has pushed the need for better ethics further.

The internet has long been a place where companies invent their own business models, and, unfortunately, a lot of shady people have been involved. Consumers are exposed to fraud, identity theft, extortion, hacking, misuse of personal information, and not getting what they've been promised.

That's not sustainable.

The Brundtland Commission defined sustainability as a development process that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Translating that into the digital world means that companies exceeding the limit of sustainability might see users move onto other platforms. We have to differentiate between social

media platforms, hotel booking, and all the other and smaller services. It's as if there are two sets of rules. You can't switch from Facebook to Ello since you will be alone on Ello — but you can switch from Endomondo to another fitness app. There are always competitors online, even for Facebook, Google, and the other big players in the field. As for all of the smaller ones, well, they are bound to have a lot of competitors.

When companies focus on sustainability and accountability, it doesn't come out of nowhere.

In some cases, the push comes from management, and at other times, the driver is market or consumer trends. Looking at the consumer side, it seems that the world is changing. People are becoming more focused on buying recycled products, organics, locally produced goods, and electric cars. We buy less plastic, drive in more economical vehicles, and do business with companies that have the same goals for the planet's sustainability as we do.

Let's return to ethical transformation. It's not that complicated. It's not enough that a company produces sustainably. If you have sustainable production and at the same time expose customers to the misuse of their personal data digitally, then you have no credibility.

Ethical transformation is about making sure that ethical behavior — fundamental *fairness* and respect — is evident in digital projects. It doesn't require a digital transformation, but for the old organizations, it is likely to be the same journey.

Just think about it. How can you and your own team make sure that nothing will go through digital production that should have been caught in a specification, during the development work, or at the last minute in a test?

If there is no systematic model for ensuring good ethics in the development department, all problems will certainly be brought up to the surface anyway — it's just that the customers will be doing it instead. There is a word for this: shitstorm.

Even if a company doesn't get into a shitstorm due to unethical conduct, the unhappy yet silent customers represent a business opportunity for more ethical competitors. Ethical design may just turn out to be a positive tool for disrupting an entire sector.

Chapter takeaways

Unethical design is problematic: it reduces freedom, compromises privacy and safety, and can cause addiction. A wide range of companies seem to think it's acceptable to use manipulative methods to steer users into certain behavioral patterns.

However, it's not necessarily good for an organization to conduct business this way. There are indicators pointing to a reduction of trust towards companies that use manipulative methods. Additionally, with the introduction of GDPR in Europe, not only can a compromise of customer data safety cause trust issues, but the legal implications can be very serious.

To get started on the journey towards an ethical design practice, change needs to happen. From all of the examples we've listed, it's obvious that there is a need for ethics to play a much larger role in business, design, and development than is currently the case in most corporations. The demand for ethical transformation is evident. But it won't happen without changing corporate culture first. In the next chapter, we will look into ways to start and complete that journey.

GOODWINGS

Sustainability and realism combined

Sustainability is one of the megatrends whose impact we're starting to see in an increasing number of businesses. Goodwings is a good example of a company that would likely not have caught traction 20 years ago, but is doing so now due to the increase in focus on sustainability among consumers.

By **Lara Mulady**, *Head of Communication, Goodwings*

Goodwings is a hotel-booking platform with a difference. On the surface, we're very similar to other hotel platforms. We offer over 365,000 hotels around the world at the best prices guaranteed. If you create a free profile, you gain access to membership rates, and, if you're a business, you can sign up to one of three plans to take advantage of exclusive wholesale rates that can save you thousands of dollars a year.

That's the business bit, the basic you-save-we-profit bit. What really makes us different to other hotel providers is the reason we were founded, our — dare we say it — purpose.

The travel industry is responsible for 8% of global greenhouse gas emissions — a hard pill to swallow, but it's there.

There was no doubt in our minds that there was a dire need to drive a sustainability agenda in the travel industry, one that could turn the entire industry into a driving force for positive change.

We knew we'd never stop travel. Whether it's for business or leisure, travel is an undeniable fact of life. So, instead of focusing on how we could encourage people to travel less, we started to think about how we could help people travel better, to travel in a more sustainable and responsible way.

In the end, it was simple. We realized that we could help people and businesses save money on their travel and tap into their desire to do good; we could help turn the negative impact travel has on people and the planet into a positive one; and we could show other businesses across all industries that the balance of profit and purpose can be both effective and sustainable.

To do this, we built a business model based on strategic partnerships with charitable organizations and forward-thinking individuals and companies. Instead of putting the booking commission we receive for each hotel booking towards mass marketing, we give at least one third of it to the NGOs, charities and nonprofits we've partnered with. All of them work to create a better and more sustainable future by, for example, protecting wildlife from poachers,

improving the lives of girls and women in disadvantaged parts of the world, and fighting plastic-based pollution.

We also offset the carbon emissions from every night booked on goodwings.com at no extra charge, which means that together with the donation, travelers get to save money, enjoy 100% carbon-neutral hotel stays, and know that their booking has supported an organization that is actively working towards a better future for all of us.

Our hope is that other companies across all industries will realize that running a business that is both profitable and sustainable is perfectly possible. All it requires is a simple shift in how they think about profit – and the planet.



CHAPTER 2

Creating positive change



IT'S NEVER EASY TO CREATE CHANGES

that last. It's easier to change a single decision than to change the approach. If it's a large team or a large company, the task is even more difficult.

Let's see how we could at least start bringing about positive change by looking into refining the culture first.

Nothing will change by itself, so if there is a desire to change the culture of ethics, it might require a project or a process to do so. And it will, sooner or later, need formal backup by the management team.

Changing the culture

It's well known that culture eats strategy for breakfast, and this certainly applies here. If you'd like to bring a company to the point where ethics is prioritised, you need to set out for the long-term and challenging task of reshaping the culture. That's also what produces the best and most sustainable results.

To bring about a cultural shift in a design or development team, we need to find the right place to start.

So, how do you do that? A good starting point would be to test with people and identify the areas where they get a suboptimal experience.

Let's take Twitter as an example.

In the past, you would receive notifications from Twitter when other users commented on a post or thread that you were somehow involved in. Maybe that didn't give Twitter enough traffic, because later Twitter changed the mechanism to trigger a notification when other users had "written something interesting" for you.

Maybe it's possible to turn off that feature, but it certainly wasn't very obvious — at least we weren't able to find the button to do so.

The problem now is that, as a Twitter user, you no longer know whether you are receiving a notification because you were involved in a conversation that has continued in your absence, or whether Twitter has just chosen to catch your attention without a proper reason — just because its algorithms decided that it might be interesting to you (and probably for Twitter, too, because it would drive traffic to the platform).

Twitter is not in tune with users here. Fortunately, there are alternatives to Twitter's app, and these apps get traction every time Twitter changes key features for reasons that users cannot understand or don't like.

Most digital platforms live in the borderland between the Kingdom of Relevance and the Spam Dictatorship. The trick is to react and adjust when something can be improved. The first task is to identify what can be improved. The other is to bring about the change.

Culture change in a team often demands that:

- the team should listen to management, employees, and users, and should test new features and ideas on an audience
- the team should set a baseline for user satisfaction and define achievable goals for improvement
- the team needs to monitor every release and react when results deviate from the desired direction

It might be a good idea to include a critic on the project team. Critics happen to be experience-driven, and prior knowledge can be a superpower for the team.

If the naysayer approves of a new design or idea, then it will be excellent for cultural change, and probably for users as well.

The role of ethics in the organization

Let's go through an example. Imagine an organization that has ethics and privacy awareness at its very core. Perhaps it's a charity that strongly believes in its cause and purpose, and it would like to move its digital presence in a more

focused, ethical direction. If so, it shouldn't be a difficult task for the organization to get there.

However, there are still obstacles and challenges:

- Changes to existing platforms still cost time and money.
- Management might be concerned about whether the conversion rate (and, thus, earnings) will drop as a result of changes. Obviously, nobody wants to risk their reputation and standing in the eyes of the public, but the bills have to be paid at the end of the day.
- Some of the platform's features might have been developed by an external team that uses different workflows and methodologies, and they might not accept the new privacy- or ethics-focused way of working.
- Because nobody has yet defined ethical design principles or has been responsible for implementing them, there might be a number of hidden problems on the organization's digital platforms. Just because an organization has a charitable cause, it would be wrong to assume that every touchpoint of the experience is designed with ethics in mind.

You can certainly find design challenges and problems in virtually all businesses. It's difficult even for the best of the trade, which means it's even harder at the other end of the scale.

If you operate in the middle of the scale, you can make a big difference as a digital designer or product owner. You just have to accept that the list of obstacles and challenges has a few additions:

- Management and the rest of the organization might find it difficult to understand that ethical design is not the opposite of running a profitable business.
- There's less experience in working strategically with ethics, because it's not part of the core value set of the organization.
- Some parts of the organization are bound to be reluctant to change, because change is usually difficult.
- Nobody will know the opinions of users. User testing is often absent or only done on special occasions in most projects.

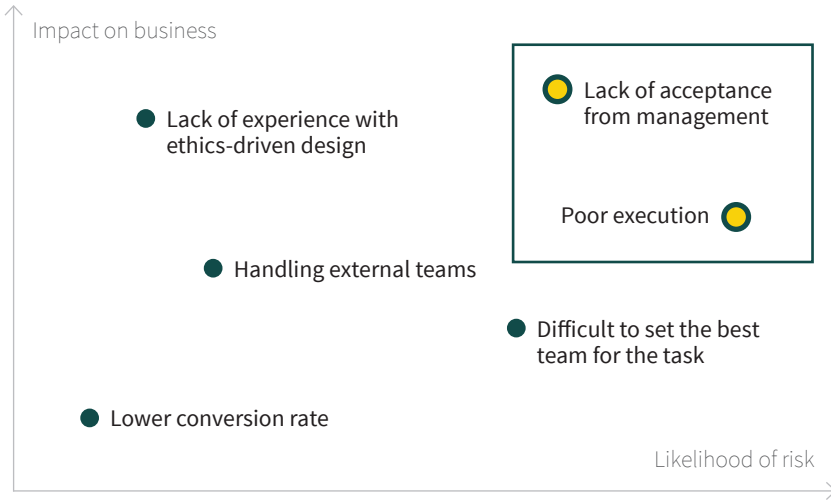
Before you go about creating changes with ethical design, it may be a good idea to identify which problems you expect to run into during the process. It's good to be prepared. The method can be based on a standard risk matrix, which is used to assess the risk factors in a project based on their likelihood and the severity of their consequences.

Challenges and solutions in an ethical transformation

A risk matrix is often used to get a detailed picture of the complexity of a given problem or situation. With a risk matrix, we usually look at the probability of an event occurring and combine it with its potential negative impact on the entire project – if that happens. While short-term problems are usually quite obvious in a project, long-term problems can be handled well with a risk matrix. Essentially, risk management is all about seeing the train way before it hits you. And to succeed in doing so requires experience. The most important thing is to stay focused on anticipated problems that can have a large negative impact.

For example, if an anticipated problem is poor execution, it may be a good idea to create a plan that allows for step-by-step improvements of the workflow and of quality control, so that the team can avoid mistakes that have a huge cost or damage. As refinements kick in and everyone's level of experience increases, the quality will get better as well. The main threat to long-term success, then, is the negative impact of high expectations and poor execution.

Here's an example of a risk matrix whose purpose is to identify the potential risks connected with introducing ethics-driven design in an organization.



Risk matrix identifying the potential risks when introducing ethics-driven design.

One of the risks identified in the matrix is poor execution. In this case, it may be a good idea to create a plan that allows for step-by-step improvements, so that the team can make mistakes at a fairly harmless level to start with.

As everyone gets more experience, it will become easier to increase quality. The negative effect of high expectations and poor results is a threat to long-term success.

EXAMPLE: B2B SALE OF KITCHEN EQUIPMENT

Let's look at the specific example of a company that sells kitchen equipment to B2B customers. The company sells both from a showroom, through its own sales representatives, and online through a B2B portal.

The business strategy has been that all customers have had their own discount agreements. Each discount agreement is based on negotiation between seller and customer, so the customer gets “the most optimal discounts” based on their usual purchases.

All in all, this sounds very good.

One consequence of this decision is that the underlying pricing model consists of individual prices for all products for each customer. If the business has 10,000 customers and 100,000 products, then there would be a total of 1,000,000,000 unique prices.

The business doesn't want to enable customers to directly compare prices with online price portals or with competitors' prices. When customers make purchases online, the discounts are deducted at the end of the buying process. Customers can see the regular prices as they place items in the

basket. They can also see their general discount level in percentages. They just can't see the exact prices before checkout.

Additionally, shipping costs, handling fees, and other extra costs are not shown until the end of checkout.

From risk to action item

What if the risk matrix could be turned into action items? That would be great, wouldn't it? Let's look at the challenges and opportunities.

In this example, the risks identified are a complex pricing model, lack of pricing transparency, and an overcomplicated checkout process.

Simpler Pricing Model	
Benefits	If customers can be segmented and the pricing model can be made simpler, this will reduce future IT costs. The savings on IT development can enable the organization to set more competitive prices and increase profit.

Disadvantages	The management and sales department might oppose suggestions from the design or IT department. It may be that a simpler pricing model will only be possible when a large legacy IT system is replaced.
Success criteria	A simpler pricing model is a success for customers when prices and discounts are easier to identify. It is a success for the business because it reduces IT costs.
Action plan	<ul style="list-style-type: none">• Find out if management is interested in reviewing the pricing model.• Calculate the potential savings.• Conduct a user test with customers, in which testing a simpler pricing model is included as a discrete part of the test.• Internally evaluate whether the project is sustainable.

Always be careful when your development team turns to the business to ask for simpler sales processes. Nevertheless, there are often great savings to be gained by looking in that direction, especially because modern consumers (both B2C and B2B) want transparency and simplicity.

The next part of the task is simpler.

More transparent prices on the website	
Benefits	If customers can easily see the prices, their worry of overpaying will be removed.
Disadvantages	If the price is too high, it's also easier for customers to see how much they can save elsewhere.
Success criteria	Transparency of prices must play a part in increasing customer satisfaction and sales.
Action plan	<ul style="list-style-type: none">• Find out if the pricing level is competitive in general.

<p>Action plan <i>continued</i></p>	<ul style="list-style-type: none">• Conduct a usability test with a redesign of prices and discounts. Find out how user input can improve the new design.• Improve the combination of pricing information and additional information about the product. It could be a return and exchange warranty, a price warranty, rapid customer service, or something similar.• Give customer service representatives a clear mandate to handle all customer inquiries instantly. Excellent customer service could be worth more than the market's lowest price.
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The project can be completed by focusing only on transparent pricing, or it can be combined with the task of giving a better overview in the checkout flow. One advantage of seeing these as two separate projects is that it will make it easier to see and measure the effect of each subproject. This can make it easier to optimise results after the launch.

Better overview in checkout	
Benefits	A better overview often reduces dropout during checkout. Customers are less likely to bounce if there is no “unpleasant surprise” at the next-to-last click.
Disadvantages	Implementing a better checkout takes time and costs money.
Success criteria	The conversion rate should increase. And customer satisfaction should increase.
Action plan	<ul style="list-style-type: none">• Conduct a usability test, and assess the biggest potentials of a redesign of the checkout flow.• Look at competitors’ checkout flows and compare them with the checkout flow of some of the most successful e-commerce companies to learn where there’s potential to stand out positively.• Redesign based on the collected insights.

To create a new culture in which ethical design gets a good position, nothing is more useful than performing small tasks that produce results that move the needle in the right direction.

There is no contradiction between ethical design and good business sense, but as long as an organization cannot see this in practice, it will be difficult to establish a new culture.

To make the change, start with small results. It's the first step towards reaching the top of the mountain.

The ethical governance model

If you ever want to bore the people next to you to death at a dinner party, bring up IT governance.

Governance is all about setting up rules and policies on how a team is to work together. The problem is that most people on one team often don't see anything that's going on outside of the team's own working processes. They lose the big picture of the entire organization around it.

One example is Scrum, which is an agile framework with a fairly comprehensive toolbox of methods and techniques. Scrum is used to improve the productivity and quality on a

development team. As a model, Scrum comprises all of the activities on the team, plus the collaboration between the Scrum master and the product owner. The product owner is the person who represents the “company”.

All in all, that sounds pretty good. There’s a method to ensuring that the development team has oversight of their work tasks. The method also ensures good collaboration between the developers and the management of the company.

Everyone is happy with the process, and all is well.

However, a lot of people have been in a situation in which an otherwise great Scrum project falls apart because the company is acting irrationally and priorities are all over the place.

The poor product owner says one thing in March and then says the opposite in May. This often happens because the company that communicates with the product owner changes its objective.

The company’s management might believe that the shift in objective won’t incur any additional cost. For example, if you’re working in sales, you could easily change your focus quickly without a massive catastrophe happening. For a development department, a major shift could render the

past six months of work obsolete. They would need to start over from scratch with a new objective.

This is why governance is so important. If a new idea arises, there would be a process to evaluate and approve it. It won't happen overnight, and the governance model would or should balance the need for change with the need for stability. The teams responsible for the execution of the new idea are more likely to work towards a successful implementation if there is a formal decision-making process. Systems development is a team sport.

It's OK to have a very informal approach on a small team of developers. But there have to be rules throughout the organization that ensure that quick fixes and changes in objectives do not occur. This is in everyone's best interest, even if the system sometimes might seem bureaucratic or formal.

So, how does governance become a part of ethical design?

Building quality into the process

You can't build a platform first and then throw some good design principles on top of it afterwards. It's not like the frosting on a birthday cake. Quality must be built into the process.

Let's say we need to develop a digital cash register for online stores. We make an app that runs on a tablet. To quickly reach our goal, we take a few shortcuts. The company is interested in releasing the app as soon as possible because there are customers who would like to buy the system as soon as it's done.

We put some tasks aside as we go along because those are shortcuts. Doing this is common in many projects. The problem with “quick and dirty” is that “quick” is soon forgotten and “dirty” remains.

Now we have a platform with a few unpleasant defects. The list of problems might look like this:

- Personal data is not encrypted in the database.
- Communication between the device and server is not encrypted. If the communication is hacked, it would also be a GDPR problem.
- The owner of the platform (our team) can keep track of all transactional data for all stores that have purchased a license. This means that developers of the platform can follow the confidential sales data of the stores using the system. This is a violation of the general principle never to give anyone access to data they don't need. As a developer, you should be able to fix a bug without access to live transactional data.

The business is likely not aware that its priority of “fast delivery” means that developers are seriously breaching good data security principles.

The developers may also think that the business is well aware of the consequences of its priorities. That’s probably expecting too much, but it’s a very common perception. If you’ve worked for many years in the development of complex platforms, you’ll know that it is a repeating pattern.

Does this rule out building a new platform at a rapid pace? You might think it does, but in our experience, it takes less time to implement features at a high quality from the very beginning. Comparatively, the cost of low quality and later bug fixes and the cost of code refactoring will burn your budget and timeline probably at the most inconvenient time.

It’s dangerous to evaluate external teams based on the results

Now let’s say we want to market our app to retail stores. We’ll surely need some marketing. We turn to an agency that specializes in online marketing, and we ask them to go all in.

A clever employee on our internal team gets the excellent idea of paying the agency a fixed amount, and then an

additional bonus for each lead it provides. A lead is defined as contact information of a potential customer, which is considered a sales opportunity.

The agency works from its own office, and after the initial briefing session, there are regular meetings in which the campaigns, as well as how they can be optimized, are discussed.

Because they are joint meetings, everyone believes that they have insight into the process. On a general level, they're correct, but as a customer of the agency, you don't necessarily have the expertise to understand the finer details. Nor is it a subject of conversation. The meeting is used to discuss results. We want leads — that's our priority.

The agency figures out that a really good way to generate leads is to run an online competition targeted to retail employees, in which the participants can win something (for themselves as private individuals) by disclosing certain — seemingly innocent — information about the store in which they work (owned by their employer).

The information could include the number of employees (this year and last year), what products they are best at selling, insights into customer service, return rates, or other confidential information about the business.

To get a chance to win, the participant must also enter their email address and workplace. The agency has a telemarketing department that will then call the shop owners.

Because the agency has an insight into the problems and challenges in the company, they can have a conversation on a relevant topic with the companies. This makes it easier for the agency to generate leads. A win for the marketing agency and a win for us, right?

The ethical problem, of course, is that you have lured employees into providing confidential information about their employer.

There are bound to be problems if the store owners find out why all of a sudden they are getting calls.

No such problems for the digital agency we hired, though — it's us, as the senders of the campaign, and the employees, who will be affected. It's no fun becoming unpopular in the industry you are trying to sell to. It can go from bad to worse very quickly.

Always carefully consider whether a performance-based agreement with an external team is a good idea. If there is a clear definition of what's allowed and what's not, then the risk is lower.

Many who have bought services for search engine optimization felt afterwards that it was a really bad experience. Even more never discovered how much they were cheated.

Selling data to third parties

You might think it couldn't get any worse, but actually it very well could. What if we turn our attention to the fact that all customers who make purchases in the stores will be using our app... Wait, we've sent receipts to those customers by email! So, in our system, we have a lot of shops and even more of their customers' email addresses. And we can read all email addresses in our database because they aren't encrypted.

It's tempting to make a business model in which we sell that data. Although that's illegal in most countries, no one would notice we're doing it, right?

The database is on our server, we have all of the customers' email addresses, and we can easily find buyers in our market who would like to send spam emails.

It might also be that they are not going to send spam. At least, they promise us they won't. What are they going to do with the email addresses then? They could send the list to

Sharing is caring, but things have gone too far. If you give Facebook your mobile number solely for two-factor authentication, it will be used by advertisers without your knowledge.



a social media company. The social media company would then display targeted ads to every customer using an email address from our list in its social media channels.

In this way, the email addresses we sell could be used for targeted advertising to people on whom we have collected data. In practice, it would be really hard to track those emails back to us.

You should not be naive and think that this is not already happening. It's a huge industry, and this violates our human right to use digital platforms with appropriate anonymity.

If you're still not convinced that companies would fall for the temptation to sell their user data, well, here's an example.

Bounty is a British pregnancy and parenting club used by millions of people. It turns out that it was also a data broker until April 2018. The problem is that it didn't inform the millions of people using its services and products about that little fact.

After an investigation by ICO (Information Commissioner's Office), it was fined £400,000 for illegally selling personal information belonging to more than 14 million people who had been using its services.

The data was collected through user registration across its website, app, and merchandise packs and – brace yourselves – from new mothers at hospital bedsides. The data included the birth date and gender of newborns.

A total of 34 million records were sold to 39 organizations, which included credit reference agencies and marketing agencies.³⁰

Data is big business, it would seem.

³⁰ <https://smashed.by/bountyuk>

The ethical governance model in practice

Let's go back to the beginning. Governance is about creating rules and policies for good teamwork. If ethics are to be taken seriously, there should be:

1. a definition of the ethical standards or objectives that the business wants to meet;
2. a description of how new systems, large features, or critical touchpoints with customers are to be designed to meet the objectives;
3. a section on ethical considerations in the specifications of all features, whenever relevant;
4. descriptions of how tests are performed — when a feature has an ethical aspect, what are the success criteria for a test?

Governance is not about the written rules. They must also be implemented. The key is what culture you create around a project, how you help each other create good results.

It can be tricky to predict the long-term consequences of a decision. That's why it's essential to have a general strategy and to make all departments (yes, including marketing) follow it. Decisions must follow the general direction, and if not, the governance model should kick in.

EXAMPLE: SUBSCRIBING TO A NEWSLETTER

If we want to improve the newsletter registration process on our website, there are many ways to approach it. It could be a competition in which the user joins the draw if they sign up. Let's take that feature as an example.

It could be done like this:

1. Within the team, we're all in agreement to never save any data that doesn't serve any purpose by being saved.
2. We come up with the idea of the competition. To participate in the competition, the person must answer three questions. A specification is written for the competition. The rest of the registration process for the newsletter should work as before.
3. The specification must state whether data collection is taking place. It should also state what data we need to keep after the competition. The only thing that should be kept is the email address. Once the winner is announced, all of the answers are no longer relevant.
4. The acceptance criteria must be described to include only the relevant data and delete everything else. For example, we do not want answers to be used for later analysis of new customers unless the design is explicit about it. If the user is given the choice, saving data for later may improve communication and increase sales.

5. Our test team should verify that data collection and deletion follow the specifications. When our next release is approved to go live, the test team must sign off. It's not enough that they assume they know how it works. The test must ensure that the specifications have been followed.

An alternative implementation would be that we choose to use customers' responses in targeted advertising. This can also be an acceptable method if customers are made aware that their data is being used in this way.

The governance model describes our process, and the team must follow it. If the governance model becomes an obstacle to a good result, then it might be time for a revision. The team may propose a change to the governance model, and they would, of course, have to submit valid arguments.

A simple way to hit the sweet spot for the ethical design strategy is to consider, "How will our customers stay with us longer?" Don't overcomplicate it.

The governance model places a formal responsibility on each individual. The person responsible for ethics should closely follow the team's work and facilitate everyone's understanding of their role. In the most skilled teams, a cul-

ture has emerged in which everyone contributes with new process proposals and ideas.

When that happens, quality is built into the process.

Testing made easy

Testing software is always tricky, and the heading of this section was written only to give you a false sense of hope. However, you can improve your odds a lot by knowing the basics of software testing and by learning a few tricks about planning.

Wait, we are still talking about ethics in software. What is the point of talking about software testing all of a sudden? There is a reason. The people in charge of strategy and planning are, in most cases, not involved in software testing. What if the planning goes well, but the execution doesn't go so well — and nobody on the team realizes it? One day, the customers will, and that will be a great day to be away on vacation.

Let's talk about test types first. Usually, it makes sense to use a variety of test types: functional testing to see whether the software works as intended; regression testing to see whether anything that worked in a previous version still works; and performance and security testing to learn whether the application is fast and secure.

Most software teams do all of this to some extent, but if you ask any software engineer, they might say there is too much focus on delivery of new features and not enough on quality.

Here are a few tips on all of the test methods mentioned above:

- Define success criteria before implementing a feature. If you run an e-commerce platform and you're expecting 10,000 simultaneous users, then the performance requirements will be very different from one with 100 users. Very.
- Write success criteria in a language anyone can understand. There are different frameworks to learn from and use. One is acceptance test-driven development,³¹ where acceptance criteria are easy to write, even by business people, and are useful for the software team.
- Map your test coverage of the application. A simple spreadsheet format will do. Make it visual: place the test map where everyone can see it, and use color to show healthy areas (green), not-so-healthy areas (yellow and red), and areas not yet tested (gray).

The purpose of testing is to improve the application, and the test process must be transparent. If not, there will be misunderstandings in the handover process to and from the software team.

³¹ <https://smashed.by/atdd>

We have not mentioned user testing. How can you tell whether you meet the expectations of users without working directly with them?

User testing is difficult. It takes time to find users, work with them, plan the testing sessions, and carry them out. After all this trouble, you might get some candid feedback that you don't like. At other times, user testing is lovely. You get new ideas, inspiration, and credit for your hard work, and you learn where the product fits in the real world.

This is very different from insights gathered through analytics, mouse-tracking and other big data methods. The automated insights will only tell you where the process fails, where users leave the checkout, or where the conversion rate drops.

Testing ethics is complicated because it involves all of the test methods mentioned. You must test data input and output to see if it works without flaws. What about data storage? Where do we keep the backups? If a user deletes an account, what will happen to their private data protected by GDPR? Can the user see what data we collect, how we protect it, what we use it for, and more?

Does this scare you? Don't be afraid. Every step you take is a step forward. Map it out and start the journey.



However beautiful the strategy, you should occasionally look at the results.

—Unknown (sometimes incorrectly attributed to Winston Churchill)

Moving right along, let's switch the subject from Churchill to cake.

Cake-driven development

If you want to create change, communication and motivation are two good ingredients.

Cake-driven development is a method to remember to celebrate once in a while. A lot of development work is about solving problems, and if you go to work every day and solve problems, meet deadlines, and ship new versions, and your boss then says “Good, we met the deadline. Here's the next one”, work can become pretty demotivating.

An ethical transformation requires you to explain three things to your organization: why projects and ethics are

closely related, what changes must take place, and how that should happen. It's also necessary to define what it takes to succeed. Without any success criteria, you cannot celebrate the victory, and doing that is important.

Once, we helped to start a digital agency that was going to be different from the rest of the industry by offering transparency in all processes. We also wanted to educate our customers to become better purchasers, and we would recommend the smallest solution possible that would fix a problem, rather than making giant projects.

Back then, we incorporated cake-driven development. We used a new planning tool in which all tasks got an ID number, and every time we completed one thousand tasks, we considered that reaching a milestone.

A milestone resulted in a treat: cake for all project participants. A success was created.

Working with ethics in design is also kind of uphill, so it might be a good idea for the team to set some milestones and remember to celebrate each and every one of them to establish a sense of success. You might want someone in your group to be an ambassador or sheriff to ensure that cake-driven development becomes a success.

The ethical watchdog

Imagine a company with 10,000 employees and a large intranet. You search the intranet for “safety guidelines”, and you get zero results.

That’s not good and probably also not correct. Who do you contact?

If the search function on the intranet is not good enough and you run into this problem a lot, there is an easy solution. The organization should appoint one person to be responsible for the search function on the intranet. The person’s picture, name, email address, and phone number should be found at the bottom of the search results, with the accompanying text:

Did you not find what you were looking for?
Then get in touch with me. I’m always ready to help.

If you’re searching on the intranet, you should also find the person responsible at the top of the search results.

This will not immediately make the search function any better. However, after a week, the poor person responsible for it will have talked with his boss 22 times and finally gotten approval and money to improve the search function.

The same is true of ethics. There needs to be a person with the combined responsibility. It needs to be a visible role with a mandate to stop projects or processes, and there should be a budget for improvements.

The responsibility of the individual

We talk a lot about responsibility in this book. It's not just the responsibility that platforms and companies have to work ethically. We also want to address the responsibility that each of us have as individuals, as professionals in an industry.

Granted, there are huge cultural factors that shape the notion of individual responsibility, depending on where you live and work in the world. Some cultures dictate and enforce a “do as you're told” paradigm, while other cultures welcome a higher degree of skepticism and dialogue.

And some groups are often reluctant to show initiative and take responsibility, because the consequence is often that they end up getting yelled at for it.

Take developers. Often, someone from the business department will ask for a feature to get built. The objectives for the

The National Society of Professional Engineers in the US has a code of ethics exam. Think about it. Something is missing in digital projects; if only we had a pattern we could learn from...



feature are vague, and the business representative doesn't have time for a follow-up meeting to clarify what they want. So, the developer has to guess and assume a lot of things to get the job done. Once the feature is built and shipped, the developer is blamed for not understanding "anything!" This type of treatment is bound to make anyone averse to taking responsibility.

An alternative, and much better, approach would be to nurture the sense of responsibility within a team or organization. That's where the governance model comes into play. The governance model must include a section about giving employees the freedom to make changes when they see a need, and to inform their team or stakeholders afterwards. If you see that something is broken, you have the obligation to get it fixed, either by doing it yourself or escalating it to someone else.

This type of change will require a cultural shift in most companies. The benefits of such a cultural change are huge, for employees as well as for business.

Ethical decision-making

When it comes to making the right decisions, it's often a matter of asking the right questions that lead up to that decision.

Think about it. There's always a conflict of interest. Asking your customers ten questions when they sign up for a newsletter will give you more data, but it will lower the conversion rate. Asking the customer "Do you have children?" is less intrusive than asking how many and what their names are.

Whether decisions are made by teams or by individuals, here's a healthy compass to follow, if there is a desire to improve on company and product ethics.

When discussing a decision, ask these four questions:

1. **Why are we making this decision?**

Are we doing it to cater to the business or to the people we are catering to? Ideally, it should be both. If not, think about the customers before the business – without customers, you would have no business.

2. **Who benefits from this decision?**

What problem are we solving through this decision? How does it make people's lives better, easier, or more comfortable? How does it help our business?

3. **What are the likely consequences of the decision?**

This goes for both the long and short term. What are the consequences for the users, and what financial ramifications would the business suffer?

4. **Would I want my loved ones to be using this?**

This should trigger an emotional reaction. And it's supposed to. Because if your immediate answer is "Heck, no!" then you might want to follow up by asking, "I wonder why that is?"

You'll find that answering these four questions will clearly identify decisions that won't improve any ethical score. Let's look at an example.

TurboTax³² is US tax preparation software made by Intuit.

To give a little bit of background information on how the tax system works in the US, it's worth mentioning that people have to file their own taxes. The International Revenue Service (IRS), which handles taxes, doesn't have its own software to file taxes. Instead, it has collaborated with a number of companies to make software for this purpose. TurboTax is one example.

In many cases, the filing itself costs money, but if you make less than \$66,000 per year, you can file your taxes free of charge. That's what the law says, anyway.

This means that companies like TurboTax are obligated by law to offer free tax filing for people who earn less than \$66,000 per year.

But here's the sneaky bit. TurboTax apparently makes that incredibly difficult. It uses a number of tricks to make low-income citizens pay for the filing.

³² <https://smashed.by/turbotoax>

As it turns out, the free filing system is not even accessible through the TurboTax website, which is the website people assume they need to visit when they want to file taxes using the TurboTax software.

The website clearly markets a free service. But this free service is nowhere to be found on turbotax.com. A test has shown that once someone starts the free filing process through TurboTax's website, they are immediately classified as a paying user in the logs, which means they will always be offered a paid option based on one of several conditions not met. The conditions are set by TurboTax.

To find the actual free version, people have to visit an entirely different website, taxfreedom.com, a separate domain from the TurboTax website.

TurboTax admits it is deeply hidden in its FAQ.

What is the TurboTax Free File program?

We're proud to offer the [TurboTax Free File program](#) to hard-working Americans and their families who meet the IRS eligibility requirements.

The TurboTax Free File program is exclusively available online and has its own dedicated website taxfreedom.com, not accessible from the "regular" TurboTax.com website.

To qualify for free 2018 federal and state tax returns through the TurboTax Free File program, you just need to meet the following requirements:

- Your 2018 household AGI is \$34,000 or less;
- You qualify for the Earned Income Tax Credit (EITC); or
- In 2018, you served as active duty military (including Reservists and National Guard) with a maximum AGI of \$66,000, and you have a military-issued W-2.

TurboTax hides the fact that its free version lives on an entirely different domain.

The domain blocks search engines from using its own descriptions and instead directs them to use the description made by TurboTax. This is done by including the “noodp” attribute in the `robots` meta tag:

```
<meta name="robots" content="index, follow, noodp" />
```

There’s nothing wrong with that. Except there is, because TurboTax’s description goes like this:



Use TurboTax Free File Program if you earned \$34K or less, or are active duty military who earned \$66K or less, or you qualify for the earned income tax credit.

According to the IRS, anyone who earns less than \$66,000 is eligible for free tax filing.³³ The limit is not \$34,000, as claimed by TurboTax in its meta description.

Talk about dubious behavior.

If we return to the four questions, let’s review TurboTax’s decision to make a UI so inherently difficult to navigate that they’ve scammed many, many people into paying to file their taxes.

“Why are we making this decision?”

To make as many people as possible pay to use the software and thereby maximize company profit.

³³ <https://smashed.by/taxfiling>

“Who benefits from this decision?”

TurboTax.

“What are the consequences of the decision?”

The short-term consequence for customers is that they will pay unnecessarily for filing taxes, anywhere between \$80 and \$120.

The long-term consequences for them are not considered grave, apart from having to spend hard-earned money to use software that was meant to be free of charge.

In the short term, TurboTax makes a ton of money.

In the long term, it risks facing a government lawsuit and customers who will go elsewhere to file their taxes. The question is not whether it'll lose money; the question is how much.

“Would I want my loved ones to be using this?”

Erm, no.

As this example illustrates, even if the business makes money in the short term, the long-term consequences have a different, potentially serious weight to them. Maybe if someone had asked those questions before the decision was made, the decision would have been different.

Chapter takeaways

A journey towards cultural change starts with small steps. It requires that the organization, over time, defines guidelines for working strategically with ethics. In many cases, it also means that the business model and existing business procedures need to be tweaked, which is what what chapter 4, **The Business of Ethical Design**, will dive into.

It is necessary to define an ethical governance model that describes how ethical design is systematically included in teamwork and workflows. It's a way to increase the likelihood of succeeding in transforming an organization into one that builds on ethical design.

Putting a governance model to paper is not enough, though. That's why introducing the “ethical watchdog” — a person who has the mandate to shut down activities that go against the governance model — is so important.

It's also important to nurture a culture where it's OK for everyone to ask the tough questions, to challenge decisions. If this is successfully introduced, it can serve as an incredibly powerful guardrail against unethical decisions.

Cultural change as described in this chapter is mostly focused on the organization. However, to truly move the needle on the ethical barometer in the right direction, we must look to the people we ultimately aim to serve, the people who use our products. There are ways to increase our level of empathy and respect – all of which we'll dive into in the next chapter.

THINK SMALL

Small Technology as the antidote to surveillance capitalism

How viable is it to abandon existing practices and establish a privacy- and ethics-focused approach? There aren't many case studies highlighting how it has been done. One example is the Small Technology Foundation that builds products and platforms focused on privacy and ethics. The following is a story that explains the thinking behind its work.

By **Aral Balkan**, *cofounder of Small Technology Foundation*

“A big shot...” “made it big...” “became huge...” These are just some of the colloquialisms that we use daily to mean that someone or something is successful. More is better. Most is best. Would you like to supersize that? Why, yes, we would, thank you for asking!

What we don't quite understand is that a world with billionaires and trillion-dollar corporations is not sustainable, because, in the words of Edward Abbey, we have adopted as our success criterion “growth for the sake of growth”.

Recently, we learned how one small company, Cambridge Analytica, used a tiny subset of Facebook's data to influence the outcomes of the presidential election in the United States and the Brexit referendum in the United Kingdom. Imagine what Facebook can do (and does) with the full set of data.

Data about a person, if you have enough of it, begins to approximate the person. In other words, data about us is us. Unless we own and control that data ourselves, we are at risk of being owned and controlled by these corporations.

So if Big Tech, and Big Data, and “Big, Bigger, Biggest!” is the problem, what is the solution?

The solution, of course, is to think small.

Small Technology

We can talk about ethical design till the cows come home, but it's not going to change what surveillance capitalists do. Surveillance capitalists like Google and Facebook are incapable of ethical design because their core — their business model — is unethical. No factory farm has ever been converted to an animal sanctuary. The two are diametrically opposed things. So, change from within is impossible. People farmers like Google and Facebook cannot be reformed.

It doesn't matter how lovely some of the people who work at these companies are, they cannot change the fundamental nature of their companies. In the case of venture-capital-funded startups, they cannot alter the billion-dollar exits that their investors demand. And as for publicly traded companies, they cannot overrule their fiduciary duty to their shareholders to provide quarter-on-quarter profit growth.

So, what can we do?

We can, for starters, regulate surveillance capitalists to reduce their harms. That's easier said than done, of course, when they spend millions of dollars every year lobbying our policymakers and have revolving doors where the people who are supposed to be protecting your rights in places like the French Data Protection Office start working at Facebook as their next job.³⁴

In other words, we cannot regulate effectively because we are institutionally corrupt. I don't see that changing anytime soon.

Initiatives like the General Data Protection Regulation are a step in the right direction but still fall far short of what is required. We desperately need algorithmic transparency and, ultimately, data-minimization regulation³⁵ to stop these data vacuums from sucking up our information to begin with.

³⁴ <https://smashed.by/fsf>

³⁵ <https://smashed.by/gdmr>

Yet regulation — even if it is effective³⁶ — can only do so much. At best, it can only limit the harms of the current system. What it cannot do is usher in a different, better system. For that, we must fund ethical organizations from the commons and task them with building ethical alternatives for the common good.

But what characteristics should these organizations have, and what shape should the products that they design and build take?

According to the “Ethical Design Manifesto”, the alternatives must respect human rights, human effort, and human experience. But what does that mean in concrete terms? That’s where the Small Technology initiative³⁷ comes in.

Small Technology:

- is built by humans for humans;
- is non-commercial and not-for-profit;
- is built by individuals and organizations without equity capital;
- is not sponsored by Big Tech or surveillance capitalists;
- is private by default;

³⁶ <https://smashed.by/techregulation>

³⁷ <https://smashed.by/smalltechnology>

- is peer-to-peer;
- is copyleft, which means the work can be freely copied, distributed, and modified;
- favors small over big, simple over complex, and modular over monolithic;
- respects human rights, effort, and experience;
- is human-scale.

These criteria mean that Small Tech:

- is owned and controlled by individuals, not by corporations or governments;
- respects, protects, and reinforces the integrity of personhood, human rights, social justice, and democracy in the digital and networked age;
- encourages hitherto impractical non-hierarchical political organisation and agency at scale;
- nurtures a healthy commons;
- is sustainable;
- will one day be funded from the commons, for the common good;
- will never make anyone a billion dollars.

Small Tech has the opposite success criteria of Big Tech. If you make a billion dollars, you've failed. The goal is to create technology that we can trust because we don't have to trust the people who make it. And that's because we — individuals — own and control Small Tech, not corporations or governments.

While one day it is my dream that such projects will be funded — at least in the EU — by our taxpayer Euros, we cannot wait for that perfect time to come to get started. Laura and I are already working on a research and development program at Indie (ind.ie) to create a small technology platform. The working title of the project is Hypha, and the goal is to create a bridge between the centralized web we have today and the peer-to-peer future we want to have tomorrow.

Imagine a world where each one of us has our own place on the web, at our own domain name. Imagine further that this was just one node in a peer-to-peer network in which every one of our devices was another node and that we had full ownership and control of all of our nodes. Others could find us easily via our domain names, they could read and watch and interact with our public content, and we could also engage in entirely private one-to-one and group conversations. This is not a pipe dream but the project that I write code for to realize every day.

When Hypha is ready for public use, we will rely on the honor system for web hosts that provide Hypha as a service to send us a small percentage of the fees they charge their customers. While I'm hopeful that this will make the effort sustainable, it still remains to be seen whether there will be uptake for it.

Building bridges

It is definitely harder to make a living in the current system if you don't want to engage in surveillance capitalism, but it is by no means impossible. Sure, you cannot take venture capital (we know what kind of business models venture capitalists invest in and how that game ends), and you cannot build centralized services that collect data (but you don't want to do that anyway, right?), but there are many ways you can make a living, including by:

- creating products and services that do exactly what they say on the tin and charging for them;
- using privacy and peer-to-peer as competitive advantages to set your products apart (also, think of all the money and time you will save on GDPR compliance if you design your products not to gather any data to begin with);

- building products that actually protect people from mainstream technology;
- having a large number of patrons independently support your work, no strings attached.

No matter which road you take in order to eke out a living within surveillance capitalism, the most important thing to remember is that in Small Tech, we measure success in human welfare, not in profit or growth. And it's OK to take baby steps.³⁸

³⁸ <https://smashed.by/babysteps>

HUMANIZING BUSINESS

SAP's people-centric approach to sustainable success

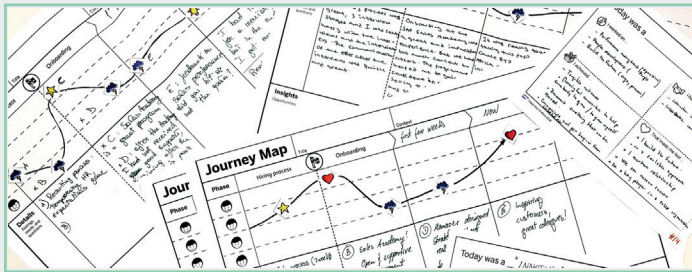
On the following pages is the story of how SAP, the German multinational software corporation that makes enterprise software to manage business operations and customer relations, is just getting started on its journey towards ethical transformation, and how it is already showing some very promising signs for the business.

By **Tobias Haug**, *Head of Happiness@work, SAP.*

In late 2018, SAP launched a new initiative called Humanizing Business, which aims to augment all of the human aspects in an organization in order to create a culture of sustainable success. The offices in Barcelona, Cairo, and Dublin, which are the digital hubs for SAP's EMEA sales teams, serve as pilot locations for SAP's endeavors to redefine the company's approach to work, with the intention to better engage, empower, and inspire the young talent working in these organizations.

The first phase of the initiative focused on identifying the employees' current pain points by running comprehensive

employee journey map research – conducting many interactive face-to-face interviews with people in various roles and locations. This research helped to illustrate the various touchpoints in the entire employee experience, including recruiting, onboarding, first-year growth, and beyond.



SAP's employee journey map research helped uncover the entire employee experience.

While this qualitative approach informed the strategy and focus moving forward, it was equally important to build a business case that included quantitative measurements to make clear the business impact that a strong focus on these topics would bring. The business case highlighted the increase in revenues around four productivity aspects:

- **Recruitment**

Bringing better talent faster into the organization

- **Time to revenue**
Optimizing the onboarding of newly hired employees
- **Retention**
Retaining and supporting valued employees
- **Empowerment**
Boosting the trajectory of employees through empowerment

Based on actual sales data and using extremely conservative assumptions, improvements in these four areas were shown to increase incremental revenue by over €10.2 million (10%+ attainment). Simply by improving the organizational culture and focusing on key moments in the employee journey, we could realize significant productivity gains.

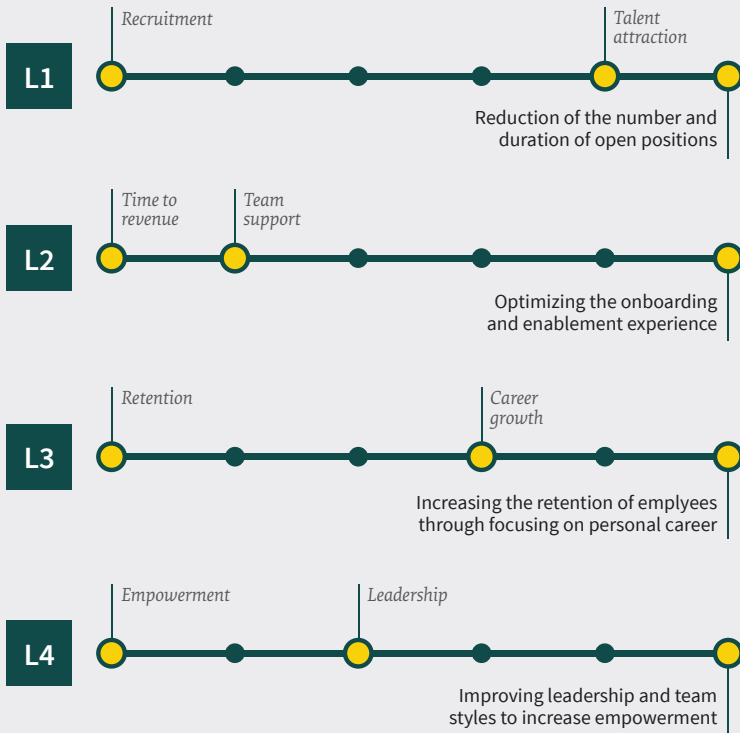
This business case was based on several measurable aspects, such as the following:

- Reduction of the number and duration of open positions through an improved and more efficient hiring experience leads to better coverage of sales territories (average territory achievement \times time / duration saved).
- Optimizing the onboarding and enablement experience significantly improves the quota attainment of new hires (percentage improvement per new hire).

- Increasing the retention of employees through focusing on personal career and growth paths (per month revenue achievement between experienced and novice professional \times number of revenue-generating employees).
- Improving leadership and team styles to increase empowerment and mentoring in order to create a culture of support for low performers (number of low performers \times 10% improvement).

Because the leadership team was convinced by this remarkable return on investment, the Humanizing Business initiative began focused activities to improve these four metrics and the overall employee experience. The first steps have already been taken: the initiative supports team events, encourages workspace personalization, highlights exemplary behavior in dedicated newsletters, and organizes activities to stimulate certain behaviors such as gratitude.

Furthermore, a special focus has been put on the topics around growth and career, as well as well-being. The initiative is improving ways to attract experienced people to the organization, to refine the recruiting experience, and to help new hires onboard and upskill more efficiently. Their approaches to these topics include coaching, mentoring, team-building exercises, leadership programs, and the establishment of new activity areas, such as communications, health ambassadors, and a sustainability committee.



SAP measured and saw a positive impact of Humanizing Business on the number and duration of open positions, employee onboarding, employee retention, and leadership.

While a person’s experience is always subjective and hard to measure, the fact that this initiative was launched in a revenue-generating organization made a monetary evaluation possible. Nevertheless, the main objective of the Humanizing Business initiative is to build a positive company culture for

people to have a healthy work-life balance and to thrive at work. In order to do so, the team's main goal was and will continue to be a strong foundation of feedback from employees – leveraging open and regular pulse checks to monitor the employee experience and monitoring key metrics to align with business results.

Although the Humanizing Business initiative is still young, we're already seeing positive indications. SAP's employee retention is increasing, and the sales metrics we're monitoring are showing positive financial results.

Moving forward, Humanizing Business is expected to scale through controlled and individualized pilots in other parts of the organization. This approach has specifically been chosen to avoid failing through a top-down programmatic change.

While the initiative is currently being tested in the sales department with connected quantitative financial key performance indicators (KPIs) that naturally resonate well in this type of department, we strongly believe that Humanizing Business will help all parts of SAP in the future, including product teams. The next step is to define KPIs of a more qualitative nature to help us monitor the success rate.



CHAPTER 3

Respect-driven design



A HUMAN-CENTERED MINDSET

is fundamental to ethical design.
Working human-centered grows a
respect for the people who use the
products and services we make.

Evoking empathy

As you've read in the early chapters of this book, there is a lack of and need for ethical consideration in this industry of ours. There is also a lack of and need for respect, and we must nurture this sense of respect in order to start making that shift towards a more considerate industry. Increasing empathy towards the people we design and develop products for is an important step in this direction. Adopting a human-centered mindset can help.

Human-centered design (HCD) is a philosophy developed by Don Norman (among others).

HCD is a framework as well as a mindset. At its core, working “human-centered” means involving the people you serve early and continuously in the process.

It's easy to get absorbed in a daily routine of designing and developing small fractions of an experience. What also can happen as a consequence is that you lose sight of the real goal.

Understanding the problems you are aiming to solve is easier when you empathize with the users. You can't really understand the core problems if you haven't seen them

appear in real cases with real people. That's where the human-centered approach comes in.

Working human-centered is a natural part of the process for UX designers, but it can be a natural approach for UI designers and developers as well – yes, even with a routine full of daily standups and reviews and code and sketching.

Maybe you're familiar with sentences that start with “I think...”, “We know...”, “From a technical perspective...”, and “I feel...”. Those are typical on a team in which user involvement is low.

The biggest problem with basing decisions on what you think and feel, or what is easiest from a technical perspective, is that it doesn't involve the people you are serving, the people whom your product or service is being put in the world to solve problems for.

UX designers and researchers typically conduct research, document insights, and bring them forward in a refined state to stakeholders and the design and product teams in the shape of personas, user needs descriptions, user flows, journeys, and so on. And that's a great start.

The problem, however, is that the distance between the organization and the people you serve remains large, because no one except the UX designers has spoken with

them or has seen them use the product. So, the team keeps going back to “I feel...”, “I think...”, and “From a technical perspective...”.

To build empathy, you must interact. This doesn't necessarily have to be done directly, and to be honest, it's doubtful that an entire team would be allowed to go to do field research or participate in user testing. This would be the optimal setup, but realistic to all teams? Not so much.

Luckily, there are some very impactful things we can do, and ask for, to get closer to our users.

- **Involve all team members in watching videos from user testing sessions.**

Actually going through the pains and delights of the people who use your products (or prototypes, depending on what you're testing) is worth every second. It cannot be stressed enough how important it is to watch other people interact with and comment on the stuff you're building (and, no, your team doesn't count as “people” here!).

If this is not part of the routine in your company, ask for it to be included. Most UX designers would be thrilled to organize and facilitate such sessions. You are guaranteed to go through pain, agony, frustration, and

happiness, and get multiple eye-openers, and it will all serve as the stepping stone towards building empathy and understanding.

- **Ask for actual, living portraits.**

User portraits are detailed descriptions of individuals from the user group, people who represent the users. They typically include photos and video from contextual studies, stories from the user's daily life, and stories about them. Getting a deeper sense of the people on the other side of the product creates instant empathy and makes it a lot harder to design things that are knowingly bad for them.

- **Insist on continuous testing.**

This includes early proof-of-concept tests, prototype tests, and usability tests. A side bonus of early and continuous involvement from the people who are meant to use the product is that it will save money in the long run. The earlier you realize a bad call or error, the cheaper it will be to fix.

Introduce UX exposure hours

However, there is an even better solution than only getting secondhand, curated insights from the UXers.

Usability expert Jared Spool and the good folks at UIE made an interesting discovery when working with teams that had

problems moving their products forward. A common pattern was that none of the teams spent time with their users.³⁹

Further research led to the conclusion that the key to successful progress in the product development was exposure hours.

Simply put, Jared and co. found that if everyone on a team spent two hours every six weeks (or more) together with users, they would be able to greatly improve the product's user experience.

This can be accomplished partly by combining field visits and remote user testing. The point is that the exposure has to be direct. It's not sufficient to be exposed indirectly through someone else's reports, as often seen in the cycle between UX, design, and development.

The trick is also to have all team members involved. The positive results on teams in which stakeholders were included far outperformed those in which only designers and developers were included.

Two hours every six weeks exposes us to the ongoing struggle people have when using our products. It's bad enough to be exposed to this once, but imagine having to go back every six weeks and see them still struggling. That's bound to spark an ambition to improve your product!

³⁹ <https://smashed.by/exposurehours>

Linking user needs and business objectives

Imagine if all we had to concern ourselves with was solving problems, without having to worry about making money to pay our bills. What a wonderful world that would be.

However, that is a privilege of the few who are financially funded by a fortune or a silent, rich sponsor. So, really, very few people have that luxury.

The rest of us work within the financial frame of companies or clients who want to see positive figures on the bottom line, which means that we can't just focus on the users. We also have business objectives to meet.

The great thing about human-centered design is that it doesn't rule out business objectives.

There's a simple formula. Ask these four questions:

1. What problems do our users have?
2. What user needs do these problems translate into?
3. What value do we bring to our users?
4. How does this value help our users meet their needs?

Notice that we still haven't mentioned the business objectives in the formula. This is totally intentional.

Starting with the user needs forces us to think ethically about the business objectives. And it forces us to focus on the users when planning how to meet those objectives. It helps us to consider the value we bring. And it's not counter-productive to meeting the business objectives.

Let's take an example.

Growth hacking has become a popular term and discipline to increase traffic and revenue. The term is often considered a bit "dirty", but it's not so much the term or the objective that's the issue. Rather, it's the tools growth hackers often use to reach the objective that are problematic.

What many growth hackers misunderstand is why growth happens. Yes, growth happens through exposure to the right people in the right channels. But, ultimately, growth happens when you are able to meet the needs of users, to solve their problems.

Growth comes through solving problems.

Once we know what the needs of our users are and what value we bring, we can pair that with the objectives of our

business. Want to increase conversion by 10%? Great! Start by looking at the current experience. Does it bring value? Does it solve some of our users' needs? Or is it primarily focused on selling more, getting more clicks, and increasing traffic for the sake of traffic (and advertisers)? If the latter is the case, you should take a deep, hard look at your product and figure out how to bring value to your users.

We once worked on a project whose objective was to bring traffic to the company's blog. Instead of working with dubious SEO tricks, like repeating the same word again and again in posts to boost search engine rankings, we looked at what problems the users typically struggled with. We identified these problems through user interviews, social media monitoring, and data analysis, and by doing so, we were able to create a content strategy that truly helped users solve some of the problems they struggled with in their work. Traffic grew on the blog as a result of our efforts.

When we bring true value to the people who use our service or buy our products, they tend to stick around. Value grows loyalty, and loyal customers are a valuable business asset. Click-bait might bring traffic and thereby short-term improvements on certain KPIs, but it's much more interesting for a company to nurture long-term growth. Working proactively to address user needs will help to do just that.

Designing for the most vulnerable

When we design for people who are vulnerable in one way or the other, there are some specific actions we must take if we want our products to be ethical. We have an extra responsibility when we design things for people who rely on us to make products for them that don't take advantage of them or put them in danger.

But, actually, you'll notice once you've read through this next section that designing with respect to the vulnerable will add an additional layer of ethical design for everyone who uses your product, not just the ones who need it the most.

Designing for the vulnerable can be seen as an ethical consideration that would look great in PR and on paper. Designing with care is, however, a benefit to all users, and your business will often end up solving problems for users without knowing there was an issue in the first place.

In the following sections, we will talk about designing for those who are some of the most vulnerable: children, people with disabilities and older people.

Risks for children in the digital space

Children are particularly vulnerable to unethical design in digital products for a number of reasons.

Their brains are not yet fully developed. This means that they don't have the same amount of mental models and cognitive frameworks to understand and analyze what they are exposed to.⁴⁰

KIDS ON SOCIAL MEDIA

According to eMarketer, 1.5 million children under 11 years of age have a Snapchat account. As with most other social media, the age limit of Snapchat is 13.⁴¹

These kids have signed up claiming to be 13 or older, and herein lies a serious issue. Snapchat (and all other social media networks) can guess that the kids are under 13 (based on their behavior such as likes and the groups they join), which makes it illegal to collect their data without parental consent. But because the kids are formally linked to an account of a person over 13 years of age, the networks can collect all the data they see fit.

The networks identify the data as belonging to a demographic younger than 13, but because this does not formally

⁴⁰ *Design for Kids* by Debra Levin Gelman, Rosenfeld Media

⁴¹ <https://smashed.by/backtoschool>

exist in their system, they can do with it what they want, as long as it complies with their own privacy policy and their terms and conditions. And “what they want” usually means selling this knowledge to advertisers and data brokers.

A situation with 1.5 million young children’s data on one platform alone is a clear security liability.

Young children are not experienced digital users, even if they have grown up as digital natives. They are naive and playful and have not yet learned to fully understand the consequences of their own actions. This means there is a high risk of them unintentionally exposing sensitive data about themselves, which ultimately puts them in vulnerable positions.

It is, simply, unsafe.

ADVERTISING

The digital advertising space is very different from traditional advertising. Today, advertising not only takes place in the usual format of commercials. It has also made its way into the core content that kids consume.

YouTube is probably the most dominant platform for advertising targeted towards young demographics today. Influ-

encer marketers as young as 5 years old frantically review toys and games and heavily influence the buying behavior of families through their young viewers.

Ryan's ToysReview is one of the most popular child influencers on YouTube, with around 20 million subscribers to the channel, which has made him (and his family) a small fortune in advertising income. Apparently, children don't have to be all expenses!

The big ethical issue here is that kids have a lower advertising literacy than adults. Advertising literacy refers to our overall knowledge about advertising and the techniques used to target us, and also our knowledge of how it persuades us.

The four-year interdisciplinary research project AdLit⁴² (short for Advertising Literacy), which studied 1,343 children between the ages of 7 and 12, showed that children don't think that advertising influences them if they don't notice the brand.

Furthermore, the study showed that children's advertising literacy for hybrid ads — the ads that include product placement and advergames — is lower compared to traditional advertising such as TV ads.

Even when the children were notified through a disclaimer that they were about to see sponsored content, it did not

⁴² <https://smashed.by/kidsads>

affect their attitude towards the brand. For the least skeptical children in the study, the advertising disclaimer resulted in an even more positive brand attitude.

The study also revealed that adolescents who were concerned about privacy issues generally were more skeptical of retargeted ads on social media.

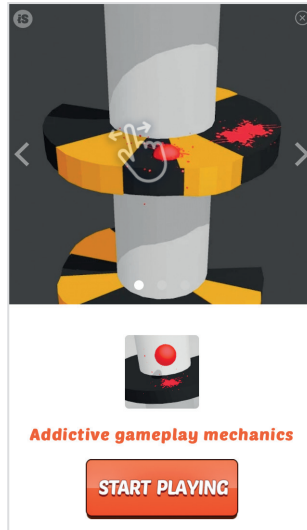
INTENTIONALLY POOR UIs

For young children, understanding a UI can be a complex task. They don't necessarily know the language of the UI, and their mental models of digital interfaces are not yet fully developed.

Additionally, until a child reaches the age of 10, their fine motor skills are not fully developed.⁴³ This means that it's harder for them to successfully tap a touch target with their fingers or click an element with a mouse pointer.

A wealth of UI patterns take advantage of this. The mobile ad space is particularly vile: it's common practice to create pop-up ads in free children's game apps with "close" buttons so small that it's nearly impossible for any child to successfully close the ad. Instead, they mistap and thereby open the App Store or Google Play.

⁴³ *Design for Kids* by Debra Levin Gelman, Rosenfeld Media



The “close” button in this ad is intentionally designed too small in order to increase the click rate.

SAFETY

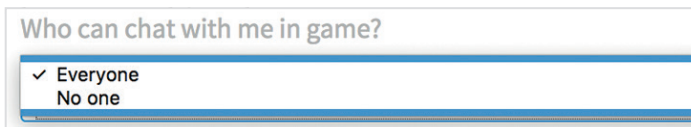
With kids going digital like never before, a new and unsafe world opens up. Sadly, a large number of games and apps targeted to children don’t protect their safety.

In a large academic study done by researchers from several US universities, an automated analysis of almost 6,000 children’s apps on Android was conducted. The study revealed that the majority of the apps shared sensitive user details with external parties, potentially violating the US

law COPPA (Children’s Online Privacy Protection Act), which prohibits the collection of certain data from children under 13. This was mostly through the use of third-party SDKs that allowed for behavioral advertising and tracking.⁴⁴

Roblox is a very popular online game portal targeted at kids. It’s possible to set up a Roblox account for a child under 13, which requires parental permission. However, the privacy settings of an under-13 account are much like YouTube’s restricted mode. It can be set to either “on” or “off”. In the case of Roblox, this means that a child has only two options for chatting in-game. They can either chat with “everyone” in the game, which is obviously unsafe, or “no one”. There is no option to chat only with the players they are connected with, which for young children is often only people they know in real life.

By not offering granular privacy options, Roblox heavily nudges children in an enormously unsafe direction, exposing them to its entire online community.



Roblox’s privacy settings for under-13s leave little option to keep the child safe while allowing them to communicate with friends in a game.

⁴⁴ <https://smashed.by/coppacompliance>

UNFILTERED CONTENT

YouTube is probably the most popular platform of them all in the young demographic. YouTube doesn't consider itself a content provider. Rather, it sees itself as a platform with user-generated content, and it takes very little responsibility in moderating the content.

As a consequence, there is no real option to filter content on behalf of children. YouTube can be set in one of two modes: strict mode “on” or “off”. There are no granular controls to allow certain types of content that a child might be interested in, content that the parents deem fit for their particular child.

This means that children are often exposed to content they find irrelevant and, worse so, scary and not fit for their age or mental capacity. Even worse, children, who are receptive to the meaning of others, are in danger of being radicalized in various ways by influencers who they look up to. And the worst part is that YouTube takes no responsibility for the content itself. As long as it falls within its terms and conditions, the content can be published.

SHAPING CHILDREN'S SELF-IMAGE

The products that children use, whether digital or physical, all contribute to the shaping of their mental models. And some of them also take part in shaping their self-image.

One can see how heightened visibility of the young demographic might be lucrative to companies that try to establish and extend their reach to the next generation. And quite often they would be using dark patterns to get and nurture children's attention.

This is where products and, ultimately, companies, have a big responsibility in nurturing a healthy self-image and helping children to grow into balanced, happy adults.

Sadly, many companies fail to live up to that responsibility, not least in the digital space.

TabTable is a company that makes a variety of apps targeted at children. It has been criticised and even sued for not complying with COPPA, specifically regarding protecting the data of children younger than 13.

It's bad enough that TabTable's apps are potentially not COPPA-compliant. There is also another dimension of its apps that is deeply problematic from an ethical perspective.

If we look at one of its games, called Hip Hop Dance School, it's not hard to see that this app focuses mostly on appearance, popularity, and gender stereotypes. And it does so in ways that potentially have a damaging effect on a child's self-image. If you're an 8-year-old girl using this app, what

you see is that “fame is important”, “cool people are skinny”, “I have to wear trendy clothes”, and “boys work out, while girls dress up”. Is this a healthy set of values that empowers children to grow up with a good self-image and image of others? Absolutely not.

The game Hip Hop Dance School focuses on appearance and gender stereotypes.



Ethical design for children

Now that we've established why it's so problematic to act unethically towards children, let's look at some ways to choose a better path.

RESPECT COGNITIVE AND PHYSICAL ABILITIES

Whenever you design or plan a product for children, be mindful of their abilities.

Make the UI understandable from their perspective. If that means stepping in their shoes and attempting to navigate a Hungarian website (if you don't read Hungarian, that is) to understand what it's like to feel verbally blinded, do it.

Respect existing conventions and mental models. Kids grow up with YouTube, so that is a great benchmark for your UI. Hint: most 3-year-olds know the "play" and "pause" button, but they have no clue what the "share" icon is!

And don't make buttons too small. Tiny fingers need big buttons!

COPPA

The Children's Online Privacy Protection Act (COPPA) is a US law that helps to protect the privacy of children under 13 years of age.

So far, COPPA is restricted to the US. But that doesn't mean that companies from other parts of the world should not aim to comply if they make products for children. In fact, because digital products move in a global market, it's a very, very good idea to comply with COPPA regardless of your company's address!

According to coppa.org, COPPA applies to:



... individually identifiable information about a child that is collected online, such as full name, home address, email address, telephone number or any other information that would allow someone to identify or contact the child. The Act and Rule also cover other types of information – for example, hobbies, interests and information collected through cookies or other types of tracking mechanisms – when they are tied to individually identifiable information.

To comply with COPPA, you must:

- Ask for specific parental consent to collect information about the child. The parental consent must be reasonably verifiable, meaning that you have to make sure that it is in fact the parent who agrees. This could be done by asking a parent to sign up on behalf of the child, or by requiring a confirmation email to be sent to the parent's email address.

- Provide a link to your privacy policy on all pages that collect sensitive data about the child. The privacy policy must be written in clear and understandable language.

The privacy policy must explain:

- the names and contact information of all of the operators who are collecting or maintaining the children's personal information;
- the types of information that are being collected and how they are being collected (for instance, through cookies or directly);
- how the personal information is being used by the operator;
- whether the personal information is being shared with third-party operators;
- that parents can opt out of disclosing the information to third parties;
- that the operator must not ask the child to disclose more information than is necessary to participate in activities on the website or app;
- that parents have the right to have their child's information deleted from the operator's database;
- the procedure for parents to have their child's information deleted.

Privo is one example of a company that assists children's products and platforms to become COPPA-compliant. As with other types of legislation, it can feel quite complicated and overwhelming to find your way around the rules. If that's the case, consulting experts such as Privo can be a good solution.

CASE STUDY: YOUNGCURRENT IN INDIA

YoungCurrent is a news website personalized to match children's various reading abilities. It is an Indian initiative founded by Mydhili Bayyapunedi.

YoungCurrent mainly targets students in India, a country that doesn't have internet privacy laws to protect children. Still, YoungCurrent has chosen to be COPPA-compliant, which is admirable considering that it actually doesn't have to be. It's a choice made by Mydhili, a choice that has had consequences for the business because of the increased complexity in data-handling and user interaction.

According to Mydhili, YoungCurrent complies with COPPA in the following ways:

- It provides links to its privacy policy. These are present in the footer on all pages and especially in those places where sensitive information is collected.

- It keeps the language simple. While there is some language that will sound legal no matter what, its privacy policy provides pro tips to parents on how best to protect their children while on YoungCurrent. It goes one step further with its terms as well, which has a “Simply put” section that explains the terms of service in an understandable form.
- It mandates that a parent sign up on behalf of children under 13 years old. This is in order to have parental consent that is reasonably verifiable.
- It never discloses or exposes any user’s information to third parties.
- It collects the bare minimum of information needed from students. For example, it does not collect location, date of birth, etc.

Pro Tip for Parent: Make sure to enter your email ID under Parent's Email Address on YoungCurrent. You can always edit this on the "Settings" page.

While we do everything in our power to make sure that the content we provide or aggregate from the internet is appropriate for your child, it may not be considered child-appropriate in all countries. Please note that instances where some information or your child choose to visit a third party service or an advertiser by "clicking" on a link on our website or online services. If you click on a link to a third party website or online service which may or may not be child-safe or child-friendly, we are not responsible for any other type of advertisement is not an endorsement, authorization or representation of YoungCurrent. We do not exercise control over third party websites and services you use. We do not exercise control over third party websites and services you use. We do not exercise control over third party websites and services you use.

Pro Tip for Parent: Monitor the Reports page to monitor what your child has learned and to be wary of any third party links they may come across and ask them for your supervision.

YoungCurrent's tips help parents understand how to use the website.

The image shows a screenshot of the YoungCurrent website's Terms of Service page. The page has a green header with the YoungCurrent logo and the tagline "Child Safe News Reader". The main heading is "Terms of Service". Below this, there is a paragraph of text, followed by a bolded paragraph, and then a section titled "ACCESS". Another section titled "CHILDREN'S DATA" follows. Two callout boxes, labeled "Simply Put:", are overlaid on the page. The first callout box highlights a paragraph of text, and the second callout box highlights a paragraph under the "CHILDREN'S DATA" section.

YoungCURRENT
Child Safe News Reader

Terms of Service

Thank you for using YoungCurrent. These terms and conditions govern Parent ("parent/care-taker," "teacher" and "School") and the Student's use of YoungCurrent, so please read them carefully before using the services.

In using this website you are agreeing to have read and agreed to following terms and conditions. While signing up you are also agreeing to these Terms of Use.

ACCESS

By Signing Up on YoungCurrent and/or allowing your student to Sign Up on YoungCurrent you authorize YoungCurrent to access student information such as name and grade of the child. YoungCurrent shall access student information for the purposes of providing a customized experience to the child as well as to improve experience of other users on YoungCurrent.

CHILDREN'S DATA

YoungCurrent has made it mandatory for the parent/care-taker of any student below the age of 13 to sign up for the service on behalf of the student. These are reasonable efforts by YoungCurrent to ensure that the parent of the child understand and receives notice from YoungCurrent about the personal information collected of the child. For children who have expressed on YoungCurrent that they are 13 years or older, we give them an option to add their parent's email ID in order to make them aware of the child's usage on YoungCurrent. In case the

Simply Put:
Every website has its terms. Since this is a website targeted towards kids, we put additional love and care into ours.

Simply Put:
YoungCurrent requires for every student to enter Parent's email while signing up. Make sure that this information is stay up to date on your child's actions on.

"Simply put" boxes in YoungCurrent's terms of service make the complex copy much easier to understand.

The main takeaway here is that we need to stop thinking of legislation as something to comply with because we "have to", and start choosing to comply because we "want to". It's the right thing to do from an ethical standpoint.

COPPA compliance means keeping children safe. How can that even be something we do because we "have to"?

Also, it is a competitive advantage. One of the primary concerns that parents have about their children is their safety.

CONSIDER THE LEARNING AND EMPOWERMENT POTENTIAL

To make truly ethical products for children, you have to think about learning potential. Learning doesn't have to be in a traditional context, such as learning a topic, though. Learning happens in a multitude of ways, all of which are equally important to nurture the healthy development of our next generation. We must help them learn physically, socially, and creatively, and there is immense potential in digital products to make that happen.

To succeed in this, asking the right questions is vital.

1. What problem does our product solve for kids?
2. What do we want kids to learn through our product?
3. How does our product empower them?

These questions are similar to the questions you'd ask yourself about products for adults, but we often don't ask ourselves what our adult users would learn from the products we create. This is a shame, because a focus on learning shouldn't only be for kids. So, maybe in your next project, ask that question: what do we want people to learn?

DESIGNING FOR CHILDREN'S RIGHTS

A great set of guidelines to consult is the “Designing for Children’s Rights” guide.⁴⁵ The guidelines are based on the UN Declaration of the Rights of the Child and provide a set of ten principles to work with when designing products and services for children:

1. **Everyone can play.**

I need a product that does not discriminate against characteristics such as gender, age, ability, language, ethnicity and socio-economic status. My parents, teachers, experts and communities also care about your product or service so include them in the process. And keep in mind that I might use your product even if it’s not designed for me.

2. **Give me control and offer support.**

Give me the tools I need to adapt your product or service to my needs. Consider where I am at in my development to both inspire me and nurture my growth. I need support to acquire new skills and encouragement to try self-driven challenges.

3. **I have purpose so make my influence matter.**

Help me understand my place and value in the world. I need space to build and express a stronger sense of self. You can help me do this by involving me as a contributor (not just a consumer). I want to have experiences that are meaningful to me.

⁴⁵ <https://childrensdesignguide.org/>

4. Offer me something safe.

Ensure you provide me with a model for healthy behavior. A marked path or “lifeguard” can tell me why something is unsafe, and then prevent me from doing it to strengthen responsible digital literacy. Make sure you equip my guardians with an understanding of this as well. And don’t forget that my data should be handled with the utmost respect and care.

5. Create space for play (including a choice to chill).

When using your product or service, consider different moods, views and contexts of play. I am active, curious and creative but it is also OK to give me a break and offer me some breathing space. Foster interactive and passive time.

6. Encourage me to be active and play with others.

My well-being, social life, play, creativity, self-expression and learning can be enhanced when I collaborate and share with others. Provide me with experiences to help me build relationships and social skills with my peers and community.

7. Give me room to explore and experiment.

I need to experiment, take risks and learn from my mistakes. If/when there are mistakes, support me to fix them by myself. Encourage my curiosity but consider my capabilities based on age and development. Be mindful of the time I need to learn something new.

8. Use communication I can relate to.

Consider all forms of communication and make it accessible to all. Visuals can help me to learn, explore, play, and imagine the future. But keep in mind that age, ability, culture and language also impact the way my friends and I will interact with your product or service.

9. Make it flexible for me.

Consider my open and fixed types of play or learning in your design. This flexibility allows me to choose a personal path and keeps opportunities open for me. Expect me to use your product in unintended ways.

10. You don't know me, so make sure you include me.

You should spend time with me, my friends and my guardians before you design a product or service. We have good ideas that could help you. Also ensure that you talk with people who are experts on my needs.

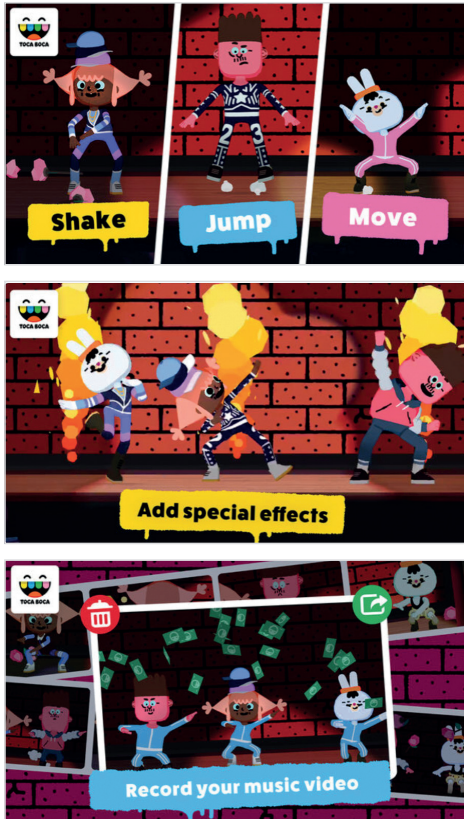
CASE: TOCA BOCA

Toca Boca makes digital toys and everyday products for children. It has four core values that direct its focus: play, innovation, quality, and inclusion.

It describes the last value, inclusion, like this:



Everyone is welcome in our world. Kids can be whoever they want to be. Everyone fits in and stands out.



The game Dance Free by Toca Boca nourishes children's play and freedom to choose whoever they want to be.

“Kids can be whoever they want to be.”

Now, there's a good mantra.

When kids play with a Toca Boca app, like Dance Free, they can indeed choose whoever they want to be. In addition, the

app doesn't focus on superficial things like appearance and popularity. Rather, it focuses on enabling kids to be creative, to have fun, and to grow their confidence.

Toca Boca could have taken another road. It chose not to. It chooses to focus on values that will help empower and grow the children who use their products — by choice, not by necessity.

There is always a choice.

How to design with ethics for children

- Make buttons large enough for small fingers to effectively tap.
- Remember that kids can't necessarily read everything in your UI.
- Comply with COPPA.
- Ask yourself, "What do we want kids to learn from our product, and how does our product empower them?"
- Use the ten principles in the "Designing for Children's Rights" guide.

Accessibility

Respect-driven design comes with a set of implications, one of them being to include accessibility in the design and development process. The following section about accessibility is a stock cube with added spice. Use it to get started, or to be reminded of the hows and whats.

By **Laura Kalbag**, cofounder of Small Technology Foundation

You might've seen the term "a11y" used on the web and had no idea what it means. It's ironic because a11y is a shorthand way to write "accessibility," (an alphanumeric acronym, to be precise), which isn't accessible because you wouldn't know what it means unless somebody has already told you.

a	c	c	e	s	s	i	b	i	l	i	t	y
a	1	2	3	4	5	6	7	8	9	10	11	y
a	11										y	

This is how a11y, the alphanumeric acronym, is constructed.

The inaccessibility of "a11y" is exemplary of how intimidating we might find the world of accessibility, not just because the

field of accessibility has some tricky terms, but also because it can feel socially awkward to talk about other people's disabilities; we can get defensive when accused of not caring about accessibility, and (most importantly!) a lack of accessibility can have a very negative impact on people's lives.

Accessibility is the degree to which our products are usable by as many people as possible. Often, when we try to improve our product's accessibility, our aim is to make our product accessible to disabled people, who are often excluded by technology not designed with their needs in mind.

What needs should we consider?

There are four broad goals we aim for in making our products inclusive.

- Make it easy to see.
- Make it easy to hear.
- Make it easy to operate.
- Make it easy to understand.

These roughly fit with the four common types of disability that affect people's use of technology.

VISION

Vision-related needs are wide-ranging. They could arise because a person is nearsighted, is farsighted, has astigmatism, is color-blind, has eyesight loss, or is blind. Vision-related needs can benefit from considerations of the visual design, including producing alternative forms of content that don't require reading or watching, and making interfaces larger and easier to see for those with impaired vision. Motion sensitivity also fits in this category, though it is often forgotten or ignored. For those with vestibular disorders or who are prone to seizures, motion such as animations or flashing images can be very harmful.

HEARING

When we talk about how hearing-related needs might affect one's use of technology, we are usually talking about people who have hearing loss or who are deaf. Providing alternatives such as transcripts for long-form audio or captions for videos can make audio content more accessible.

MOTOR

Motor-related needs can include difficulty with fine motor control, low stamina for repetitive tasks, and pain while moving. We all use different inputs to operate our devices, whether it's touchscreens, mice, or keyboards. Accessible design accommodates these inputs, as well as those provided

by assistive technology, such as screen readers, speech recognition, hardware switches and eye-tracking navigation.

COGNITIVE

Cognitive-related needs fall across a huge spectrum, which includes difficulties with memory, attention, problem-solving, visual processing, maths processing, text processing, learning disabilities, and reading. Some of these needs also overlap with the needs of neurodiverse people, who process the world differently and so might struggle with interfaces created for the needs of neurotypical people.

ACCESSIBILITY MAKES INTERFACES MORE USABLE FOR EVERYONE

Considerations of the few examples I've included do not just help people with those specific needs. Making our technology easier to see, hear, operate, and understand is just good usability and can benefit everyone. For example, designing for vision-related needs can also help people who struggle to use their device in bright sunlight. Making products better for hearing-impaired people can help those who want to listen to videos in public places without disturbing their neighbors. Making our interfaces accommodate people with motor-related needs makes them more adaptable and flexible for everyone. Technology that is mindful of our cognitive-related needs helps all of us in a

world that is stressful, that demands hard work, and whose segments fight for our attention.

Advanced accessibility: Don't prevent text resizing

The basics, like adding alternative text for images, writing clearly, and ensuring good contrast between background and text color, go a long way in accessibility. But sometimes it can get a little trickier. Text resizing is a good example.

One basic rule for accessible web pages is: don't prevent visitors from resizing text. Ideally, we shouldn't render body text any smaller than 16 pixels, but that doesn't mean 16 pixels is big enough for everyone to read. Sometimes people set a default or minimum font size in their browser preferences. Sometimes people will temporarily zoom into your page to better read the text. They might zoom by pinching to zoom on a touchscreen device, by using their keyboard's + and – shortcuts, or by using the “Zoom in” and “Zoom out” options in their browser's menu. These will all change the text size on the page — at least they will if you haven't prevented the visitor from resizing the text.

One common way developers prevent visitors from resizing text is using `user-scalable=no` or `maximum-scale=1.0` in the `viewport` meta element. Another way we prevent zooming in CSS is when we set font sizes in pixels (for example,

`body { font-size: 16px; }`), which overrides the visitor's default or minimum font-size preference.

The best way to ensure fonts scale according to the visitor's preferred size and zoom level is to set your style sheet's base font size to match the visitor's preferred size using the following:

```
body { font-size: 100%; }
```

Then, define further font sizes using scalable units that are relative to the body's base font size, such as `ems` or `rems`:

```
h1 { font-size: 3em; }  
h2 { font-size: 1em; }
```

But beware that not all scalable units are zoomable.

Recently, viewport units (particularly `vh` and `vw`), which enable us to size text according to the height and width of the viewport, have become popular as browser support has become widespread. They seem like the ultimate in responsive design because we can use them to scale text precisely to the viewport without the need for a load of media queries.

```
h1 { font-size: 4vw; /* Equivalent to 4% of viewport  
width */ }  
h2 { font-size: 3vw; /* Equivalent to 3% of viewport  
width */ }
```

However, because viewport units scale relative to the viewport, and not relative to the base font size, they override the visitor's default font-size settings, and the text will not respond to page zooming. But there is a workaround!

MAKING VIEWPORT UNITS ACCESSIBLE

Recently, I was working on the Small Technology Foundation's website. We designed a cute responsive header, and we wanted the text and images to scale together to best fill the available space in the viewport. Viewport width (`vw`) units are perfect for the job. In order to make the header still scale when someone zooms or sets a default or minimum font size, I wrote a workaround using `calc`.

```
body { font-size: 100%; } /* Ensure fonts scale from
browser's default size */
h2 { font-size: 4em; } /* Font size for older
browsers that do not understand calc and vw */
h2 { font-size: calc(0.5em + 4vw); } /* Scalable to
the viewport width and scalable */
```

Using `calc` enables us to benefit simultaneously from the scalability of `em` units and the viewport-relativity of `vw` units. We get the impact of a nice big heading, and we get our responsiveness, without having a negative effect on the accessibility of the page. Whether cursive text is good for accessibility... well, that's a discussion for another day.

There's no such thing as 100% accessible

Accessibility is not absolute. There is no such thing as 100% accessible. You might have captions on your videos, but are those captions only in English? What about all of the other languages in the world? This is to say not that you should settle for inaccessibility for some people, but rather that accessibility is about determining your minimum requirements, and about always striving for improvement. The Web Content Accessibility Guidelines (WCAG)⁴⁶ provide a list of recommendations that can help you understand what is sufficient and what will truly take your interface to the next level of accessibility.

⁴⁶ <https://smashed.by/wcag>

Ethical design for older people

According to the PEW Research Center's projections, the number of people aged 65 and over will triple by 2050. By that time, there will be 1.5 billion seniors in the world. That's a lot of people. And by 2050, don't expect many of those seniors to be tech-illiterate. Bear in mind that the youngest of them were born in 1985!⁴⁷

This makes seniors a demographic group that can't, and shouldn't, be ignored.

Ollie Campbell, CEO and founder of Milanote, has some good advice when designing for older people.⁴⁸ While some of the considerations for older people overlap with those of general accessibility, it's worth spending some time looking into the more specific needs of seniors.

VISION

Eyesight changes with age, making it increasingly hard to read small text and to tell similar colors apart.

Considerations:

- Avoid font sizes smaller than 16 pixels.
- Allow people to adjust text size.

⁴⁷ <https://smashed.by/2050>

⁴⁸ <https://smashed.by/elderly>

- Make sure to apply sufficient text-contrast ratios.

HEARING

About 1 in 3 people over 65 have some sort of hearing loss.⁴⁹

Considerations:

- Provide subtitles when video or audio content is fundamental to the user experience.

MOTOR CONTROL

Motor skills decline with age, which can make it increasingly hard to operate a mouse. However, finger tapping declines later than some other motor skills, making it a convenient interaction design pattern for older people.

Considerations:

- Follow minimum standard size guidelines for clickable elements for touch (like 44 × 44 pixels on tablets), and consider adding width and height to the elements.
- Make clickable elements for mouse interaction at least 11 pixels in diameter.

⁴⁹ <https://smashed.by/hearingloss>

COGNITION AND MEMORY

Memory deteriorates as we get older, which for some older people makes it hard to comprehend new complex concepts and radical changes in products and interfaces.

Considerations:

- Introduce product features gradually over time.
- Avoid splitting tasks across multiple screens if they require memory of previous actions.
- During longer tasks, give clear feedback on progress and reminders of goals.

ATTENTION SPAN

Interestingly, attention span seems to increase as we age. On the upside, this means that the ability to focus and to spot details increases. The downside is that things tend to take more time. Also, people's multitasking abilities decrease over time.

Considerations:

- Don't be afraid of long-form text and deep content.
- Allow for greater time intervals in interactions (for example, server timeouts, inactivity warnings).

- Avoid dividing the user's attention between multiple tasks or parts of the screen.
- And, as with anything else, test with people who are actually going to be using your product!

Business considerations of ethical design for the vulnerable

The number of lawsuits against companies whose websites are inaccessible is growing rapidly (up 181% from 2017 to 2018 in the US⁵⁰). Companies large and small are being sued because of COPPA violations.

Those are just the legal implications of why it makes sense from a business perspective to focus on ethics in design. There's also another point. People who are vulnerable also tend to be more alert and aware when their rights are being violated or when a product they use doesn't treat them well. They might be more likely to voice their opinion. And they will find alternative products that solve their needs without treating them poorly.

Children have safeguards in the shape of parents and guardians. So, even when children aren't aware that their rights are being violated, their safeguards tend to be.

⁵⁰ <https://smashed.by/dominos>

As professionals, we must also think about our track record. Ten years from now, do you want to be associated with an unethical company that violated people's privacy? Or would you rather look back and be proud of the work you did for a company whose values resonated with your own?

Chapter takeaways

Without people to use the products and services we make, there is no business. Underestimating how much positivity comes out of treating people with a fundamental respect and empathy can therefore be a critical business mistake. And because it's only for the privileged few to run a business without making money, it makes business sense to treat people with decency.

When it comes to the most vulnerable of people who we might be building products for, it's worth taking extra care and consideration. Children, people with disabilities, and older people fall within this category, and with them we have an added responsibility to be fair and respectful, and to make sure we understand the special needs they bring. For children, this includes knowing their mental models, physical and cognitive constraints, and, not least, their playful approach to things they see. For the disabled, cognition, vision, hearing, and motor control are key to understand, and for older people, many of the same areas apply.

With respect to business and success, many of the traditional methods we know can be tweaked to measure and plan for ethical design efforts. We'll explore some of them in the next chapter.

References and further reading

- AdLit full report: “Minors’ advertising literacy in relation to new advertising formats”
<https://smashed.by/adliteracy>
- *Accessibility for Everyone*, Laura Kalbag, A Book Apart
<https://smashed.by/a11yforeveryone>
- *Inclusive Components*, Heydon Pickering, Smashing Media
- A11y Project
<https://a11yproject.com>
- *Design for Kids*, Debra Levin Gelman, Rosenfeld Media



CHAPTER 4

The business of ethical design



TO MAKE POSITIVE CHANGES

on a grand scale when it comes to ethical design, the starting point is to understand that it is not about “feeling good”. It is about running a healthy business from a financial perspective, and ethical design and sound business go hand in hand.

The innovation headache

Transformation often requires innovation, and there is an innovation headache connected to the introduction of ethical design.

Changing the way you work requires people and methods to change, and not everyone is happy about changes.

If you work in an IT department, you might work with IT operations, but you don't work with innovation. Every change is, as a starting point, a challenge to the predictable operation of IT systems.

You may think the head of IT will be happy to hear about all of your ideas for new and exciting projects, but that's the conundrum. Even if your plans change everything for the better, the innovation process will disturb the current state of affairs. People obsessed with stability will say, "If it ain't broke, don't fix it."

Your IT department might be understaffed and short on resources. The IT manager is assessed on their ability to run a stable operation, provide support, reduce costs, and avoid problems. The entire department is a cost center, and if the costs are too high, outsourcing will be up for discussion at the next board meeting.

The IT department is likely to oppose ethical design, yet they have so much expertise to offer and can be a driving force during transformation.

The introduction of ethical design is, in most cases, a project that involves more than a new design and better text labels on buttons. There will be changes in data storage, encryption, security, business intelligence, and more. These changes require time, budget and know-how from the IT department.

Let's consider an example.

A connection between “transactions” and “analytics” has started to form in systems architecture and databases. It's called “translytics”. The concept is about building platforms that combine transactions and analytics in real time so that an organization can understand data immediately and react strategically and commercially to new trends and events.

Imagine you would like to prove the positive business impact of changing to ethical design. Your management team would like to see real-time data and follow conversion rates, customer loyalty, and interactions between customer service and shoppers.

Try to do that without help from your tech team. It is not a trivial task, and you would probably want to work with the nerdiest staff members to reach your goal.

They will tell you that changing the way you store and use data is a radical change to core systems, and you will have to proceed with care. Their job is to protect everything that works just fine. If changing systems can create a better future, that's fine, but their job is to keep the systems running flawlessly; so, a radical change actually sits quite opposite to their goals and disrupts their existing workflows. The people who are hired by management to be responsible for IT are unlikely to also be the innovative team that can elevate the company to the next level. You will have to respect that the team is protecting safe operations, but it will set a limit to innovation.

The IT department will be good at pointing out ethical problems in the processing of data from the point the data is created until the time it is removed. This expert team can help business teams and management understand that it's dangerous to blindly follow hunches, and show the impact that their decisions will have on privacy and the overall customer experience.

Let's say that we have an app with a loyalty program. And a customer wants to remove their data from the system. That's an easy task, right? OK, but the IT department has, of course, ensured that we have proper backups over the last ten years. Data is not totally removed because it is in all of the backups. The customer can quickly be deleted on the live server, but the system will still contain personally identifiable data in the backup files.

You cannot solve all of the tricky problems at once. Your speed of innovation will be challenged by everyday issues such as backup systems.

Predictive analytics

Predictive analytics uses an arsenal of statistical methods like data mining, predictive modelling, and machine learning to analyse current and historical data. The purpose is to predict trends and completely unexpected events.

A well-known example from the financial world is credit ratings, in which information about the loan applicant's past and current financial situation is used to decide the outcome of their loan application.

It's an ethical problem that the automation of these types of processes has become such an integral part of our society. The algorithms don't take into account any personal situations. There's no humanity. The systems that make decisions based on data can never be wiser than the data they receive. In many cases, the models are accurate – but not all of the time.

It's becoming easier and cheaper to use predictive analytics in digital projects. The price of the software is decreasing, and there are a lot of good ways to use predictions.

One example could be that we are selling things online and in physical stores, and that the current weather forecast is used in the recommendations engine. When we suggest additional products to a customer, it would probably be a good idea to suggest things that fit the current season.

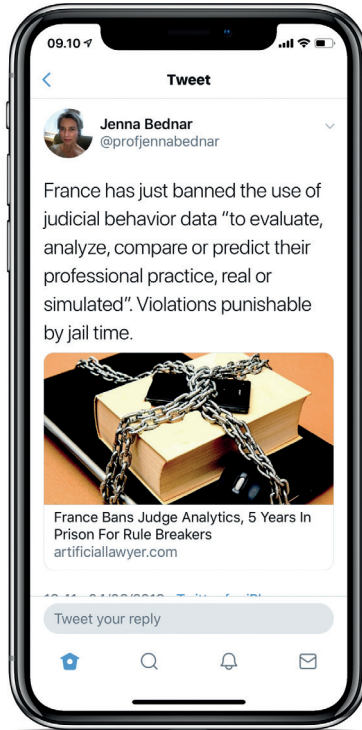
We can look at predictive analytics from several perspectives. We have harmless cases like product recommendations, and we have critical cases like the approval of a loan to buy a house.

For critical cases, it's important that the person who is exposed to the merciless algorithm has the option to ask for a manual case evaluation. In some cases, it might be unfair to get a “no” from an algorithm. The algorithm might not

be smart enough to understand the nuances of the case. Remember that we use humans to teach machine learning how to react. Think about it.

If you buy a house, and the house has an old roof, then the algorithm would assume that the roof needs to be replaced. But if it's a slate roof, it might be able to withstand 100 years.

A passage from the law: "The identity data of magistrates and members of the judiciary cannot be reused with the purpose or effect of evaluating, analyzing, comparing or predicting their actual or alleged professional practices."



The algorithm can be improved, but at least one user will experience an odd result.

Our lives are getting increasingly digitized, and data from multiple sources are being combined without our knowledge or explicit consent. This is why special attention is required when a company uses predictive analysis. Think about the dangers here. What if your insurance company is using data acquired from an external company, but the external data source is incorrect and your payment is based on incorrect data. Your insurance company then merges with your bank to the benefit of stock owners. Using predictive analysis, the bank thinks you are a high-risk customer and cancels your agreements. Your life will turn into a mess, and not a single person was involved.

In the good old days, the village grocery-store owner was the big data expert and the best at predictive analytics. He knew what everyone in the village bought, and his business was based on years-long knowledge of consumer habits and the village's inhabitants.

It's a brilliant idea to look at predictive analytics as a tool to operate a better merchant store, if you understand that you need to treat all of the confidential data with care. Just remember that customers are people, and not everything in this world can be calculated in an algorithm.

Road map planning

Change needs to be thoroughly planned, and it's also important to offer support for that change to happen.

Usually, a good recipe for a successful outcome is to involve everybody in a road map decision from the very start. Bring in business units, the innovation teams, the IT department, customer service, and other stakeholders to sit together at a table and discuss the plan.

The purpose of bringing together employees across all units is to ensure that decisions are accepted, approved, and committed to universally by all of the people who will make the plan a reality. An extra benefit is having the opportunity to discuss the transition across business units, with everyone from development to operations. “If we implement this feature, what would happen in customer service when we ship it?”

Let's take an example.

Imagine a company that works with software for the automotive industry, and it wants to increase its sales abroad. The decision to expand the existing platform with new features has been made. It could be an integration of other IT systems, new features that are expected to become the standard in the

new markets, and a redesign of the platform. The current translation mechanisms should also be improved.

The planning is done on the road map before it's applied for real.

The communication level between departments and teams is low in this organization, as in many others, which can lead to terrible mistakes. Here are a few examples:

- The business unit doesn't have time to describe its specific requests to the developers, so a lot of guesswork is done in development.
- The business unit doesn't have time to assist in the process, so new features aren't tested until the very end of the project, if ever.
- The business unit describes all of the prerequisites, but from its own frame of reference. The project contains "invisible" requirements and requests that nobody thinks of.

Nobody is doing anything out of ill will, but the project ends up taking longer and costing more than it was supposed to, all because there was never a joint time for everyone to discuss the details and create alignment across departments

This is where a general meeting about the road map comes into play.

Let's take a closer look at road map meetings.

The participants are stakeholders across the organization: management, sales, marketing, logistics, customer service, product management, development, IT management.

Quality is not created accidentally

It may not be a popular comparison, but good software development is similar in many ways to a sausage factory. If you want a consistent taste every time, then you need to work hard to make a consistent production line.

Software development is more complicated than most sausage factories because software development starts with innovation and continues into operation.

The road map meeting is a hub for the business and the developers. Here's an opportunity to discuss principal problems and find common solutions. If no joint decisions are made, then the results will be all over the map.

The seven-plus-five steps

A road map forum typically has three to four participants from the business unit and the same number from the development team.

If you normally use Scrum or another agile development method, then you'll know that there would usually be a product owner from the business unit, and a Scrum master from the developers. These two people should obviously attend. The list of other participants is up for discussion.

The point is to collect the minds who have the best insight into the strategy and details, and who can best discuss future plans together. That happens in seven-plus-five steps.

PRESENTATION OF THE PREVIOUS QUARTER

The first four points are presented by the product owner. The purpose is to show what's happened since the last meeting.

1. Presentation of releases since the previous meeting
2. Presentation of most important features
3. Feedback from the organization on releases and features
4. Feedback from customers on releases and features

Then, the Scrum master takes over the presentation. The discussion shifts from releases, features, and feedback to a brief on how the delivery is progressing.

5. Review of process improvements on the team
6. Overview of estimated time versus real time
7. Presentation of the feature that had the greatest value for the business

With this presentation from the product owner and the Scrum master, the participants now have an overview of the situation. They know what was delivered in the past three months and how that went. This is where quality comes into play. If you don't have a proper understanding of how projects were done, you can't make smart decisions for the future.

PRESENTATION OF THE NEXT QUARTER

In a lot of projects, people might be too busy to look into the past. Being too busy is a problem, because future projects are built on past versions and lessons from past mistakes. Maybe a team decided to skip a few steps to reach a deadline, or maybe the project has expanded over time.

A road map forum is a place where everyone can get a look into what is actually happening. If the reporting has been

done right, there will be release notes for projects and approval by the project's release manager.

Assuming you follow a set of ethical guidelines, the road map meeting also offers an opportunity to verify that the projects are on track. And if they're not, then you'll be able to compose a list of known challenges to prioritize in the road map.

The meeting can now continue with the product owner's presentation of the upcoming period:

8. Presentation of themes for the next period
9. Review of business cases
10. Presentation of decisions from the product owner for approval
11. Estimates of the most important activities
12. Approval of the current quarter's road map

That's more or less everything you need. The road map forum is a simple process that can be of great assistance when multiple projects are planned across the organization. Anyone who has tried to get the business unit to actively collaborate with one or more development teams knows that many cultural differences and problems stand in the way of good communication.

So, where exactly does ethical design fit in this picture?

Ethical design requires a space in the development process. A road map meeting is a high-level discussion about strategy and execution, to the benefit of the business.

It is not a meeting where test quality, legal issues, ethical design, or similar topics are discussed, unless, of course, something is broken and needs a new direction.

The bigger picture

Let's say that we are selling milk and butter, and our products are sold through many channels and in several countries. Marketing is important, and we have company websites, products, field offices, campaign websites, and sometimes a concept for an app designed by the marketing department.

At the same time, we've established ethical guidelines for the collection of data and how we store it. We've established guidelines for the product's lifetime cycle.

In large projects, it's extremely hard to ensure that policies are correctly followed at all times. It requires education of

teams, good planning of projects, continual random checks, and tests at each release. We won't know whether our ethical rules are being followed if we don't check.

What we do know for sure is that we are accountable both in the media and in the court system. On social media, we will also be held accountable for what the world around us thinks and feels about our behavior, regardless of whether it's a judicial problem.

It's completely fair that we're expected to follow the rules and even exceed customers' expectations, which is exactly the reason why our effort must be systematized.

It's time to listen carefully. Let's say our budget is 1,000 hours to develop some new projects. If we attend a road map meeting and see data on how we've spent our time, we will see an empirical value. Maybe 500 of the hours have been used for the new projects. Nothing more. 500 hours would be a good number.

So, what have the remaining 500 hours been used for? The impatient CEO might say that the time is being wasted and we need to speed up development. The CEO is most likely not right this time.

The experienced IT project manager would know that the time is being well spent. It's used, among other things, for:

- collaboration between the business unit and teams on upcoming projects;
- requirement specifications for upcoming projects;
- review of multiple systems in several interconnected projects (one might think that all projects are just small islands in a large ocean, but a lot of projects are based on a common infrastructure that needs constant updates, preparations, and adjustments);
- improvements of common infrastructure based on the review (see above);
- testing across interconnected systems;
- release notes and systems documentation;
- hotfixes;
- operational tasks.

If the 1,000 hours are not spread out so that there's space for 500 hours of new development and 500 hours for maintenance to ensure that systems keep their top quality, then the projects will slowly fall apart.

Imagine that your 22 projects are small sandcastles by the coast, and the waves are approaching. It's a fairly accurate representation. You will have to use 50% of the time to maintain the parts of the castles that are already built, and you will never be able to spend all of your time only building new ones.

It's not a rule that can be bent. The more code that is written, the more time will be needed for maintenance in the coming years.

The empirical value for 1,000 hours could be 600 hours of new development and 400 hours of continual projects and maintenance. It could also be the opposite. If you start claiming that you can dedicate 750 out of the 1,000 hours to new development, then the authors of this book will call your bluff. We simply don't believe it's a sustainable plan.

Return on investment for ethical design

How do you measure the effect of something as vague as ethical design? Unfortunately, it's not like money simply falls into the cash register because you are behaving properly.

In some circles, there's the idea that you become more successful either by being in the gray zone of the morally justifiable or, even better, by being completely in the dark. There are several factors determining why that will become less and less true.

Factor 1: Transparency

Modern consumers are increasingly becoming accustomed to transparency. We can compare prices before making a purchase online. All of the information about a product or service can be compared with other options. It's radically different from 25 years ago. Back then, you had no choice but to follow a shop's advice when buying a washing machine.

Today, consumers are doing research online before they buy. In many cases, the consumer is more of an expert on the product than the seller is, and consumers have become accustomed to looking for shipping costs and hidden fees. Online trading has created a generation of critical consumers who might go to the next store if a shipping cost is added to the price just before the last click.

The modern, critical and demanding consumer also requires transparency in all other contexts. Because there is a remarkable choice of brands and products these days,

loyalty to a brand will increase if customers can develop a sense of trust and an emotional relationship, built on the principles, values, and philosophy of the brand. And if a brand ends up with bad press — because it treats its employees badly or damages the environment — recovering from it will be expensive, financially and ethically.

So, whether you are selling B2B or making an app of food recipes, you might as well adjust to being transparent from start to finish.

Factor 2: Traceability

Let's turn back time by 15 years and imagine ourselves selling old lamps at a flea market. We possibly exaggerate a little when we sell one of the slightly broken lamps to Mrs. Jones. When Mrs. Jones gets home with the lamp, she doesn't have the contact information of the person who sold her the lamp, and so she never comes back to make a complaint.

Today, sellers in flea markets use mobile payment solutions, and Mrs. Jones knows who received her money. So, she will come back to complain about her broken lamp.

When we remove an analogue process and introduce a digital one, a side effect is that everything can be traced digitally.

That also means that dismissing a poor review has become much more difficult. If the consumer's complaint is fair, then the digital trace will often mean that the case will end up in favor of the customer.

One example is the shitstorms on social media in which a company tries to dismiss a sequence of events. Their explanation doesn't fly well when the consumer uploads screenshots of their correspondence with customer support afterwards.

It would have been much easier to dismiss if the conversation was between two people in a store, but we're living in a different time now.

Factor 3: Simplicity

If you want to be transparent to users, then you have to explain what you have designed. It can be difficult to explain a complicated concept, and a focus on ethical design often means that there will also be a focus on simplification. A simpler solution will often be better, and it certainly will be easier to explain.

The modern consumer is increasingly skeptical. A complicated system will in itself give a poorer user experience. We know this from e-commerce. In fact, research from Baymard Institute

indicates that in 26% of cases where an online purchase is abandoned, it's because of an overly complicated checkout process.⁵³

If our conversion rate is 2.2%, and we want to raise it to 2.5%, the first step is usually to simplify. If there are fewer clicks from start to finish during checkout, the conversion rate will most likely increase.

But don't take our word for it. Run a split test, and learn what works for you. Our experience is that a clean-up of the checkout flow increases the conversion. We have never seen the reverse trend.

A better overview of shipping costs and the return policy is also good. It's hardly useful to lower the price, because if the customer has already put items in their basket, then the price was not the obstacle.

We're now at the core of measuring the return on investment (ROI) for ethical design. It's about finding a relevant way to measure, and the relevant way is different from project to project.

Below, you'll find an example of a model. You will always have to make your own.

53 <https://smashed.by/cartabandonment>

EXAMPLE: RETURN ON INVESTMENT FOR E-COMMERCE

Activity	Development Cost (USD)	Effect (USD)	Return on Investment
Better onboarding of new customers	12,000	19,000	58.3%
Information on return policy	2,000	17,000	750.0%
Better product information	10,000	15,000	50.0%
Higher visibility of shipping costs	12,000	13,000	8.3%
Data security	8,000	0	-100.0%
Securing sensitive data	16,000	0	-100.0%
Information to users on security	2,000	11,000	450.0%
Option to be an anonymous user	11,000	26,000	136.4%

Let's go through the first row in the table to explain the calculation. We can see that improving the onboarding process will cost \$12,000 in development, but in return, we expect an effect with a total of \$19,000. The difference (\$7,000) is the ROI, which translates to 58.3%.

You can use the model before and after implementation. The "before" version is the estimated effect, and the "after" version is the actual result. The combination will improve your understanding of empirical values for your project.

You might be wondering why data security returns a negative ROI. Why should we spend extra money on data security if it doesn't have a positive effect on sales? Well, you have to do that because nothing is more important than data security, of course. Without a credible security level, customers cannot feel safe when buying, and they simply won't. It's to be considered an operational expense — a prerequisite of successful operations. The cost of data security will not increase sales, but the cost of weak data security will, over time, be much higher.

If you're not convinced that improving on the ethics and user experience scale is good for ROI, consider that Baymard Institute, which conducts large-scale e-commerce UX research, did a large study to find out why people abandon a purchase during checkout.⁵⁴

It turns out that the main thing people want when they buy stuff is to know the total cost of purchase. They want the total price, and they want it early. 21% of people who took the survey (over 2,500 respondents) said they had abandoned a purchase during checkout within the past three months because they couldn't see or calculate their order's total cost up front. That's a pretty high number!

So, we can conclude that by doing the right thing from an ethical and UX perspective and surfacing shipping costs

⁵⁴ <https://smashed.by/cartabandonment>

and other charges early rather than late, it's possible to significantly improve the ROI.

Oh, and if you're still not convinced: 34% of people who took the survey said they had abandoned a purchase within the past three months because the website asked them to create an account. Having to create an account causes friction. It's a barrier. And barriers are bad for conversion.

Loyalty

Access to buying anything from anywhere has changed consumer loyalty. Brand loyalty has changed, and some consumers are loyal only to price. If they can get the product from someone else at a lower price, they'll switch.

If you purchase online, you'll know this makes sense. Whether you click "Buy" on the website with the blue logo or on the website with the red logo makes little difference.

One of the things that does make a difference when you purchase online is your trust of the website. That's why we have trust indicators. A trust indicator is anything that enhances the feeling of being in safe hands when shopping. It could be the company logo, but it could also be icons for credit cards accepted, a security badge, certifications, information about the return policy, and easy access to customer service.

It doesn't matter whether your website or app has anything to do with e-commerce. It's still a great idea to consider how its look and feel can communicate trust to the user. Find the way that works for your audience, and it might be a good idea to ask your users how trust can be enhanced.

The Kano model,⁵⁵ invented by Noriaki Kano, is a theory of product development and customer satisfaction. The basic idea is to differentiate needs and to distinguish between expected quality, desired quality, and delighters.

If I buy a new car, it will not impress me much that you offer four wheels and an engine. There was a time in history when that was impressive (especially the engine part), but that was some time ago.

The target is continually moving, and you might remember the first time you experienced the "type ahead" feature in a search on Google. What a feeling. Instead of typing the entire search string, a magic dropdown appeared to do the job for you.

The next day, 99% of the internet felt old-fashioned. We all needed type ahead on our websites. The feature moved from the level of exciting to expected.

When you design and ship software, it's wise to set up the road map so that the first version covers the basic features.

⁵⁵ <https://smashed.by/kano>

It will not make anyone happy, but you will be able to ship a useful version, and it will serve as a proof of concept.

It takes a while to move from a basic version to a product that will delight users. While you develop, the exciting features will become expected. The expected features of today will not meet customers' minimum expectations next year.

This might not be difficult to understand, but the planning is complicated. If you work with a sales team, they will be highly committed to any feature that will help them sell more tomorrow. Suggesting a feature that would be useful next year might be considered irrelevant.

Introducing ethical design in a software project may not be critical today, but it takes time to implement. Being ethical and transparent might not be an expected feature today, but for more and more users, it is exciting to come across brands that are just that. However, this will not last. It will soon move from "something that excites" to "something expected".

Openness

There could be a number of good reasons to share knowledge about the platform you're working on. Obviously, there are business secrets that have to be protected, but this doesn't preclude a strategy that includes openness.

Let's imagine we're building a booking platform for summer house rentals, and our business model combines direct rentals from our own platform with those of an affiliate partner program. On the one side, we have the summer houses that we're renting out. On the other side, we have a set of affiliate partners who have their own platforms. An affiliate gets a commission when a house from our system is booked via their platform.

We could decide to be open with affiliates by giving them the opportunity to check that our system calculates the correct commission.

There are several ways to do this. A radical approach would be simply to show the commission algorithm to the affiliates. Maybe their head of IT or finances is personally interested in testing the accuracy of the algorithm.

Is this business-critical? Hardly. If a contract between us and our affiliates has been written, we've already told them how the commission is calculated, so the algorithm itself is merely an opportunity for them to look over our shoulder. This should not cause concern (and if it does, then we have much bigger problems on our hands).

Sometimes it's tricky and confusing to define what makes something a business secret. It is often the special features, the

way we mix technology with manual processes, and, of course, business intelligence that are defined as business secrets.

An algorithm is rarely a business secret.

Let's take it a step further and decide to also share business intelligence with our affiliates. It would be wrong to uncritically share our data with others, but it could be relevant to offer all affiliates insight into their benchmarks against the other affiliates.

Naturally, this has to take place in a way so that no affiliates are identifiable, but openness would help affiliates understand how they can improve. This approach to sharing intelligence nurtures a network that helps each one grow.

In doing so, this openness is used to strengthen trust as well as results.

Measuring ROI of ethics

Once you've established a model of measurement, so that you know what to measure by, it's time to actually start measuring. And just as with any other test, it's crucial that you don't test a lot of things at once, because that makes it nearly impossible to identify which factor sparked the change in conversion or whatever data point is measured.

Instead, make one change at a time. If we continue our example of the ROI for e-commerce, we could focus on developing “better onboarding”. Next, we would establish the benchmark key performance indicator (KPI), which could be churn. We now need to establish a baseline, which could be December of last year. We then develop and ship the improved onboarding, and measure through December of this year to figure out whether our improved onboarding did in fact improve the retention rate.

The reason why it’s important to benchmark against the same period of time is to account for periodical differences.

Key performance indicators

Some will say that ethical design will lower the conversion rate, the basket size, the daily use of an app, or the business value you get from the data you collect. Others will say that development costs are going up.

You can measure what you do to see whether the critics are right or wrong. It’s not complicated or time-consuming. You need to consider why you want to measure and, of course, find the metrics that make the most sense for your project.

A KPI is a performance measurement often used to measure the success of an organization or a particular activity, such as a software project.

A standard method is to set a target for a metric, and then measure monthly compared to the target value.

It might look like this:

Basket Size		
Target	June	July
\$90	\$85 (-5.6%)	92 (+2.2%)

If you're in charge of the e-commerce project, you might divide your KPIs into categories such as brand awareness, customers, acquisition, conversion, retention, and logistics. In the conversion category, the metrics could be conversion rate, basket size, basket abandonment rate, return on advertising spend, percentage of sales from newsletters, and so forth.

The purpose of the KPIs is the first thing to consider. Why are we measuring, who will use the performance measurement, and how will decisions be made based on the data? A sales director will need a different dataset than a product manager. It all boils down to taking a look at existing KPIs in the company and considering how ethics data can improve the current dataset.

What you measure is what you get

As is the case with measuring on data points, what you measure is what you get. And what you don't measure, you don't get.

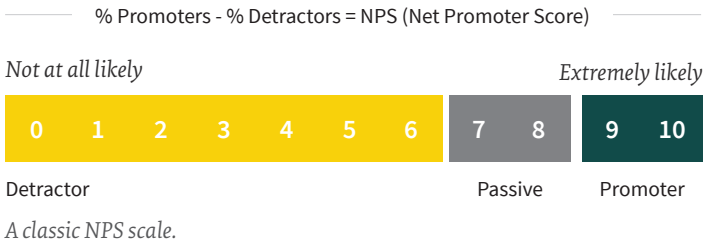
The net promoter score (NPS) is a good example. NPS is a popular metric to measure customer experience. It's also often used as a KPI.

It's a very simple setup. One question is asked and sometimes, but not always, followed up by a request to elaborate on the answer. The question could be:

On a scale from 0 to 10, how likely are you to recommend [this brand] to a friend or colleague?

And the follow-up would go:

Please explain your reason for giving this score.



Here's how NPS works: 0 to 6 are labeled *detractors*, or unhappy customers; 7 to 8 are so-called *passives*; and 9 to 10 are the *promoters*. The promoters are the only ones who count.

The NPS is calculated by subtracting the percentage of detractors from the percentage of promoters. The NPS itself is an absolute number, not a percentage, and a positive NPS (anything above zero) is considered good.

The problem is that it's a vanity metric, which is a metric intended to make you look good to others. It doesn't do much else.

It was designed to allow organizations to benchmark themselves against competitors. But owing to the extreme simplicity of the metric, it's impossible to understand which parameters to benchmark on, or to identify just how unhappy someone is with your product. The NPS makes no distinction between a zero score and a 6 score. Both are labeled as negative.

The way the NPS is calculated is not logical. For instance, you can reach the same +20 NPS by having 50% promoters and 30% detractors as by having 20% promoters and 0% detractors. The NPS is the same, but in scenario A, your brand has 30% unhappy customers, whereas scenario B has zero unhappy customers. NPS doesn't reflect that, and in not doing so, valuable insight is lost. What you measure is what you get.

Also, it measures people's intentions, not their actual behavior. We all know how much difference there can be. For instance, we could say, "I have every intention of starting that 'From Couch to 5K' running program this weekend". Come Saturday: "Oh no, my procrastination list has so many items on it. I couldn't possibly find time for a run!"

An intention doesn't say much about our actual, future behavior.

Finally, it can be manipulated very easily. If you've ever come across a rating system in a retail store, it's likely that you've participated in an NPS survey. But a retail store rating system is hardly ever made of 11 options. It often has 4 options: one red, one yellow, one light green, and one bright green.

Do you know which score you've given when you hit that light-green button for that average experience? Neither do we,

but chances are that it translates to a 9. Visual tricks like color indicating mood or score work every time. And, in all honesty, not all products are suitable to be measured with a NPS.

Not all products are suitable to be measured with a net promoter score (NPS)



A more nuanced way to measure would be to look at things like number of support calls, types of support calls, positive and negative social media mentions, returning customer rate, and retention. There are more metrics that make sense for customer satisfaction, but these are some to get started with.

Measuring happiness

There are many theories on how to measure customer success. Some companies measure how many phone calls one support person can pick up per hour, and success is defined by how quickly a call can be finalized. It's all about efficiency.

Other companies have realized that the longer the support person speaks to a customer on the phone or emails back and forth, the happier the customer becomes, and the more the company sells. This can be a good philosophy (when used ethically!) in companies that have a complicated buying process, like in B2B situations, but we've also seen this approach taken in B2C with success.

The key here is to understand that slowing down can be a good thing, because it enables a company to establish a relationship with its customers. In turn, customers feel more loyal to the company, and the really great bonus is that the company and its employees will start to grow that sense of loyalty to its customers as well. Empathy towards customers

will grow, and valuable insights into their experiences, pains, and happy moments will surface — and once this type of positive feedback loop is established, everybody wins.

When the only metric used to measure customer satisfaction is the NPS, it's impossible to find out whether a change in philosophy could potentially improve customer satisfaction.

The Ethical Design Scorecard

In the following section, you will find a systematic approach to assessing the ethical level of products, businesses, and practices. The ethical design scorecard comprises a variety of categorized assessment criteria, which have all been assigned a specific weight according to their impact on ethics.

The scorecard is not just a holistic tool. It's a tool designed to surface exactly where a product or business does well from an ethical standpoint, and to reveal where improvements can be made.

The scorecard is available for download at ethicaldesignhandbook.com

Data collection

	1-5 Evaluation	0-100 Weighting	E × W Score
Data transfer from the user's platform uses a secure connection.	1	100	100
Communication between internal IT systems uses a secure connection.	1	100	100
Only necessary data is collected. The purpose is to collect only what we need and avoid the cost and legal risk of storing excess data for no reason.	1	90	90
The amount of data collected about users is not a KPI. We do not want to benchmark staff members to encourage data collection without a specific purpose.	1	60	60
Users are not encouraged to submit information about other users.	1	70	70
It is easy for users to see if information is stored on their own device or on a server.	1	80	80
When asking for information from users it is explicitly explained what information is needed to avoid irrelevant or unwanted information.	1	80	80
There is a plan for the use of collected data once its primary purpose has been met.	1	60	60
There is a test process to verify correct data collection.	1	100	100
Actual score (highest possible score: 3,700)			740
Test result quotient			20

Data storage

	1-5 Evaluation	0-100 Weighting	E × W Score
Data is stored in a secure location.	1	100	100
Backups are encrypted.	1	100	100
Access to stored data is limited to a minimum of staff.	1	80	80
There are strong requirements for decryption of backups.	1	90	90
In case of a security compromise, data in the database is hashed .	1	90	90
There is a process for testing the security of the server and the network (penetration test).	1	100	100
In the case of multiple profiles on one account, user profiles are uniquely identifiable.	1	50	50
When a user deletes their data via the front end, the data is also deleted from all backup files.	1	100	100
No third parties (such as a cloud service) have access to our users' data. Admin rights to the database are never placed at the cloud service.	1	100	100
There is a test process to verify correct data storage.	1	100	100
Actual score (highest possible score: 4,150)			830
Test result quotient			20

Data processing

	1-5 Evaluation	0-100 Weighting	E x W Score
It is possible – and easy – for users to have their data deleted.	1	100	100
Users can delete their own data using a login.	1	100	100
Revision of old data is a recurring process.	1	80	80
There is no backdoor for developers to view the user's sensitive data.	1	100	100
Entire datasets are never submitted to partners – only aggregated data.	1	80	80
Selected parts of the codebase are released as open source APIs to help the community and to establish ourselves as a valid and skilled company.	1	30	30
There is a test process to verify correct data processing.	1	100	100
Actual score (highest possible score: 2,950)			590
Test result quotient			20

Communication

1-5 Evaluation 0-100 Weighting E x W Score

It is clearly communicated what user data is being collected.	1	100	100
Users can opt in to provide additional information.	1	80	80
Our cookie consent prompts meet best practices (see the section about cookie consent prompts).	1	80	80
We have a plan of action in case we have to deliver extraordinarily bad news to our customers.	1	80	80
Our terms and conditions are written in plain and clear language.	1	100	100
Cost of move is kept to the lowest level possible.	1	50	50
All written communication on the website/app is written in clear and simple language to conform to accessibility and usability standards.	1	100	100
System feedback and feedforward is implemented across our product.	1	60	60
We make it easy for users to give us feedback on our product and service.	1	80	80
There is a test process to verify correct communication with users.	1	100	100

Actual score (highest possible score: 4,150)	830
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Test result quotient	20
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Governance

	1-5 Evaluation	0-100 Weighting	E x W Score
A governance model is in place and enforced.	1	100	100
Rapid implementation is not favored over high quality.	1	80	80
Projects follow internal standards for ethical governance.	1	80	80
Touchpoints with users are tested to comply with the governance model.	1	60	60
There's a person responsible for ethical governance in the team.	1	60	60
The governance model includes standards for the correct handling of user feedback to ensure that our users are heard, and heard by the right people in the organization.	1	60	60
The governance model includes standards for ensuring that our front facing staff (support, etc.) have a mandate to act on user feedback.	1	40	40
The governance model includes a procedure for handling user feedback.	1	40	40
We don't just follow the law, we also act reasonably and honestly. Even if the law doesn't require us to do so.	1	100	100
The governance model is reviewed annually.	1	100	100
Actual score (highest possible score: 3,600)			720
Test result quotient			20

Business

	1-5 Evaluation	0-100 Weighting	E x W Score
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Data is not sold to third parties unless users explicitly allow it.

1	150	150
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Data ethics is a part of the standard business case.

1	80	80
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In an ad-based business model, we communicate to users what advertisers receive (ad space or also data).

1	100	100
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In a subscription-based business model, we communicate to users what the subscription implies, its terms, and how to cancel.

1	100	100
---	-----	-----

Our business case is not built upon intentionally making money on passive user behavior (such as focusing on deliberately making money off of users who forget to cancel a subscription).

1	100	100
---	-----	-----

We have full visibility on the third-party cookies we use.

1	80	80
---	----	----

Actual score (highest possible score: 3,050)

610

Test result quotient

20

UX/UI

1-5
Evaluation

0-100
Weighting

E x W
Score

We test our product regularly to identify dark patterns.	1	80	80
We proactively remove any dark pattern that we identify.	1	80	80
We proactively opt out of using manipulative/persuasive design methods.	1	100	100
We have an established process for testing all UX copy before release.	1	70	70
We aggregate notifications where possible to reduce frequency.	1	50	50
Every notification has a user value connected to it.	1	50	50
Accessibility: alternative texts are provided for all images on the website.	1	50	50
Accessibility: contrast between background and text color is at least 4.5:1.	1	50	50
Accessibility: our website/app is readable by a screen reader.	1	50	50

Actual score (highest possible score: 2,900)

580

Test result quotient

20

KPIs to measure ethical design

The ethical scorecard for digital teams is a balanced scorecard designed to fill in the gaps.

You can use the scorecard to benchmark what you do. It offers a detailed evaluation of a platform, divided into categories such as data collection, data storage, communication, governance, and user involvement.

The aggregated benchmark result from the balanced scorecard can be used for KPIs. Focus on what is essential for the project or the business.

There is a distinction between KPIs that show a past trend and those that will help us understand the future.

Sales figures can tell us how we performed in the past, but they won't help us with future development, other than maybe showing a trend. Sales figures can vary because of the weather, a campaign, what the competition is offering, or something else entirely.

A KPI like customer satisfaction, on the other hand, is predictive. It tells us the current state of things, and besides, it can help us estimate future sales.

The two most important ethical KPIs to monitor could be:

- how we perform in data collection, security, and compliance with GDPR and similar rules;
- user satisfaction and retention.

However, there are no rules, and it doesn't make sense to treat all projects alike. Measure what feels right to improve decision-making at a high level.

Chapter takeaways

Throughout this chapter, we've shown how it is, in fact, possible to plan for and measure the impact of ethical design. After all, that's what we need to do in order to run a sound, sensible business. Bringing everyone into a project with road map planning is a great way to introduce transparency, and this is a good path towards ethical design.

Consumers of today are increasingly used to transparency, and with the added traceability that has come along with the digitalization of society, it's wise from a business perspective to stay on the right side of what is considered acceptable and ethical. Add simplicity to the mix, and the result will usually be a success.

Building ethically designed products doesn't require abandoning KPIs or ROI measurements — quite the opposite, actually. The important thing is to measure the right things, and that's the major difference from the way we traditionally measure and track success.

To understand where we do well and where we have room for improvement, we have created the ethical design scorecard. It's a practical method to evaluate all factors that influence a company's ethical design score. The KPIs in the scorecard can be used as a total or as individual metrics depending on the purpose of measurement.

In the next chapter, we will concentrate on another practical aspect of ethical design: a set of best practices for designing ethics first.

LINGsCARS is ethical design. Honest.

If you haven't heard of lingscars.com, now is the right moment to take a break and visit the website.

Think what you will of the user interface – LINGsCARS is big business. But that's not why we asked Ling to write a case study for this book. We did so because LINGsCARS is an example of a company that runs on a core of fundamental fairness and respect for everyone involved. Its products and services are developed with the same values in mind. Ethical design at its best.

By **Ling Valentine**, CEO of LINGsCARS

When I started LINGsCARS back in the early 2000s, ethics weren't on my mind.

I lease new cars in the UK, and the problem with new cars is that, although the value of a car is very high, the margins are small. It's a recipe for ignoring ethics and maximizing profits, because you just can't give any of the small margin away.

Making the decision to be the best, ethically, was hard. Most franchised car dealers are very hard-nosed, and owing to

years of ingrained competitive practices, they are very reluctant to give the customer an inch when things go wrong and the car buyer gets upset with the way they have been treated.

Even today, there is an attitude of “the customer is always wrong” in the car industry. Yet, a lot of things can go wrong with a new car purchase.

One of my biggest problems is the new-car supply chain. The franchised car dealers so often overpromise when cars are being ordered. The car manufacturers have very poor systems for guaranteeing that a new car ordered at the factory will be built on time or arrive at the dealer on a certain date. Usually, an element of guesswork is involved, and so many things can go wrong in the pipeline. Car part shortages, factory delays, car legislation changes, model year changes, strikes, transportation delays, weather when shipping the cars by sea, congestion at the ports, even lorry driver hours, and car damage en route — all these make it very hard to keep a customer happy. I can’t just ring Stuttgart and demand that Mercedes build the car faster.

A car purchase is a very emotional thing for most customers. It’s a big decision, and once made, people usually want their car now. And then there are long lead times (often months for

most new cars), giving a big opportunity for buyer remorse to set in and a lot of time after placing the order for customers to research the car and the deal and to find a more recent, slightly cheaper offer or a more attractive deal or even a different car that looks more appealing to them. Some changes can be accommodated, some can't. If a car has been built, I can't magically add a sunroof to it or change the color.

To get orders, the franchised car dealers are often overly optimistic (and often lie) about potential car delivery times, and customers experience frustration and disappointment when their car appears a month later than they were promised when placing the order.

All of this makes it very difficult to manage customer expectations — and keep customers happy. And of course, not every customer is an angel.

I soon realized that brutal honesty was needed when talking to new car buyers, which isn't the normal approach to ethics and corporate standards.

I also found that this approach made me quite a few enemies in the new car trade. After all, you are supposed to use only "positive" words and phrases. For instance, you should

say “roadside assistance”, not “car breakdown service”. God forbid that anyone should tell the truth that cars can break down. You are not supposed to say, “Don’t buy an Alfa Romeo unless you can take a joke”.

To this day, so many car finance companies and car dealers won’t deal with me because I don’t meet their “corporate ethics” (which boil down to a constant attempt to pretend that the world is rosy and that their cars are shiny and perfect). But, look at what Volkswagen did with the emissions scandal. “Shhh, don’t mention it” is the official line. Only last year, I was told that I didn’t meet The Co-operative Bank’s ethical standards. People will remember that this was a UK bank that had a chief executive dubbed the “Crystal Methodist” because of his drug use, who also used his work email account to send and receive “sexually explicit and otherwise inappropriate messages, and to discuss illegal drugs”, the Financial Conduct Authority found. He didn’t know what a balance sheet was when questioned by Members of Parliament, and he oversaw The Co-operative Bank’s near collapse after it revealed a £1.5 billion black hole in its accounts in 2013. And I was told in 2018 that I didn’t meet The Co-operative Bank’s “ethical standards”, over a joke image of a shipping container labeled “Ling’s staff transport” on my anti-slavery statement web page.⁵⁶ Christ, I must be bad!

⁵⁶ <https://smashed.by/antislavery>

So, out of frustration, I developed a style that made hard points to customers when necessary – and it is often necessary – but that was softened slightly in the approach with humor.

I made my website fun. I often used animals, videos, and various adult fun scenarios to explain difficult points to customers, points that needed to be made, often stating the bloody obvious, like “I am Chinese, not Catholic – I can’t do miracles”.



Ling aims for a fun website that communicates difficult points to customers through humour.

On delivery of a new car, I give my customers a car safety card,⁵⁷ like the ones you find on a Boeing 737. Instead of

⁵⁷ <https://smashed.by/safetycard>

the patronizing “duty of care” advice that treats people like children, I rip the piss out of it.

I created 68 FAQ videos⁵⁸ that feature flight attendants explaining various scenarios customers might come across and common questions they might ask.

Sick of the false reviews posted by other car lease suppliers on Trustpilot, I send a brutally honest survey to every customer, and I now have over 5,800 survey replies posted in complete honesty on my “TrustPirate” page.⁵⁹

I made a mosaic out of my customers’ driving license pictures,⁶⁰ GDPR be damned, and on the same page, I plonked a Google map of the UK with pins showing customer locations. The poor map is just covered in pins — you can’t see the UK underneath them.

Just adding and adding stuff like this to my website made it very busy, but I don’t care. In fact, I like it because, really, it’s about customers, not cars. It’s important to note that many people are put off by my website, but I view that as a good thing. My reasoning is that those are the customers who don’t quite understand my mindset, and I’d rather filter them out early on than go through a whole world of pain later by trying to explain why I can’t work magic.

58 <https://smashed.by/lingsfaq>

59 <https://smashed.by/trustpirate>

60 <https://smashed.by/lingscustomers>

Most importantly, after early mistakes of using the telephone to do business, I made sure that all customer communication is fully transcribed in “LINGO”, my custom-built customer relationship management software, where three-sided conversations (me, the customer, and the dealer) are recorded with date stamps, so no one can ever misinterpret or deny anything they have said. Deletions are not allowed. This has solved many issues; it’s the best magic bullet I’ve ever fired. Customers love it. I love it.

But not all customers are always happy. Some just have unreasonable demands or expectations. Stop pretending that all customers are angels. Just this week, I saw a customer who (in 2015) wanted rear parking sensors on an Audi A1. So, after they had paid for them, I arranged for fitment at their local Audi dealer. The customer “forgot” to have them fitted, even after numerous reminders, and this week when they came to hand the car back, they demanded a refund for “the parking sensors they never had”. They posted a bad Facebook review.⁶¹ Hmm, how to deal with that? I simply published the whole transcript from LINGO verbatim, as images, in a Facebook post, which got over 100 likes and comments in my support, none against me, and the bad review came down pretty sharp-ish.

⁶¹ <https://smashed.by/lingsfb>

I'd describe my ethics as honesty wrapped in a boxing glove.

Often, making tough ethical decisions means a short-term loss of profit, but I always hope that it pays off in the long run (it doesn't always). I fight for the customer when they deserve it. For example, I saved a Kia Stinger customer £3,287 in payments when Kia dropped the price just before delivery.⁶² I fight for big sweeteners for customers when disaster strikes (for example, when a car arrives in the wrong color). But I am unafraid to explain what is reasonable and what is unreasonable about customer expectations.

I think what it all boils down to is treating people like adults, not idiots.

⁶² <https://smashed.by/lingskia>



CHAPTER 5

Ethical design best practices



WE DON'T HAVE TO REINVENT

the wheel every time we are trying to build an ethical website or application. We can learn from other people who have learned their lessons the hard way, and we can build on top of existing patterns and practices to make a positive change. In this chapter, we'll cover a few practices that will help you to navigate towards a more ethical and respectful direction for your product or business.

Mind the mental model

One way to ensure that people will understand what your thing does (whether it's an app or a website) is by understanding the mental model with which they make sense of it.

A mental model is defined by Don Norman as “what the user believes about the system at hand”.⁶³

To elaborate, a mental model is a model constructed in a person's mind about how a system works. Mental models are shaped by how the system looks, reacts, and responds, but also very much so by the person's previous experience with similar systems.

Mental models are individual, meaning that two people can have different perceptions of how a particular thing works.

So, when someone hops on a bike, they expect it to work in a certain way, assuming they've ridden a bike or seen someone else ride a bike before. This has shaped their mental model of how a bike works. They can control the speed through the pedals and the direction through the handlebars, and they can make it stop moving by using the brakes.

⁶³ <https://smashed.by/mentalmodels>

If a bike designer decided to “innovate” and, for instance, make the handlebar turn the bike in the opposite direction, so that left is suddenly right and right is left, we can guess what would happen, all because there is now a discrepancy between the mental model of the designer and the user.

There are a number of ways in which we can come to understand someone’s mental model of a system.

Design patterns

Design patterns are specific solutions to specific problems. They have grown from the practice and problem-solving of numerous professionals. Usually, they are considered good practices.

User research

Sometimes, design patterns aren’t enough. It’s important to understand the people who are going to use the product we’re building, which means we have to talk to them, observe them, and understand their context of use.

Looking at a lot of examples of the feature we’re building

Because mental models are shaped not just by how the system at hand looks, reacts, and responds, but also by the

user's past experiences, it's worth spending time researching what else is out there.

If you're building a checkout flow, look at a wide set of checkout flows to get a sense of what the mental model of a checkout flow might look like. This will make it a whole lot easier to design a checkout flow that actually resonates and matches the mental models of your users.

Trustworthy design

Let's be clear. Persuasive design is widely used because it works. But that doesn't mean it's the best option. Most of us eat sugar, too, even though it's not healthy.

If you are capable of making people trust you because the way you run your business is ethics first, then you won't need that second step where you make people feel like they have to rush in order not to miss out.

To improve on the ethical scale by reducing the use of persuasive techniques, you have to establish trust. It's absolutely viable to use the same mechanisms as the ones listed in the chapter about the problems connected to persuasive design, but it's important to get them right.

Trust comes by establishing authority, expertise, and popularity. You can add continuity, consistency, recommendation, a deep emotional connection with the customer, and more to the list if you want to.

Authority

If you have some sort of stamp of authentication, by all means, use it. It could be a seal for the Children's Online Privacy Protection Act (COPPA), which indicates that your product is COPPA-compliant.

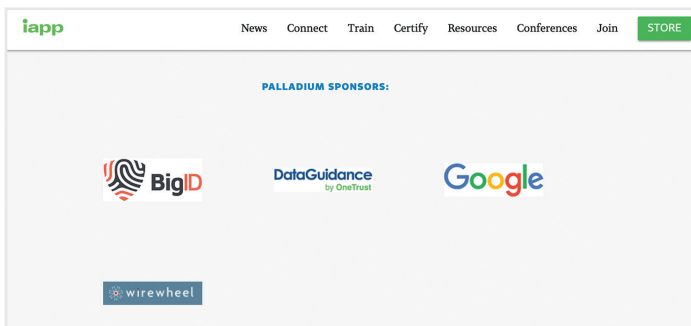
Think about how you demonstrate authority. Test the outcome. In one project, we added a rating from Trustpilot to a website. The customer rating was great for that particular website. Adding a small banner lowered the conversion rate, whereas a large banner led to a significant increase.

It can be valuable to link to any trustworthy company or large-scale organization that uses your product. Or, as with the case of Siteimprove, showcase the membership of a range of established foundations and programs.



Authority can be established by surfacing good collaborators.

Authority can also be communicated by showing collaboration partners. We often see websites showcasing their biggest clients and partners, which works well. Just be careful that you don't end up in the wrong company. We've seen several examples in which people who are worried about privacy would not support companies that had a Google or Facebook logo in their partners section.



Global Privacy Summit's sponsors section surfaces some problematic collaborators if you are concerned about privacy.

A well-written, thoughtful FAQ section works wonders to establish trust. However, it takes some work to create a good FAQ.

First off, it has to actually answer frequently asked questions, not just all questions.

This requires a dive into the statistics of the current FAQ section, alongside a thorough analysis of all support entries (including phone and email support entries).

Secondly, the questions should be sorted by popularity within their respective categories.

The upside to having a good FAQ is not just that it will establish trust. Chances are that it will save money on the bottom line, because there are going to be fewer phone calls and emails in the support pipeline (assuming that the FAQ is placed visibly on the website). Win-win!

Expertise

If you're an expert, don't hide it. And put in the effort to extend your knowledge to customers and communities.

Some of the companies out there that have succeeded in establishing themselves as experts in their field have done so by sharing what they know, without necessarily expecting a direct return.

This can be done through a well-run blog where insights are shared, or by sharing knowledge on social media and interacting directly with people, even if they're not customers (yet).

Popularity

In addition to using services like Trustpilot, use social media tracking to find excited customers, and ask for their permission to use their statements. Be transparent when someone is not satisfied. Give them the same attention as happy customers. You might learn something!

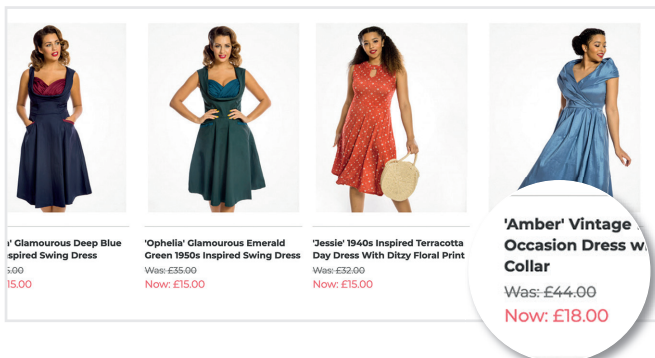
Make sure to use nuanced customer statements. People will find out anyway if some customers are unhappy. It's much better to address these things in the open to show that you care and to show that you're dealing with the problems. That also establishes trust.

Trustworthy design: the checklist

- If you have any certificates or “stamps of approval” that are actually valuable, use them. They show that you care about your own quality.
- Create a proper FAQ section that actually answers frequently asked questions, not just all questions.
- If you have knowledge to share, do so. Create a blog, and make a content plan for it in the same go. Share your knowledge on social media, on a blog, in a video, etc., and make sure to be visible and public.
- Use transparent pricing. Avoid using psychological pricing, such as discount pricing, if you're not discount-

ing (for example, don't sell a product at \$29.95 or \$29.99 if it's not an item on sale).

- If an item is selling out, it's OK to label it as such. But if it's not scarce, don't claim that it is. Think about how quickly items are selling. Milk will probably sell out faster than helicopters. Make information about remaining items relevant to users, so that you help them to purchase in time.
- Use sensible defaults (you can read more about that in the section on "Ethical Design Patterns" on page 290).
- Is it viable to pull all of this off? To take one example, Lindy Bop opts out of using persuasive pricing. It follows the principle of displaying clear prices, making it easy for people to identify whether an item falls within their budget.



Lindy Bop's honest and clear pricing is a great example to follow.

The biggest problem with persuasive design is that it uses dirty tricks to make people buy.

The reality is that companies have to sell stuff. But we can do so ethically. It just takes a bit of effort and a commitment not to follow the herd.

The fight against dark patterns

To move away from dark patterns in our flows, we must first identify them. Both in small and large companies, the chances are high that we aren't fully aware of where dark patterns exist, or of their dependencies with other parts of the product.

The best way to discover dark patterns is by testing.

INTERNAL TEST

Select a small team of people, ideally from several departments, and have them test the core flows of your product. This is the most cost-effective approach.

EXTERNAL TEST

Hire an expert to perform a heuristic evaluation of your product, focusing on discovering dark patterns.

UX TEST

This could be the most cost-heavy test of the bunch, but it doesn't have to be. Invite five users — or even better, go visit them — and conduct a think-aloud test with them. Focus on the initial findings from your internal or external test, and expect the participants to reveal many more issues than what you initially found.

You will be surprised to see how many users you can attract with an offer like “Test our new software Monday evening and get free pizza”. Finding new and cost-effective ways to increase user testing should be a sport for your team.

Root cause analysis

What should you do if a test or an analysis of a process shows that the ethical guidelines you established for yourself are not being used in practice?

It's obviously a good idea to solve the problem. It's an even better idea to investigate whether there are any related problems that you have not yet found. This is a good time to conduct a root cause analysis.

Root cause analysis in science and engineering is a method of problem-solving, used to identify the root causes of faults or problems.

You can divide the analysis into four steps:

1. Identify and describe the problem.
2. Make a timeline from “situation normal” up until the point when the problem arose.
3. Separate the root cause from irrelevant factors.
4. Describe the connection between the root cause and the current problem.

Even if there is only a single root cause, the analysis could surface that many factors are involved. The definition of a root cause is fairly simple: if the root cause of a problem is removed, then the problem won't happen again. It differs from other parallel events and factors that could very well be part of the current problematic situation but that don't play a crucial role.

Let's consider an example.

Suppose we're selling products online, and we've received reports that our customers have gotten their credit card details stolen. There's an apparent security issue on our website. The root cause turns out to be related to the lack of a secure layer over which the website is served (HTTP instead of HTTPS). Even if the website uses HTTPS for communication in general, it's not used in the checkout flow or in the communication

between the website and the payment provider, due to technical reasons and legacy issues.

Our internal tests have not been done properly, and, therefore, our website has been running despite the poor security. The missing test is an influencing factor, but the root cause of the problem is a lack of thoroughness in the design of the platform, combined with missing code review, technical debt, and a lack of responsibility for the security of the platform.

Oh, you may say that the payment integration would have required HTTPS in order to get approved, that an error like this would never happen in real life. Code is changed every time there is deployment, and errors sneak in over time. Systems are complicated, and old legacy systems, such as ones designed by teams whose key members have since left for other jobs, are especially vulnerable. Management might not be open to a major rewrite of the code, and then one day reality strikes.

When you are hit by a problem of this scale, it is necessary to investigate similar systems, because the development work and test methods are probably fairly similar.

It's never easy to draw an unambiguous connection between problems that occur and the underlying reason for those problems. A good rule of thumb, therefore, is to ensure that the most competent people who own the problem take part in the meeting.

Reducing the cost of moving

One particularly nasty dark pattern is called a roach motel. According to this pattern, a design makes it very easy for people to get into a certain situation but very hard to get out of it.

One of the reasons why a situation can be hard to get out of is the *cost of moving*. “Cost of moving” is an expression that relates to how hard or easy it is to move one’s data, products, money, etc. to an alternative service. Just think of switching banks or insurance agencies, and you’ll understand what an exceptionally high cost of moving feels like.

The cost of moving can cause pain and frustration. The agony caused by lost data, lost time, lost effort, formalities, bureaucracy, and having to start over when switching providers is something that heavily affects the experience of a product and brand. The last thing we want when people leave is for them to slam the door on their way out.

Keeping the cost of moving high won’t make people stay. If they want to leave, the question is not if your product will die out, but rather when and how. Some designers are smart and analyze the offboarding process in order to improve user experience for those who leave. Also, keeping the cost of moving low will keep your team on edge, because the consequence of not being sharp will be visible right away.

It's also worth remembering that many people leave not because they don't like the service, but just because they don't need it any longer. So, instead of annoying them when they want to cut costs, we can make them feel appreciated, tell them that we'd be happy to have them back at some point, and explain exactly what will happen with their payments, history, and data after cancellation.

Reducing the cost of moving will improve a product's ethical score. That's a given. Making it easy for people to leave your product for one reason or another and to take their stuff with them ("We'll help you pack!") is one of the nicest things you can do for your users. It leaves a positive impression, and it is likely to make them want to give you positive reviews and even come back should their new provider fail to live up to their expectations.

The potential cost of moving depends on which industry you belong to. It makes sense that the cost is traditionally higher to switch banks than to use a new calorie-counter app. But a low cost of moving is possible in both cases.

Overcast is a podcast app that does very well in keeping the cost of moving to a minimum. It has a feature that allows people to export a file with the podcast shows they listen to. The file can then be imported into a new podcast app. That's a great example of "We'll help you pack!" — with a smile.

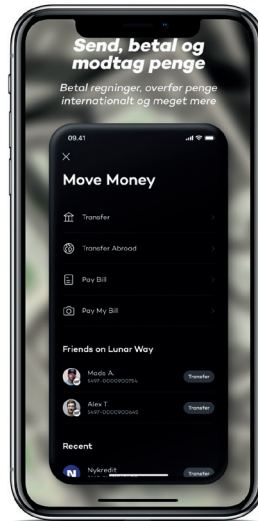


The Overcast app makes it easy for users to move their data away from the app.

Lunar Way is another great example of a company that has succeeded in keeping the cost of moving low — except that it's the cost of moving from competitors to it, which is very clever from a business perspective.

Lunar Way is an app that offers a new kind of banking service, but it's not a traditional bank. It offers services related to banking, such as credit cards, money transfers, and bill payment. It has a partner bank that handles accounts, so security is ensured. The way it keeps the cost of moving to a minimum is that it allows people simply to connect their existing bank account to Lunar Way. So, the money stays in the same place, but the money is handled through the Lunar Way app.

Lunar Way keeps the cost of moving down by allowing users to connect their bank account rather than setting up a new account.



As always, there's a trade-off. If you don't require an account for customers to use your product, then it might be easy for them to get in and play around with the interface and get a feeling for what it provides, but this won't be enough to fully move to the new service. The user will have to identify what they want moved and then create an account for that. However, the creation of the account doesn't have to happen first. The key is to communicate that as part of the onboarding process in order to give people a choice.

Choice is important because choice means freedom. And freedom and ethics go hand in hand in design.

We'll go into the specifics on how to design the interface and the underlying data model for reducing the cost of moving and offboarding later in this chapter.

Cookies behind the scenes

The EU cookie directive came into effect in 2011, and since then, it has turned into quite the cookie monster, affecting the website experiences of 512 million EU citizens daily.

The directive was not designed with that purpose. It was designed to protect EU citizens from being tracked online without their knowledge. And so, the directive states that all websites that use specific types of cookies must communicate that to their users, and also offer them a way to opt out.

To make sense of what this means for designers who are concerned with ethics, first we need to understand some definitions:⁶⁴

- A first-party cookie is set by the website itself.
- A third-party cookie is set by someone other than the website. Google, Facebook, Pinterest, Mixpanel and a very long list of retargeting companies are considered third-party.

⁶⁴ <https://smashed.by/cookieguide>

- A session cookie only “lives” for as long as the user is actively on the website.
- a persistent cookie lives for as long as it’s defined in the cookie.

There are four types of cookies:

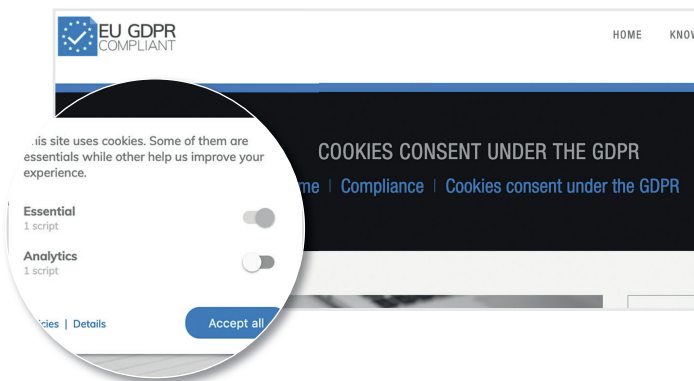
- **Necessary cookies** are most often session cookies used to identify the user and, by doing so, make the website capable of remembering things like products added to the cart and user logins. This is the only type of cookie that doesn’t need the user’s consent to be placed.
- **Functionality cookies** are used to store people’s preferences and choices on a website. They save us the agony of having to say “No, thanks” to the same survey over and over again.
- **Performance cookies** are used to track and improve how a website runs. They are used to track errors, speed, page visits, ad response rates, and other analytical metrics. The main difference between performance and advertising cookies is that the data collected through performance cookies must only be seen and used by the website operator.
- **Advertising cookies** are most likely third-party. They can be used to control the number of times an ad is

shown to a particular user on your website, and they are also used for affiliate and retargeted marketing. Advertising cookies are always persistent but time-limited.

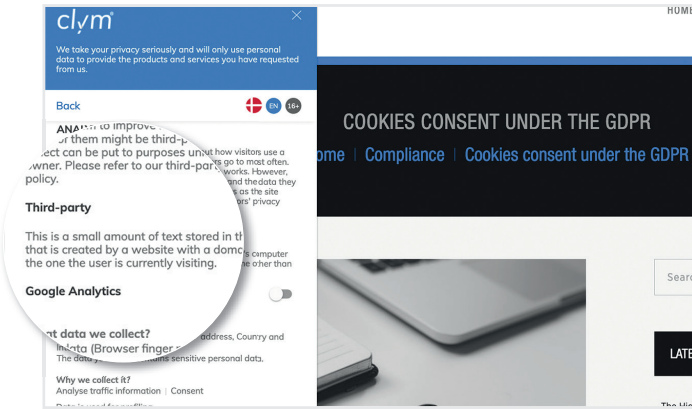
Not all websites surface these four cookie types in their cookie disclaimer. Often, we see categories like “essential”, “analytics”, and “advertising”. The problem here is that sometimes a performance cookie (analytics) is really an advertising cookie in disguise.

Let’s see an example of a website that clearly has issues surfacing the types of cookies it asks users to agree to.

On the surface, everything looks OK. The website displays a cookie disclaimer, with an explanation of what types of cookies are used, and there’s a call-to-action button to “Accept all”, and a way to access the policy and some details:



However, on further inspection (three additional clicks!), the “analytics” cookie turns out to be a cookie set by Google Analytics, which can hardly be described as a non-advertising cookie:



In fact, the EU user consent policy states that:



For Google products used on any site, app or other property that is under your control, or that of your affiliate or your client, the following duties apply for end users in the European Economic Area.

You must obtain end users’ legally valid consent to:

- the use of cookies or other local storage where legally required; and

- the collection, sharing, and use of personal data for personalization of ads.⁶⁵

Oh, and guess what you can't do in the cookie disclaimer? That's right. You can't make it disappear unless you click "Accept all", which forces acceptance of the analytics cookie. Very sneaky! However, this seems to be common practice. A study on cookie consents found that less than 5% of the 5,000 most popular websites in the EU provide a visible choice to decline data-sharing with third-party companies.⁶⁶

And yes, the irony is double considering that it's a website that informs about cookie consent under the GDPR.

Stop milking the cookies

No one likes cookie disclaimers. And a lot of people click "OK" just to get past the irritation of something blocking their view. Imagine what we could hide in there. Who knows whether any of us have ever agreed to: "If you click OK, you agree to donate your firstborn child to Facebook".

Anything that stops the user from reaching their goal (like accessing information on your website) is considered noise. Cookie disclaimers fall in that category.

⁶⁵ <https://smashed.by/userconsent>

⁶⁶ <https://smashed.by/cookiebanners>

A cookie disclaimer's purpose is to:

1. notify the user that cookies are being used,
2. explain what they are being used for and why,
3. offer a way for the user to either accept or decline the usage of cookies.

Most cookie disclaimers only do two of these three things. Can you guess which one most don't do?

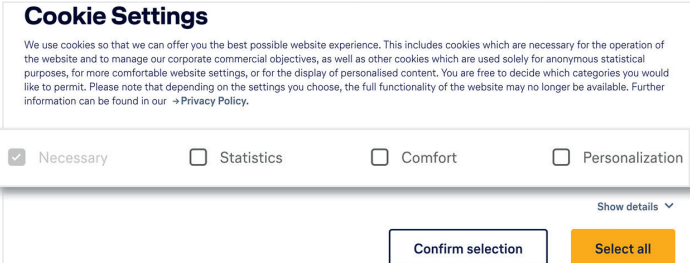
Most neglect to offer an actual way out of cookie usage. It's as if someone set the benchmark for cookie disclaimers really, really low, and few seem to have the ambition to do better. It's also caused by a few cookie-consent tools that have been very good at popularizing just a few options — unsurprisingly, the ones that get all permissions silently. Some of them have reduced the process so extensively that a single click on a link constitutes consent.

The web is full of examples of unambitious cookie disclaimers. Depending on your viewpoint, you can replace “unambitious” with “dubious”, “intentionally misleading”, or “deceptive”.

Regardless of the term, most cookie disclaimers fail to surface just how many cookies people opt in to when clicking

“OK”. It’s not uncommon to see over 25 statistics cookies and over 100 marketing cookies when investigating a cookie policy. These are in addition to the necessary cookies that actually improve the user experience, such as cookies that remember your data entries when shopping online and that ensure you log in safely.

Lufthansa is an exception. It surfaces opt in and opt out in the disclaimer itself. And only necessary cookies are pre-selected. This is something rarely seen:



Cookie Settings

We use cookies so that we can offer you the best possible website experience. This includes cookies which are necessary for the operation of the website and to manage our corporate commercial objectives, as well as other cookies which are used solely for anonymous statistical purposes, for more comfortable website settings, or for the display of personalised content. You are free to decide which categories you would like to permit. Please note that depending on the settings you choose, the full functionality of the website may no longer be available. Further information can be found in our [Privacy Policy](#).

Necessary Statistics Comfort Personalization

[Show details](#) ▾

[Confirm selection](#) [Select all](#)

Granular controls and clear language make for a good cookie disclaimer.

Now, you might think that all websites must have a cookie-consent prompt to comply with the European GDPR, but that’s not so. If a website only uses functional cookies – cookies that are necessary for the website to run, such as a cookie that stores the logged-in state of the user – then no consent is needed.

According to European law, the user has to be able to withdraw their cookie consent at any time.

To rank highly on the ethical scale, it's not enough to just write that "You can withdraw your consent at any time". That has to be followed up with a clear path to where that can be done. And it has to be visible and easily accessible on the website.

How to make a transparent cookie disclaimer

It's time for someone to raise the bar for cookie disclaimers. We'd like that to be us, and you. Here's a starting point.

1. Surface opt in and opt out in the actual disclaimer. Don't hide it in an additional settings pop-up.
2. Be honest. If you use advertising cookies, tell your users. Then, make it easy for them to opt out.
3. Only have default opt-in on required cookies.
4. Explain succinctly and in plain language what the different types of cookies are used for.
5. Make it easy for users to withdraw their consent. Link directly to the consent withdrawal, which can be placed in the privacy settings or, even better, in the footer of the website.

Authentication

You've heard the story before. Someone has made an app, and instead of having new users create a new account with a new password, they allow them to easily create an account with their current login from Facebook, Google, Twitter, or whatever.

It's easy, it's quick, and the provider of the app knows that more users will sign up to the app. We are lazy consumers, and the easy solution wins each time.

There are several frameworks for authentication, and one is OAuth. It's also known as the OAuth 2.0 authorization framework. In a nutshell, it's an open protocol to allow secure authorization as a simple and standardized method in web, mobile, and desktop applications.

It works by using your existing login, for example, on Facebook — or any service that has a token. This token can be used to log into the new app. In return, Facebook receives access to some information. The app would probably also like to have your email address, your friends list, and your profile photo from Facebook.

In some cases, both the app and Facebook will ask for more information than that. We're basically just waiting for the

day when you need to sacrifice your firstborn in order to get a faster login process.

While it's convenient for the customer, making use of OAuth for login requires thorough consideration. The technical problems aren't the issue here. Your users, rather, will have to give up information on how they are using the app to the service that was used on signup. This service can then connect that information to the already extensive profiling they have of each individual user.

There are a great number of cases that show that the large platforms don't take their responsibility seriously when it comes to handling data they've collected. We're seeing illegal reselling of data, illegal sharing of data with business partners, security breaches, and moreover, OAuth has known security problems.

We hear about the larger instances of data breaches, such as the exposure of 50 million Facebook users, or when hackers got access to Uber's GitHub account. Here, the hackers found login credentials to Uber's account on Amazon Web Services. The data breach leaked the names, email addresses, and mobile phone numbers of 57 million Uber users, as well as the driver's license numbers of 600,000 Uber drivers.⁶⁷

⁶⁷ <https://smashed.by/databreaches>



*A new standard
for verification...*

The large platforms are not alone with security issues. Authentication is complicated; the frameworks are not perfect, writing your own authentication code is expensive; and it will not be perfect either. Security breaches are common, so privacy by design is meant to allow users to store data on their phone – not in the cloud – and to keep businesses from collecting data that they don't need to run their business.

Allowing the user to create a password in the app itself, instead of using an authentication framework, will take a little longer for the user. But it is a more secure option and will prevent the sharing of personal data with the authentication platform.

Later in this chapter, you will find the blueprint for an ethically designed authentication model.

Good terms and conditions

There is a story going around that a company hid a \$1,000 prize on a page deep in its terms and conditions. No one ever found it.

Who knows how many times we've sold our soul to the devil by agreeing to terms of service.

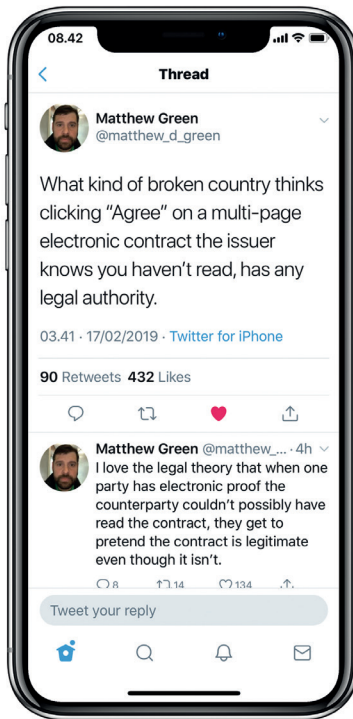
It's a very difficult job to write good terms. After all, they have to cover all of the legal aspects of people's use of a product or service.

That doesn't mean it's acceptable to write 25, 50, or 100 pages of legalese just to cover one's back.



If I had more time, I would have written a shorter letter.

Those are the famous words of French mathematician Blaise Pascal. They are good words to live by when writing terms and conditions (and when writing in general!).



The internet version of "If you break the seal of this software package, you accept the license agreement". And remember that the license agreement is inside the box. No, they don't want you to understand the terms and conditions.

Most important to good terms is plain language. Think about who you're writing them for. The fancy term is “user-centered copywriting”. It works!

We've collected a list of things to include in good terms and conditions. It's likely not a complete list, because the content of the terms will depend on the type of product or service offered. But it's a short and concise list, which is what you should aim for in your terms.

- **Company information**
 - Core product
 - Legal address
 - Jurisdiction (which country's laws apply)

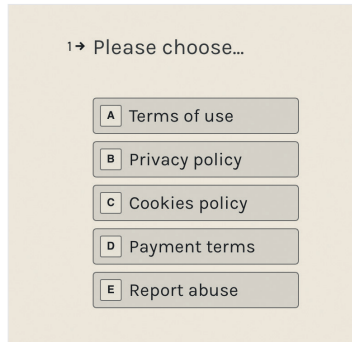
- **Which services or products are offered, and how do they work?**
 - What do users get?
 - How to cancel a subscription or order
 - What happens if the terms change in the future?
 - Warranties
 - Pricing, currency, and taxes
 - Delivery time (for physical products)

- Shipping (for physical products)
- Returns (for physical products)

- **Privacy**
 - Who owns the user's data?
 - How is data security ensured?
 - Who can access and use the user's data?
 - What happens if security is compromised?
 - A link to where people can withdraw their consent
 - What data is needed and why?
 - How is data deleted?
 - How can users get a hold of their data?
 - An explanation of what happens to user data in case of bankruptcy or if the company is acquired.

- **Responsibilities**
 - What is the company responsible for (for instance, in case of a security breach)?
 - What is the user responsible for (for instance, if the user's computer is stolen)?
 - What responsibilities do third parties have?

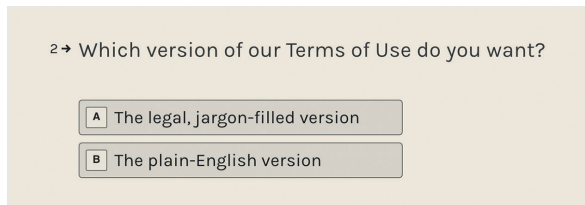
It's a good idea to divide the terms into smaller section. Typeform (www.typeform.com) does this with great success:



1 → Please choose...

- A Terms of use
- B Privacy policy
- C Cookies policy
- D Payment terms
- E Report abuse

Its terms of service also allow you to select between two variants: the legalese version and the plain-English version:



2 → Which version of our Terms of Use do you want?

- A The legal, jargon-filled version
- B The plain-English version

Cozy Cloud is another great example. It takes it one step further by making the plain-English version legally binding.⁶⁸ We love it:

⁶⁸ <https://smashed.by/cozycloud>

1.2 NO TRICKS

We aren't taking any shortcuts. Our "clear and understandable" Terms of Service for the Cozy Service prevail over the detailed ToS for the Cozy Service, which specify all rights and obligations for both you and COZY CLOUD in more complex *legalese*.

In the event of a contradiction between the two documents, the "clear and understandable" Terms of Service for the Cozy Service shall prevail. That means no nasty surprises if you only read the "clear and understandable" Terms of Service for the Cozy Service .

Cozy Cloud's "clear and understandable" terms of service

How to collect and delete data

The amount of data collected by digital platforms is massive. A lot of data is collected “because we can” or because “maybe it could be used in the future”.

That’s obviously a problem. The general rule is that you should not collect data that you have no use for or that you don’t have time to analyze. It’s tempting to think that it could probably be used at a later stage, but that’s unlikely ever to happen. The one time it would actually happen would be because a plan was made ahead of time.

Let’s see an example.

Take a company that collects information about the users of its website. Initially, a closer relationship between the customers and the company is built through a newsletter. Later

on, the company hires a digital agency to set up contests with the objective to collect additional data about customers, with the purpose of profiling each customer.

The company now has a database that contains data about customers and their profiles. The digital agency has the ability to analyze the data. However, they are never asked to do so, because the company hasn't planned how they want to use the data.

At one point, the company shifts its marketing strategy.

The data is still on a server with the digital agency, and it is now just gathering dust without being used. Meanwhile, the marketing activities of gathering additional data managed to raise alarms within the customer base, which is now slightly annoyed by the marketing activities of a company that once used to be humble and respectful of their data.

Collecting data without a purpose is a waste of resources and a security risk.

It's always easy to point out problems, so let's look at what the company could do instead.

Rule 1: Only ask for information that will be used later on

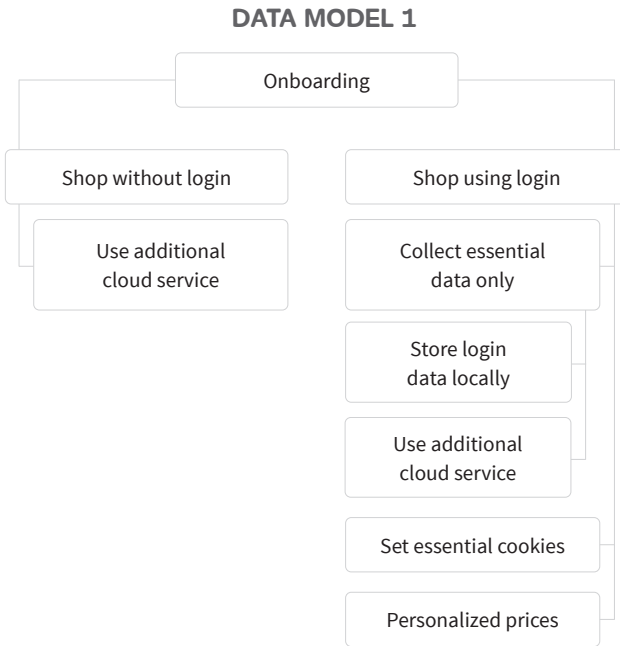
Whenever you collect data, ask yourself if it really is necessary. Let's say we own a mall and would like to know where the customers are located inside the mall.

We have a couple of options. We could track and register each individual customer. Alternatively, we could track all of the shopping carts.

The perk of the alternative method is that we wouldn't collect data on the customers themselves, but we would still learn how they move in the shopping mall.

If there is no defined process for what types of data we want to collect and what it will be used for later, it's likely that too much data is going to be collected... you know, too much just to be on the safe side. You are also not as likely to devise simpler methods that will solve the challenge quicker and better. It's so easy to just monitor everything that's going on instead.

An example of the fact that large amounts of data often are unusable is the advertisements on Facebook. How many of us have not been introduced to meaningless suggestions for new interests and products?



Rule 2: Make sure that users know what kind of data is collected and why

If we know what kind of data we collect and what the purpose is, we can easily communicate that to users.

Users of a digital platform have the right to know what kind of data they are sharing with the owner of the platform. Speaking of which, there's a nice analogy in the real world.

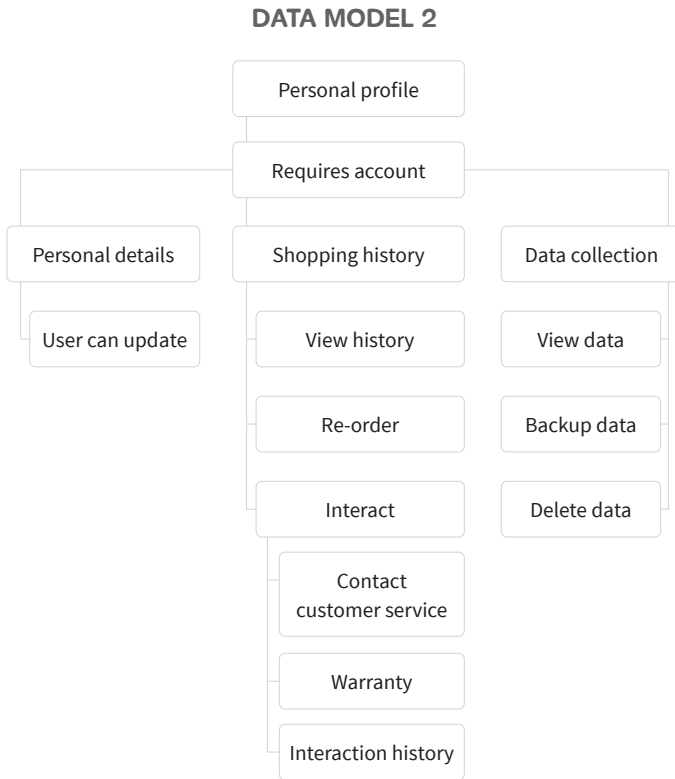
When you enter a store, you know that you are not invisible to the store. There's a sensor on the automatic sliding doors, the employees greet you, and you can move around inside the store. Maybe there are cameras. That's OK with you. Hidden cameras inside the changing room are not OK, though. Face recognition inside the store is not OK either. Scanning your credit card on payment is also a no-go.

It's technically possible to do extensive data collection in stores, but it's not done. Any store that were to get caught with inappropriate surveillance would immediately lose its reputation, and customers would stay away from that store.

However, it's as if we have become so blinded by the digital world that when online platforms are revealed to track data dubiously, we just shrug and tell ourselves that they're all like that.

It's really sad, and something that we as an industry must take a responsibility to improve on.

Tell users what kind of data you are collecting. If the platform can be used anonymously, then the information can be put in a section where there is room to explain how data collection, storage, and analysis are done and what purposes they serve.



Rule 3: Give users the ability to remove their own data

If a product requires user registration, then the section where you explain the processing of data can and should be expanded.

The additional information should show all users what kind of personal data will be recorded.

In some cases, like with a fitness app, data can be used to let the user compete with and compare themselves with other users. If a user wants to use that kind of feature, it's fair to ask that they share their own data with others first. If the shared pool of data may use that user's data, then they also need to see where they are placed in relation to other users.

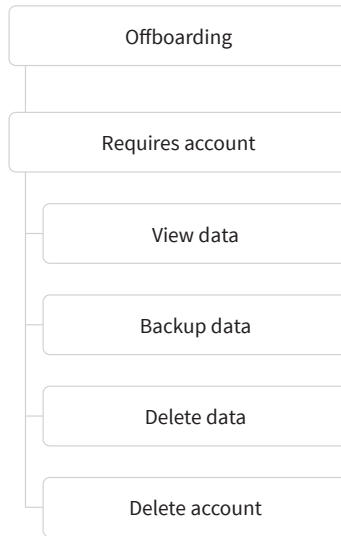
This creates a couple of layers in the data model. When data is collected, it can either be "personal" or "shared with others", and provided that the user has shared with others, they can also see "general statistics". Otherwise, they would only be able to see their own personal statistics.

When we can show all of this data to a customer, we can also make it easy for that customer to remove their own data. That is great service.

Instead of a fitness app, another example could be a loyalty program for a retailer. Let's say that we register all purchases for a customer, but we also register visits to the store. If the customer doesn't want us to record their location (i.e. visits to the store), this should be able to be switched off in the personal settings, and in addition, all location data in the

app should be able to be removed by the customer as well, without removing the purchasing data.

DATA MODEL 3



Rule 4: The company must have a process for reviewing stored data

We all have heard it before: the later that changes need to be made in the life cycle of a feature or a product, the more expensive the cost of development will be. Because many companies are feature-driven, and we tend to focus on getting the first version out of the door quickly, finding out that we don't know

how data is saved is an expensive mistake to make. Taking care of sensitive attributes of a product later on — security, safety, privacy and accessibility, to name a few — can create colossal damage in terms of unaccounted design and development time, and more importantly, the chosen architecture of the product might not be able to account for new changes and would put future releases at risk. On top of that, we are getting caught up in something else in the process as well.

The company must have a clear, scheduled process for reviewing stored data. It has to be simple and approved by upper management because, otherwise, it won't be adhered to. It also has to be followed consistently. If the process is followed sporadically, that's a warning sign that it falls short and will need to be improved.

There needs to be a general plan for data processing and a plan for each individual project.

The general rules could describe the basics of how we handle data in general for all projects, and define when we remove stored data.

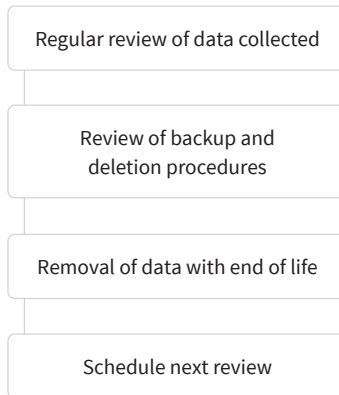
The specific rules for a project could describe, in detail, how it is done in that project. For example, if we're making a campaign about cat food, the goal might be to get more subscribers to a newsletter about cats. Permissions could be collected from the website and from stores as well.

When the campaign is over, the result is the collected permissions to send a newsletter. All other data, such as which stores collected the most permissions, is less relevant.

A good strategy could be to aggregate relevant data in a spreadsheet. The spreadsheet would be saved, and all the underlying data could be deleted. No one will ever look at the underlying data again, and life will go on with the next campaign.

Never throwing anything away is a not a good process.

DATA MODEL 4



In the section about blueprints later in the chapter, we've outlined a series of data models to make it easier for you to design the underlying flows for handling data ethically.

Data as business model

A good number of companies have tried to create businesses whose underlying purpose is to collect data and sell it to someone else. The product they are marketing is just a tool for collecting data.

For some platforms, it makes sense. You can't run a "free" service without some way of making money later.

The ethical aspect is really only a question of whether you explain the business model clearly to users, or whether you obfuscate what you are doing.

It's easy to condemn many of the free apps and websites that many of us use in our everyday lives. The thing is that we are happy with most of them. The internet has made a huge and positive difference to a lot of people, and much of the development is driven by systems that are free to use – from a monetary perspective. What most customers tend to forget is that they pay for the service in another way, usually by granting access to their personal messages, photos, and videos.

Free apps with ads can be a good strategy, in which case the business model could be that an ad-free version of the app is available to those who want to pay for it.

Apps and websites with limited features is another model. If the website or app has a free version, and the user wants access to extra features or wants access for more users on the same account, then it's fair to say that they should have to sign up for a subscription or pay for a premium version.

The freemium model, with upgrades to premium, has been successfully implemented by companies like Grammarly, but no social media companies follow that path.

Apparently, collecting and selling data is a much more lucrative model for most of these companies. So, as a result, after years of development and growth, we aren't seeing any premium accounts for these large data brokers.

An unlucky pitfall for users can happen when some aspiring entrepreneur creates a good digital platform. The platform is cheap or free to use, and it grows very fast. At some point – we've all seen it happen – the entrepreneur is approached by venture capital firms that want to buy in. It could also be that a competitor wants to take over the company to buy either the customers or the technology.

If the company doesn't have a sustainable business model, then the users are at risk of being trapped in an unsolicited transfer of their data to third parties. "We promise to never

sell your data to others” is not covered by “We sold the company to others, who now have your data”.

There’s no such thing as a free lunch. That also applies here. People need to know what they are getting themselves into when they use a digital service that is “free”. It never actually is.

Collecting less data is cost-effective

Collecting data that you will never use is expensive. That is probably the strongest argument to make in a discussion in which someone wants to collect as much data as possible and another wants to collect the information with the most value.

It is not about the cost of storage, of course. Storage is virtually free. What is costly is the combination of concept development, implementation on the website, testing, compliance with the GDPR and other legislation, and making sure you can erase data even from a backup system.

We were once involved in a project in which a retailer wanted to use its website to obtain more subscriptions to its newsletter. Once it had gotten more email addresses in the database, the newsletter would be used to obtain more visits, both to the physical stores and to the online store.

The first version of the registration form was a simple input field where you could enter your email address. In doing so, you were then subscribed to the newsletter.

The number of registered subscribers was building up nicely, and suddenly the marketing department got interested. They wanted more data. As time went on, the subscription form got more detailed, starting with requests for the user's interests. Because the target group was "families with children", the marketing department now wanted users to enter how many children they had, and how old they were.

The amount of information they wanted from users grew steadily. Both money and hours were spent on developing the data collection.

At the same time, the number of new subscriptions was rapidly decreasing — getting close to zero. Users didn't see the benefit of answering this long questionnaire that the marketing department loved so much. Obviously, the more questions you ask a customer in order to subscribe, the lower your subscription and registration rates will be.

Look at it as if you are going on a date. You start by inviting a friend to a café. Later, you invite them to the cinema. Each time you meet, you have the opportunity to use common

sense and conduct to collect more data. You don't ask them to marry you on the first date.

The financial burden of collecting data that you don't plan to use is measured not only in time, but also in development costs, design costs, data collection, and data storage. If you don't intend to marry your friend, it's easier just to get their email address and send them a newsletter.

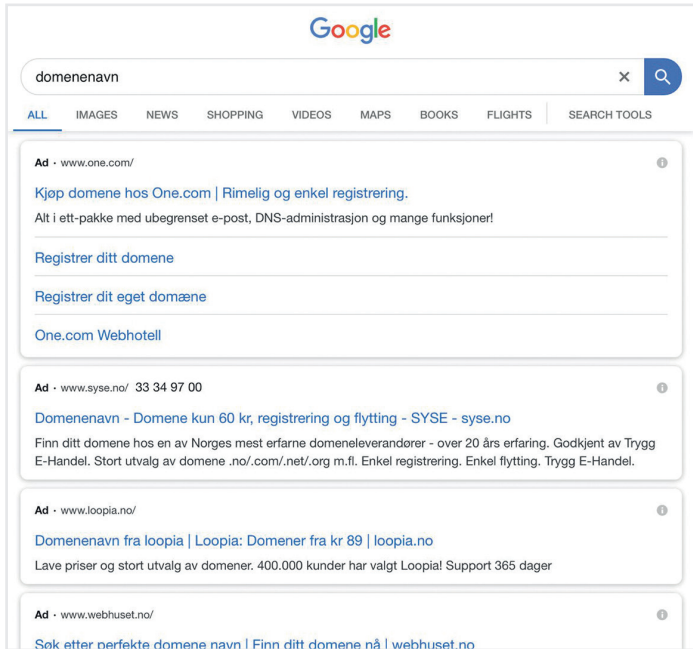
Tools: the ethical alternatives

We use plugins and third-party applications for a number of things on websites and in apps. The Google and Facebook suites are particularly popular because they offer easy integration, and they are well known to most companies because of their high market share.

However, there is one big underlying problem with Google and Facebook products. Google and Facebook are designed at the core to monetize data. So, when we use Google or Facebook products for website analytics, surveys, social signup, or internal search, we are delivering data about our users to them.

Google claims that google.com is a search engine. But it has proved over and over again that it is in fact an advertising

platform. The same goes for its analytics tools. How can we tell? Well, look at its revenue stream. Google is making money from advertising, not from search.



A reminder that Google is more of an advertising platform than a search engine.

There are a wide range of alternatives to Google and Facebook products. DataEthics⁶⁹ is a think tank that works to promote ethical data products and services. We have

⁶⁹ <https://dataethics.eu>

found great inspiration in its list of ethical alternatives, and we've compiled them with even more tools below.

Website analytics and statistics

Mixpanel, Netminers, Siteimprove, Webtrekk, Matomo, and Hotjar are tools for running analytics and statistics. Some can be installed on the server, while others are cloud-based. Common to them all is that the data doesn't get shared with third parties (unless, of course, the company is acquired, in which case you really don't know).

Surveys

Typeform, Qualtrics and SoGoSurvey can be used for online surveys, questionnaires, quizzes, and other types of user feedback, and the data collected doesn't get shared with third parties. It is kept safe and encrypted.

Social plugins

Social Share Privacy is a tool that prohibits the hidden tracking of users. The tool allows you to add social-sharing icons, which usually track user behavior even when people don't click them. Social Share Privacy makes it possible to disable this automatic tracking, unless people click the "Share" button.

Ethical design patterns

In this section, we've collected and illustrated a set of design patterns that are effective for improving on the ethical design scale. Use them as they are, or use them as inspiration to improve your own.

Most sensible default

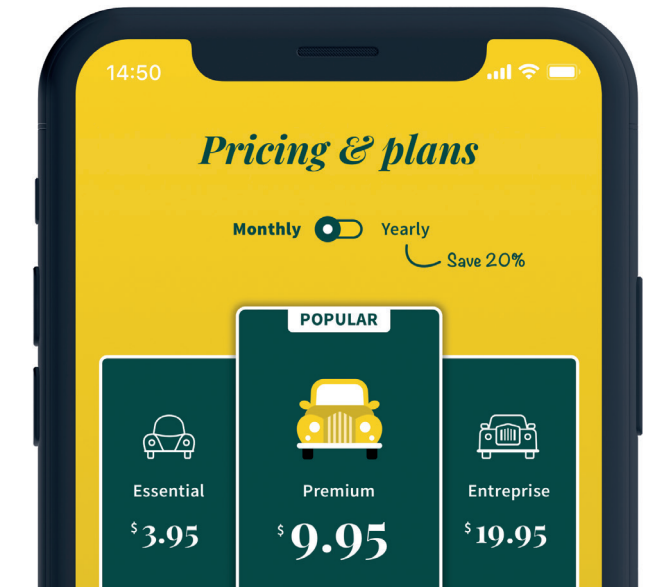
We know how supermarkets try to nudge us towards purchasing things we don't want or need. Placing fruit at eye height increases sales, as does placing candy in the checkout line.

Nudging is used to make positive reinforcement, but also to influence behavior and decision-making.⁷⁰ It's a powerful tool to do good. It's also a powerful tool to persuade people to do something that helps a business make more money.

Rather than only focusing on increasing revenue and traffic, consider using more sensible and ethical approaches. This can be done by using sensible default values.

A huge portion of food won't sit well with everyone. The same goes for SaaS and other digital products. Highlight the option that suits most people. That's a sensible default.

⁷⁰ *Nudge: Improving Decisions About Health, Wealth, and Happiness*, by Richard H. Thaler and Cass R. Sunstein, Rosenfeld Media



An example of highlighting the most sensible default.

Progressive disclosure

Progressive disclosure is a technique for reducing complexity or limiting choices to avoid overwhelming the user.

Progressive disclosure done right manifests itself in a flow that discloses the right information at the right time, to ensure that people actually understand the consequences of the action they're about to take. Other examples include:

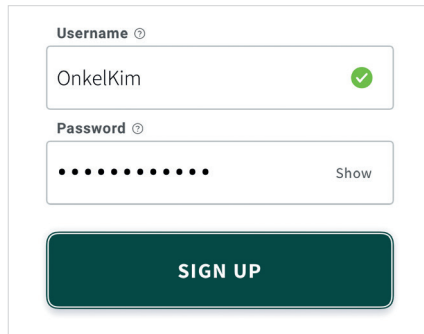
- showing a limited feature set to novice users, with an option to see advanced features;
- an advanced search option;
- displaying a sample of what comes next in a flow (for instance, the title of the next entry on a blog);
- disclosing one step at a time in a checkout flow, but surfacing the title of the next step;

But we can also look at progressive disclosure the other way around: the disclosure of information we ask from users.

We ask people to disclose information all the time. The trick to doing so ethically is to ask for information only when it's needed, and at the right time.

If you're selling a digital product, why would you need people's home addresses?

When you need more information, ask for more information, but avoid asking for too much too soon in a too-lengthy form – that's the easiest way to alienate a good portion of your customers.



The image shows a registration form with two input fields and a button. The first field is labeled 'Username' and contains the text 'OnkelKim' with a green checkmark icon to its right. The second field is labeled 'Password' and contains a series of dots, with a 'Show' link to its right. Below these fields is a dark green button with the text 'SIGN UP' in white capital letters.

An example of progressive disclosure.

Transparent system feedforward

System feedforward is an interaction pattern defined by Tom Djajadiningrat, which states that a system should communicate the purpose of an action. In other words, people should know the consequence before they perform an action.⁷¹

This applies to a variety of situations. We'll look at a few of them here.

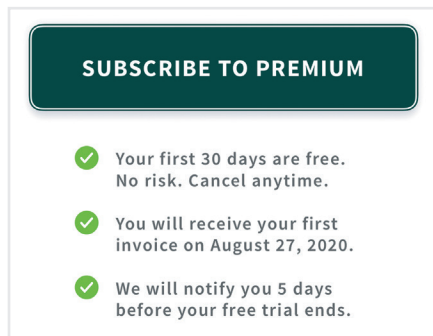
CALLS TO ACTION

There is a lot to be said about designing a good call to action.

⁷¹ <https://smashed.by/feedforward>

It usually appears in the shape of a button, and it should be designed as a focal point with prominent positioning (if it's the thing you want users to do). Feedforward — or the lack thereof — is often apparent in the wording or label of a call to action. If the action at hand is to “log in”, don't label the button “Start” because that's too ambiguous and might be misunderstood. Explain clearly what is going to happen once the user taps the button.

Moving beyond the label, if the action at hand is too complex to be explained by the label of a button, it might be necessary to include additional explanatory text in context with the call to action. Things that belong together should be grouped. It shouldn't be hard for the user to understand the terms and conditions of a subscription-based product when they sign up. That's proper feedforward.



An example of transparent system feedforward used to clarify what happens when the button is clicked.

COOKIE CONSENT PROMPTS

In all honesty, it's easier to find a thousand bad cookie consent examples than one good one. But let's stick to the positive notion of wanting to do better.

The thing about cookie consent prompts is that they are always in the way. The user wants to get to the content.

This does not mean we have zero responsibility of creating a good and transparent prompt. We'd argue that it actually increases our responsibility.

A good cookie consent prompt explains the following:

- why cookies are being used;
- what they are being used for;
- what types of cookies are being used (statistics, marketing, comfort, personalization, etc.);
- when third-party collaborators are in play, such as targeted marketing affiliates (in which case, the cookie consent prompt must list each cookie and its purpose);
- a button with “accept and close”, rather than consent being given by closing the cookie consent prompt via the “x” in the top-right corner of the modal;

- most importantly, granular control to opt in and out of the different types of cookies.

How we use cookies

We use cookies to enrich your user experience when you interact with us. [Tell me more →](#)

- Necessary cookies** →
Strictly necessary to provide you with our services, for example access to secure areas.
- Functionality and performance cookies** →
Used to monitor things like errors and response rates and to save your preferences.
- Advertising cookies** →
Used to serve personalised ads and allow sharing on social networks.

SAVE & EXIT **ACCEPT ALL** **REJECT ALL**

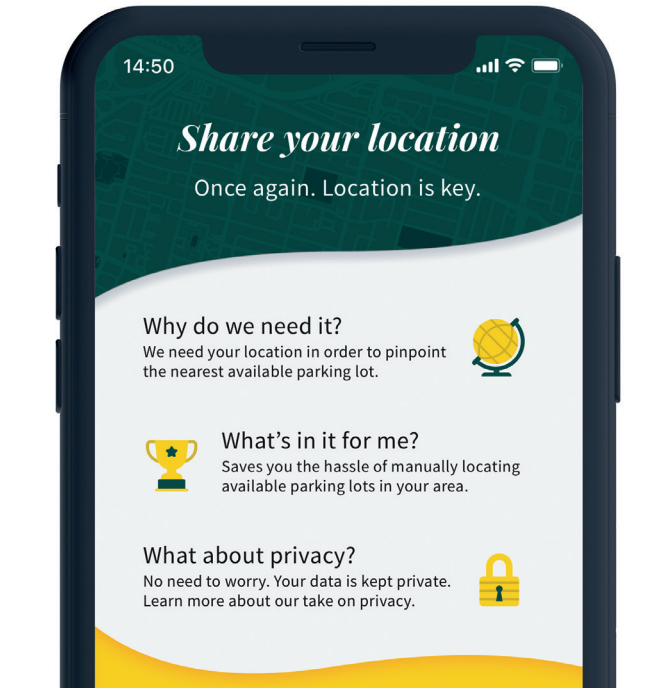
Withdrawal of cookie consent?
[Check our privacy policy →](#)

An example of a good cookie consent prompt.

LOCATION PERMISSIONS

As with any disclaimer, one about location permission needs to communicate clearly what the user is about to give permission for. A good location permission disclaimer clearly explains:

- why your website or app needs to know the user's location;
- what you will be using the information for;
- how it will help the user (this is important if you want people to allow location tracking);
- how you will be treating the data.



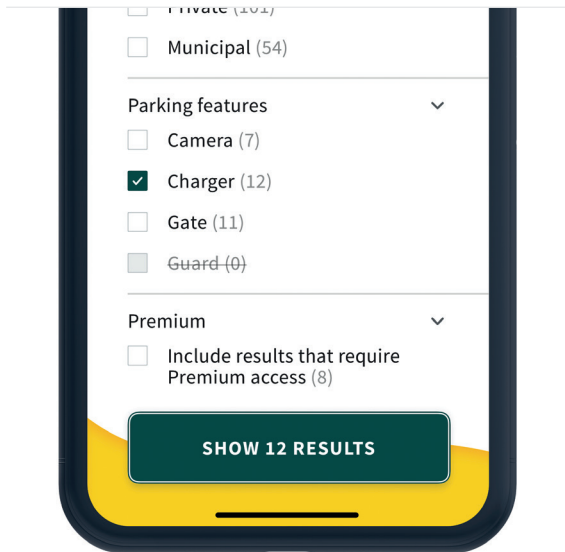
An example of a location permission prompt done right.

Meaningful filtering

All users have different needs, and if we are to help people make the right choice for them, we need to offer meaningful filtering, a way to easily remove irrelevant choices. This is the best way to convert – a much better way than swaying people to buy whatever we make the most money on.

Filtering comes in different shapes and sizes:

- categorization of the product base (this is especially helpful if there are a lot of products);



An example of how filtering can be done meaningfully.

- filtering in sequence with a text string search;
- sorting by different variables, such as price, discount, quantity, size, etc. (the variables will obviously depend on the product type).

The best filtering mechanisms include all of the above.

Sensible notifications

According to Apple's Human Interface Guidelines, a great notification experience should:



Provide useful, informative notifications. People enable notifications to get quick updates, so focus on providing information of value. Use complete sentences, sentence case, proper punctuation, and don't truncate your message – the system does this automatically, if necessary. Avoid telling people to open your app, navigate to specific screens, tap specific buttons, and perform other tasks that are hard to remember once the notification is dismissed.

It continues with an encouragement:



Don't send multiple notifications for the same thing, even if the user hasn't responded. People attend to notifications at their convenience. If you send multiple notifications for the same thing, you fill up Notification Center, and users may turn off notifications from your app.⁷²

⁷² <https://smashed.by/notifications>

Both of these guidelines serve as good pointers to design a mindful notification framework, even if you're not designing a native app. In short, a good notification:

- is useful
- is informative
- only happens once for each instance

In the following, we've laid out a framework to create sensible notifications. A notification framework for a given product can typically be illustrated in a table like this one:

Use Case	Copy Example	Frequency	Link to (screen)	Type
New homework	<course> added homework for week	Real-time	Homework	In-app + email
Personal message	New personal message from <name>	Real-time	Messages	In-app + email
Class message	New class message from <name>	Real-time	Messages	In-app + email
Summary for next week	Don't forget to check your homework for next week!	Weekly (EOW)	Homework	Email

We define the use case, copy, frequency, where the notification should link to, and its type, which is not problematic in itself.

The problem occurs when we dive into the purpose of notifications. If the sole purpose of a notification is to meet a business goal, then there is a potential problem from an ethical standpoint. It's easy to “forget” the good tips from Apple and instead send out notifications multiple times, or not worry much about their usefulness. After all, if it converts, it works, right?

Here's how we improve the ethical score of a notification framework:

Use Case	Copy Example	Frequency	Link to (screen)	Type	User Value
New homework	<course> added homework for week	Real-time	Homework	In-app + email	Keeping up to avoid accumulating homework for the weekend
Personal message	New personal message from <name>	Real-time	Messages	In-app + email	Staying up to date
Class message	New class message from <name>	Real-time	Messages	In-app + email	Staying up to date
Summary for next week	Don't forget to check your homework for next week!	Weekly (end of week)	Homework	Email	Another chance to catch up on homework (weekend)

The difference between the first and the second framework is the last column: user value.

Adding user value as an element of a notification framework enables us to discuss whether a notification is actually useful and informative from a user standpoint. If you can't think of anything to add in the column, chances are that the notification needs to go — if your aim is to offer mindful, more ethically designed notifications, that is.

REDUCE FREQUENCY

We also have to talk about frequency. In the framework, one particular frequency type stands out: “aggregated daily”. With notifications making their way into multiple places (UI, browser, in-app, email, SMS, and even more) we have to consider not just volume, but also frequency as a variable that affects the amount of notifications we impose on users.

Aggregation is a great place to start if we want to reduce frequency. Especially if the framework dictates multiple notifications for the same instance (like in-app and email), it's a good idea to aggregate email notifications once a day.

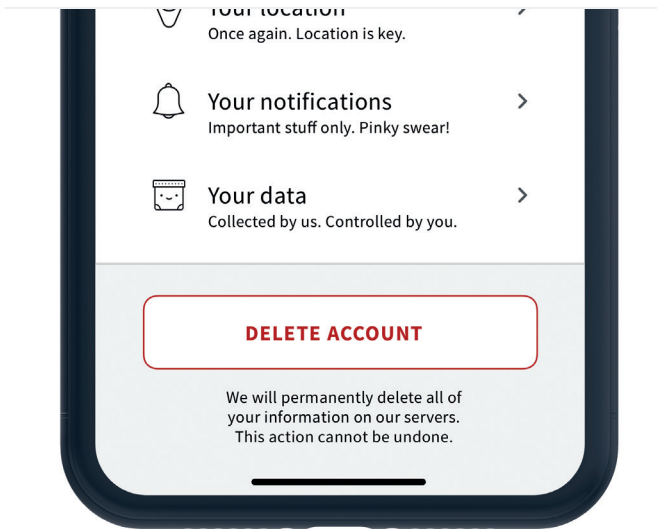
Offboarding (how to delete an account)

Ever tried to delete your Skype account? Let's just say it's gone from being very complicated (this was before Microsoft merged Microsoft and Skype accounts) to being practically impossible. Deleting a Skype account requires deletion of the Microsoft account associated with the Skype account. That means saying goodbye to all services associated with your Microsoft account: Windows OS, cloud services, the Office suite, the lot.

A good rule of thumb, unfortunately rarely followed, when it comes to deleting accounts is to make it as easy to delete an account as it is to set it up. So, if you've done a good job in designing a simple onboarding flow, you must do the same with your offboarding.

And unless there is an actual user-centered purpose to adding a 7-, 21- or 30-day restoration period whereby the account is deactivated, not deleted, there is no way you can argue it's a good idea from an ethical perspective. If it doesn't help the user, it has to go.

Here is a suggested way to design a good offboarding UI. You will find a blueprint of the flow and data model in the following section.



An example of easy offboarding.

In the previous pages, we introduced a range of ethical design best practices, followed by a set of visual design patterns, that can help you in the process of creating user interfaces with ethical design in mind. But there is more to software than the interface. In the following section, we've illustrated a large set of data models in the form of blueprints to help you design not just the interface, but the underlying flows and data models with fairness and respect.

Steal our blueprints, please

How do you design the perfect website, app, or digital service if you want to treat users right and store data in the best way possible?

We have designed a few blueprints. They can be a starting point for your next project. Use them, improve them, share them.

Remember that you have two issues to solve. The first is to design and build your product. The second is to refine the product over time.

You probably know from experience that the initial design and concept will change over time. New team members will join, some will leave, the strategy or focus will pivot, new technology will appear out of nowhere, and consumer trends will shift.

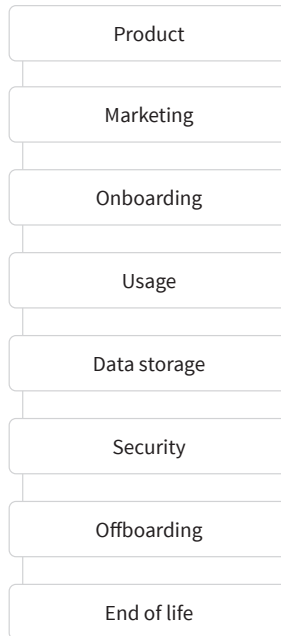
Taking care of users, their data, and the security model, and aligning with the business scope is challenging.

Here's a bit of help to get you started.

Product life cycle considerations

It may be wise to consider the entire product life cycle from the very beginning of the product design process.

One way to divide the life cycle into stages looks like this.



You may remove some of the stages and add others. The key is to consider how to build, improve, and later close the application down and keeping high ethical standards from start to finish.

The life cycle of a software product can easily exceed ten years, so it is not an easy task. Do not over-plan. It takes too much time, and you will switch to plan B sometime in the future, no matter how much time you have spent on plan A.

A BRIEF NOTE ABOUT MARKETING

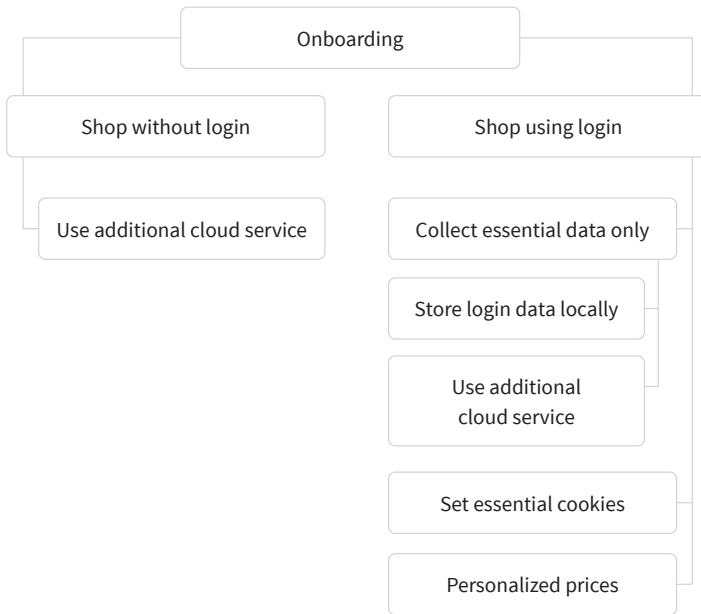
The communication and marketing used to attract customers must provide a fair picture of the product or service you deliver. Yes, it is marketing, and you are allowed to brag about what you do. But it is also your first encounter with a new user, and that user will either abandon the product in anger later, become a somewhat happy user, or become a great ambassador beyond what the marketing department could ever dream of.

Blueprint elements

A blueprint element is a building block for your ethical design. Let's say you want to open a new web shop. What are your design options, and what would be the outcome for users and you, pending the design choices you make? Below is a list of elements to consider. They are all related to the building of a web shop, but they are of such a general nature that they apply to any type of digital project, regardless of platform.

BLUEPRINT ELEMENTS: ONBOARDING

When a new user visits your shop for the first time, you can let the user shop as a guest, or you can encourage the user to sign up for an account.



Users without an account can shop, and that's about it. If the user signs up for an account, there will be a stronger connection between the user and your store. This is a mutual benefit.

You will have to ensure that the communication is secure, that the login information cannot be read in clear text, that cookies collect essential data, and nothing more.

On top of that, you can offer registered users easy access to shop across devices, and you can personalize prices and selection, improve shipping options, and much more.

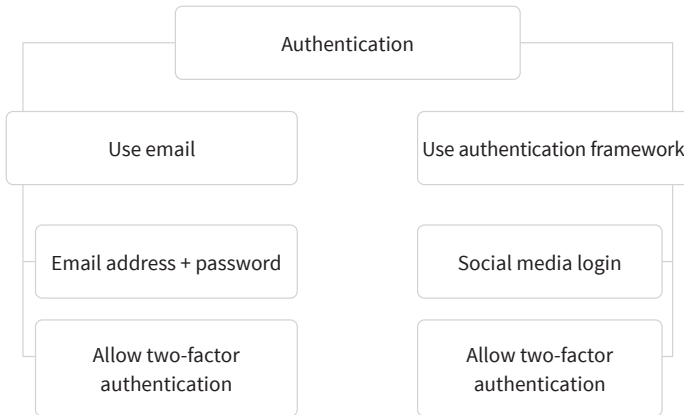
Ethical onboarding offers the user a fair method of staying private. Consider adding an option whereby the user submits additional information to get extra benefits in return.

BLUEPRINT ELEMENT: AUTHENTICATION

Logging in is the next step if the user signs up for an account. Two conventional methods are by a combination of email address plus password or by using an authentication framework. The latter approach will allow the user to log in using another account from Facebook, LinkedIn, or another social platform.

The user's advantage of using an email address and password is better privacy. The user can create a new email address for this website only. That will make it difficult for marketing engines to track them across the internet (unless they also submit a phone number).

The user's advantage of using an authentication framework is simplicity. The disadvantage is the new sharing of behavior.



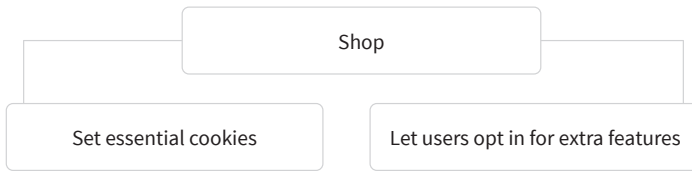
It is recommended to add two-factor authentication to the email and password authentication. Two-factor authentication using SMS or any other communications channel to verify identity adds a security layer.

Most social networks support two-factor authentication already. You might not need to implement anything extra.

BLUEPRINT ELEMENT: SHOPPING

You may want or need to set a few cookies to support the shopping features on your new website. Do not track anything you don't need to.

Basic internet shopping does not require a lot of tracking for technical reasons. Cookies are often used to the benefit of the web shop, not the user.



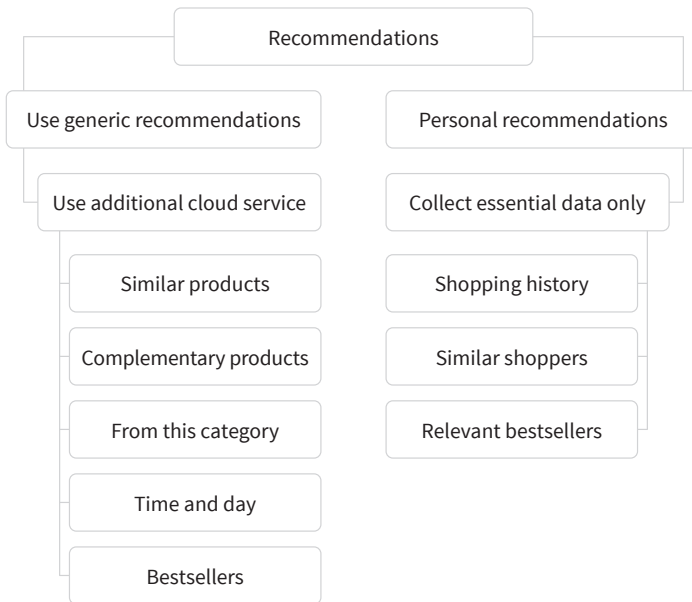
If you want to add product recommendations to your web shop, you can use basic recommendations such as “Customers who bought this item also bought...”.

This method does not require a cookie. There is nothing personal about it. The list of recommended items is built using product data, not user data.

If you want to personalize a recommendation, you might need a cookie. You can then customize the colors of products shown to the user, add product recommendations based on purchase history, or show special offers for selected customers. There is nothing wrong with doing so, as long as you offer the user a fair choice between shopping with extra tracking and without.

BLUEPRINT ELEMENT: RECOMMENDATIONS

Product recommendations can be divided into generic and personal recommendations.



A few types of generic recommendations include similar products, complementary products, and recommendations based on events. You might want to recommend umbrellas if it's been raining for weeks.

Personal recommendations can elevate the shopping experience, but danger is lurking in the dark. You can use the shopping history or data from similar shoppers for just about anything, and to an extent where it becomes creepy. You don't have to, and you are not likely to sell more by overdoing the personal features in your web shop.

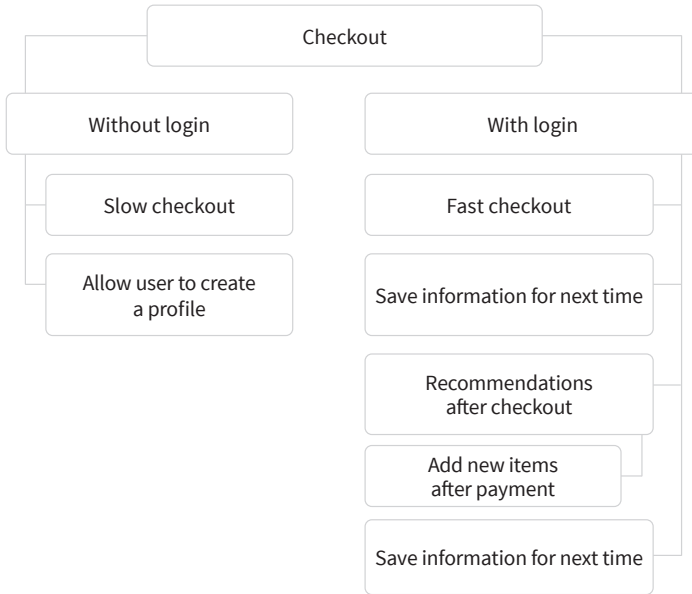
BLUEPRINT ELEMENT: CHECKOUT

There is no such thing as an anonymous checkout. When you purchase, the web shop needs your name, address, credit card information, and probably more to make sure you have paid and to deliver your items.

That said, some web shops gather too much information without a plan on how to use this extra data.

Checking out without logging in is slow because all data must be entered manually by the user. User data can be stored in a profile and used for faster checkout. A system that stores purchase history can add relevant recommendations during checkout or suggest better options for payment and shipping.

Checkout blueprint



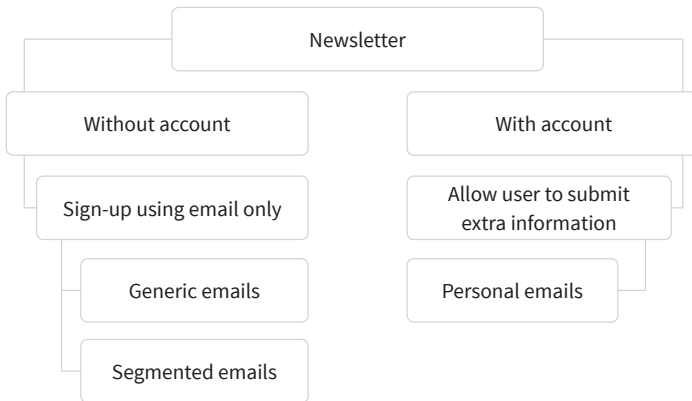
BLUEPRINT ELEMENT: NEWSLETTER

There is always a fun game going on between marketing departments and everyone else. Marketing people everywhere are adding newsletters to their web shops, often starting lean. After all, you only need an email address from the user, don't you?

The simple approach usually works well, especially if the reader is provided with an incentive to sign up.

Quite often, feature creep starts here. Everything is going well, so why not ask the user further questions about their age, number of kids, and shoe size.

It is technically possible to ask about anything, but once signing up for the newsletter gets more complicated, the result is a much lower conversion rate.



If the user is shopping without an account, then the plain email sign-up is all you need. If you add an extra input field, such as “Name”, you are likely to see the conversion rate drop just because of that additional task, regardless of whether the name field is mandatory.

There’s a simple solution to segmentation if your email database is a list of emails only. Let’s say you are selling to architects

and engineers. Your newsletter contains information relevant to each segment and also information relevant to everyone.

Observe how they navigate from the newsletter email to the website. Which news item did the user click? If the user reads a story relevant to engineers, you may have reason to believe they are more interested in that type of story in the future.

If you want to level up your segmentation, the next step is to create variations of the regular newsletter, with one version mainly for architects and the other for engineers.

This is a simple method to segment communication without tracking, other than explicit user preference.

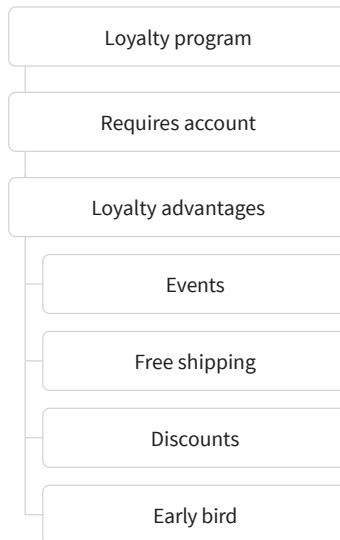
If the user is a customer, their shopping history can be used to personalize emails. The communication will be more relevant, and as long as the concept does not cross the border between cool and creepy, it will make for a happy customer.

Think of it this way: you can help your customers to avoid looking at all the products they don't want to buy anyway. That's your job.

BLUEPRINT ELEMENT: LOYALTY PROGRAM

Being a member of a loyalty program requires an account. It is one of the few features without an option for the shopper to maintain their privacy. However, that doesn't mean that the web shop should extort all kinds of private information from users.

A successful loyalty program is a balance between offering users fair rewards and advantages based on a relevant insight into their behavior.

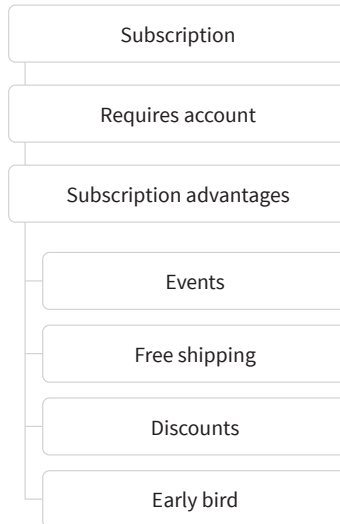


As an example, you may want to offer the best items you have for sale on Black Friday to your most loyal customers.

BLUEPRINT ELEMENT: SUBSCRIPTION

Subscriptions share a lot of properties with loyalty programs. You have a user base that has shown great interest in the products and services you provide, and you have quite detailed information about demographics, shopping behavior, etc.

In return, you can offer relevant information to create a stronger connection between you and your customers.



There are, however, two different types of subscription services. The first is a genuine subscription model, one in which your best customers will gain the most significant advantages. The more they shop, the more value they will get from the monthly fee they pay.

The other type is the subscription trap. Users are tricked into the subscription service, and afterwards, the web shop stays so much undercover that no products are purchased, but the monthly fee keeps coming.

This is a trick played by some web shops with discounted products, not to mention your local fitness centre just after Christmas.

BLUEPRINT ELEMENT: PERSONAL PROFILE

A shop with user accounts will hold a personal profile for each user. Consider how a personal profile can be an advantage to users, not just a lot of input fields to fill out.

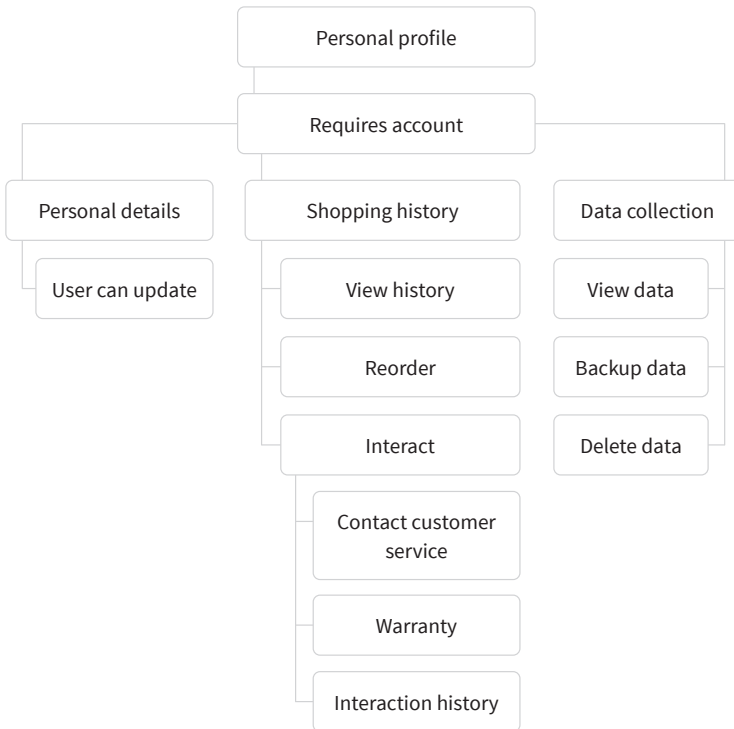
Shopping history and related features are often the most interesting areas to invent new and exciting features that differentiate your shop and make your users smile.

The basics include shopping history and an easy way to reorder items or entire shopping baskets from the past. You

can also add all warranty information and provide one-click access to customer support.

On top of that, you can email customers a month before a warranty expires. That is outstanding service, and remember: it will be a negative business proposition only if you are selling low-quality products.

Personal profile blueprint

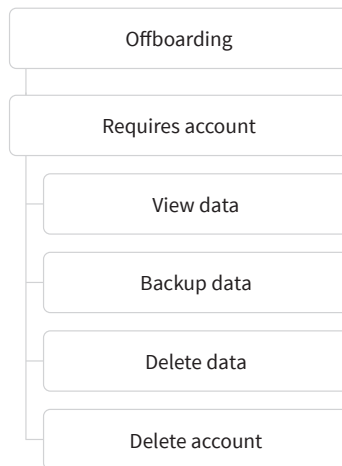


The most crucial part of providing a transparent user experience is to display all information you have ever collected about the user to the user, and allow them to back up or delete information that was shared unintentionally.

BLUEPRINT ELEMENT: OFFBOARDING

Everything comes to an end, and one day the customer will leave your store and take their purchases somewhere else. Make that a pleasant experience, and you might see the customer return one day.

An evil strategy would be to require the user to phone customer service to close their account and then to secretly keep their phone number. Yes, some companies do this, believe it or not.



The best offboarding experience is friendly and makes it easy for the user to close their account, maybe even with the option for the customer to back up all of their data. The philosophy would be akin to you saying, “We will genuinely enjoy having you as a customer for as long as you have a desire to shop with us. If you leave, please let us know what would make you come back”.

Other types of applications

The elements above can be used for multiple application types, not only for web shops.

In addition to these general elements, we have designed specific blueprints for three other types of applications:

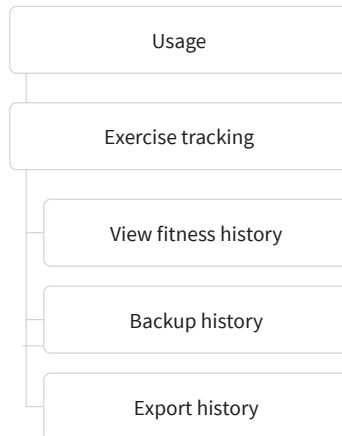
1. an app
2. a digital service with no visual interface
3. Internet of Things

The three diagrams describe the relation between users and the platform, the data, and how to handle data storage and processing in the specific types of applications. An interactive version of the blueprints can be found on this book’s website, including files for download to make your design process a bit easier.

BLUEPRINT FOR A FITNESS APP

What if you were designing a fitness app and not a web shop? Some elements are identical for the two application types, but not all. A significant difference would be the option to store data on the phone, not on a web server. Tracking of fitness and health data is the core function of a fitness app, and it is also a sensitive area for which a user should be given a choice between privacy and extra features.

Usage blueprint for a fitness app



It would be neat for the user to be able to back up all data and export that data to a spreadsheet or other database. As

software designers, we cannot guess all of the relevant user journeys, and we don't have to. A universal export format is a great tool that will allow users to migrate their data to other applications for whatever purpose they have.

Benchmarking is an interesting feature in a fitness app. Users often want to compare their performance to last week or last year, but also to other users.

You can design the fitness app so that the user can keep all data on the device. This is privacy by design.

Benchmarking against other users would require that the app transfer either specific data about every training session or aggregated data to a cloud server for analysis.

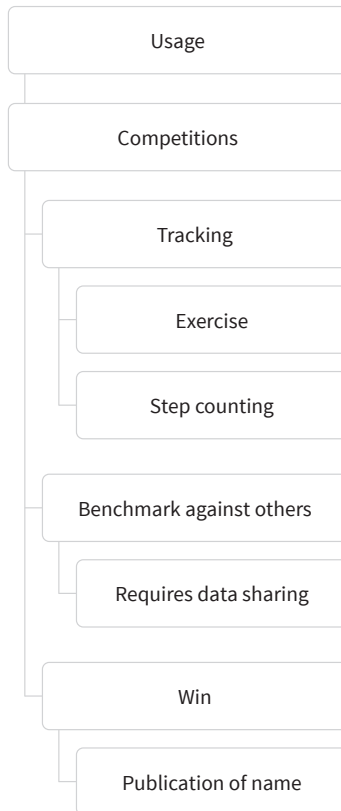
A fair rule would be that a user cannot benchmark their results against other users unless those users get similar access to her or his data. Users get what they share.

Another feature in a fitness app is competition.

The difference between anonymous benchmarking and competition is the set of rules for determining the announcement of winners. Some competitions require an element of co-working. That could be team A against team B, and you

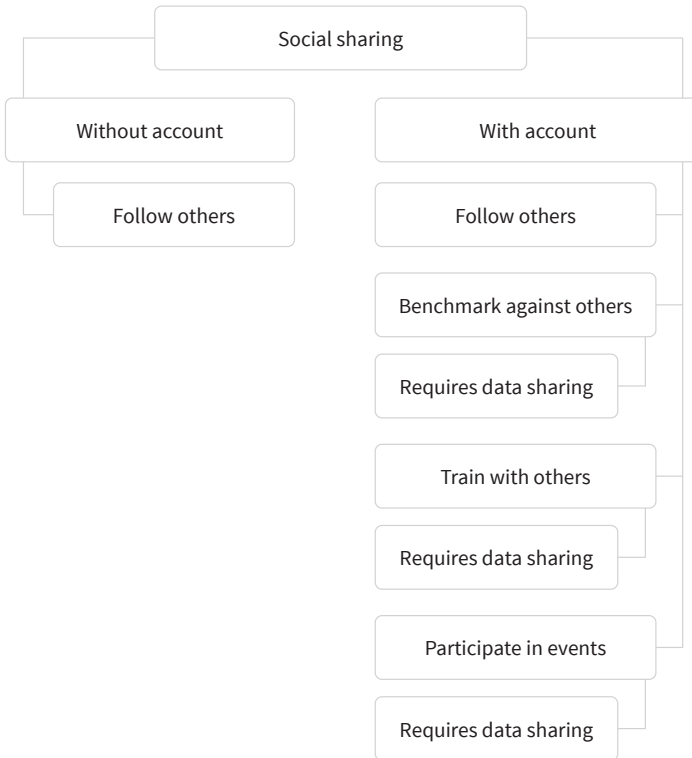
would have to consider how to balance the amount of data that everyone can see against the transparency you'll need to prove that you've picked the right winner of the contest.

Competition blueprint for a fitness app.



Social sharing also poses compelling dilemmas for the ethical software designer.

Social sharing blueprint for a fitness app



What if a user doesn't want a public account? Would it be fair then to allow the user to follow other users?

In terms of analytics, we would differentiate between private users and those who share data. Private users store data on their phones. They don't use the cloud server, and we don't have any analytics data on them.

Cloud users can access features such as benchmarking, training with others, and access to events. It is essential to distinguish between data types. We are storing confidential data about users, and sensitive data must always be sent using a secure connection and be encrypted on the server.

A fitness app will also store trivial data. If a user goes for a bike ride in the forest, the fitness app might show a map. Map information is trivial data. The user's route and the time of day are not.

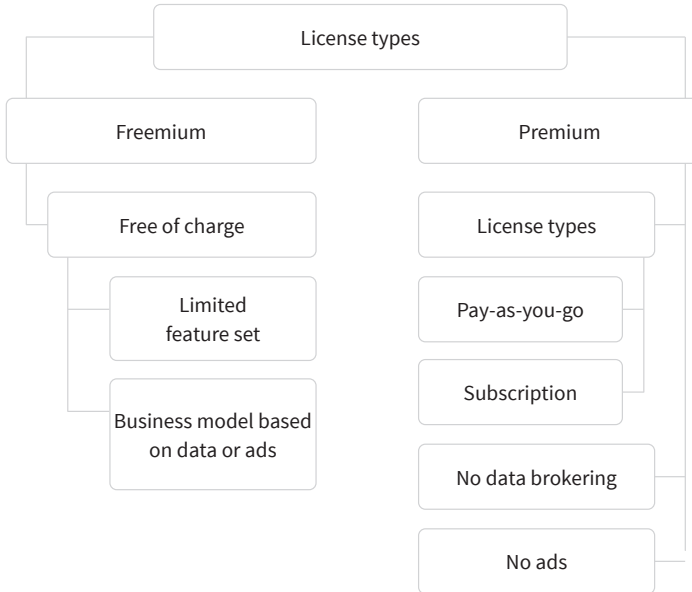
If you build an app, there is also an ethical perspective to the distribution model. For some app types, there could be several ways to pay for using the app.

The free version could be feature-crippled or use ads. Both options sound kind of evil, but a feature-reduced version is usually better than a crippled version.

Consider how the feature-reduced version could provide an experience so great that users would want to buy the full version. Punishment does not increase conversion rates.

License-based software is great because users pay a fee and then own a license, without worries about future costs.

License blueprint for a fitness app



Pay-as-you-go is either a standalone business model or a combination of free and licensed, such as an in-app purchase. A subscription model could be a more transparent way to sell your product. Selecting the best options for distribution and payment is often tricky. You have to understand your audience and also do quite a bit of testing to find a fair and sustainable model.

BLUEPRINT FOR A DIGITAL SERVICE WITH NO USER INTERFACE

What if your project is a digital service with no user interface? Come on — there are no ethical considerations for a system like that, right?

Think again. Digital services such as systems that exchange data between e-commerce websites and marketplaces can be evil. You have to consider what you know about the data exchange and especially what you do not know.

Authentication between two systems is often done using a token. The marketplace platform might create a token, and an administrator of the e-commerce platform would set up a connection between the platforms.

Product data, pricing information, and so on would now be available on the marketplace, which opens up a new sales channel for the web shop. It all sounds great.

A common feature is benchmarking between web shops in the marketplace. Suppose you own a web shop that sells sports equipment in France, and you would like to compare your sales figures to other French stores, to other stores that sell sports equipment, and perhaps to other stores of your size in the outdoors category.

Blueprint for a digital service with no user interface



There is one player in this game with more data than anyone else. The owner of the marketplace will get access to all business intelligence for all stores that participate.

There is nothing wrong with marketplaces as a concept. You'll have to consider the implications for your long-term business, and the owner of the marketplace could have a long-standing interest in protecting the business secrets of the marketplace's customers, such as your business.

A problem with digital services, in general, is a unique combination of nasty issues. The services are often business-critical. The decision-makers do not understand the technical aspects of the operation or the security risk asso-

ciated with the exchange of data with other servers run by other companies.

The amount of data submitted between servers can be vast, and if everything is running without interruption, the data exchange is nearly invisible to everyone but the tech department.

At the same time, someone from the outside could get access to the authentication token by social engineering or another trick, and this would allow a competitor to follow the exchange of data in real time.

In this case, ethical design is not enough. Control systems must be in place to blow the whistle when needed.

BLUEPRINT FOR THE INTERNET OF THINGS

What is more complicated than ethical design for digital services? Just add hardware.

The Internet of Things is a fun combination of hardware and software, and just about anything can go wrong. A common type of system is a sensor that collects data, which is sent to a cloud server; data is analyzed, and events are triggered.

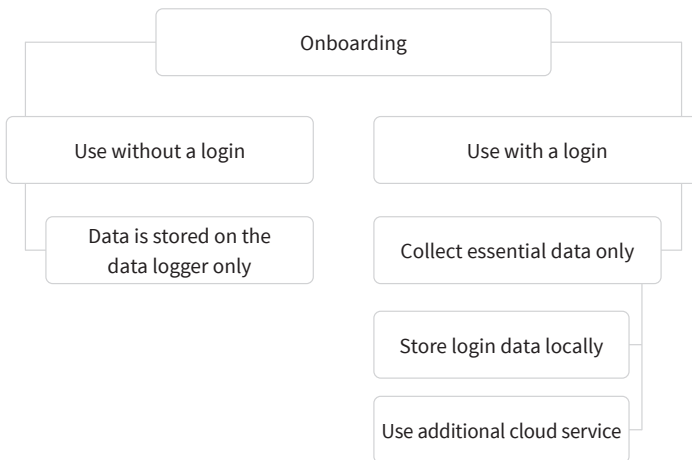
Let's say we own a factory. It seems like a good idea to install a data logger on machines to monitor their uptime. The data log-

ger can monitor the device, and a dashboard can display information about all machines in a single view and in real time.

The idea is valid, no doubt about it. However, it opens up a long list of issues to consider.

Everything you know about the production is now on a cloud server, and the server might not be owned by you. How can you make sure that data protection is in place?

Onboarding blueprint for the Internet of Things

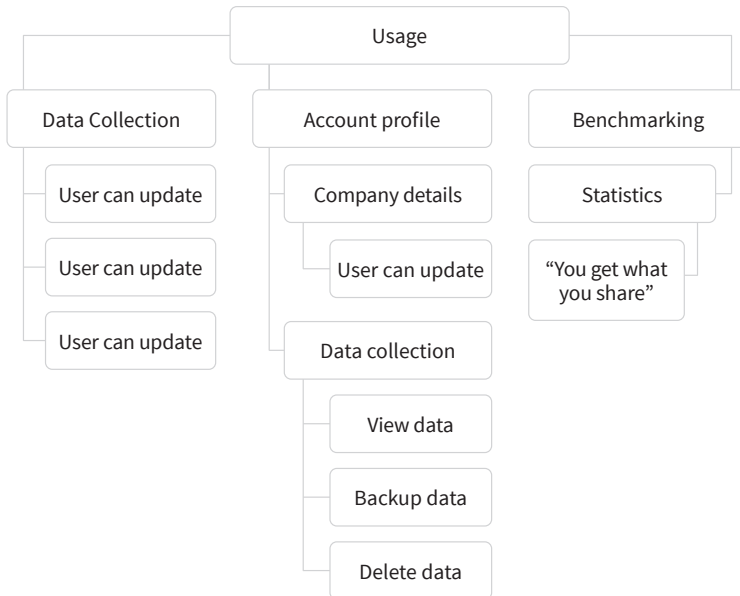


If you design software for the Internet of Things, you have to consider all of the fragile scenarios possible: from

the hacking of hardware, software, and the network right through to social engineering and the protection of data.

The Internet of Things is a dream arena for ethical designers because great software can be a game changer. Who would not want to invent something that creates a better future? The data logger, as an example, is the key to a complete understanding of the factory. Small data in real time from every machine can be used to optimize production, lower energy costs, reduce waste, make production more sustainable, and improve the environment.

Usage blueprint for the Internet of Things



It is not easy, so careful planning of the system's design can shut the gate both on hackers and on unintentional data leaks.

Social media ethics

It is not enough to make a blueprint for the web application, app, or service itself. You have to consider what users will share from your application, how they will do it, and how it will affect others.

We could call it sharing ethics, social media ethics, or just “SoMe-thics”.

Facetune is an app for taking selfies and easy editing — sorry, manipulation — of those selfies. It takes seconds to create a fake selfie of your more beautiful self and share it with friends. Apps like this can be fun, but users are sharing a dream and not a real photo.

Snapchat has a feature called a Snapstreak. Two users — they could be teenage girls — would send snaps to each other. Every day that both of them snap each other, the Snapstreak keeps counting. If one of the two girls forgets to send the daily snap, the streak is broken, and the counter goes back to zero.

The feature, unfortunately, puts pressure on users to use the app at a constant rate. If one girl forgets, the streak is broken not only for her, but also for her friend.

A better way to implement such a feature would be to limit the number of days you can streak, create a Hall of Fame for users who have reached the top, and devise other methods to boost traffic to the app.

Snapchat's advantage is daily traffic and app addiction. It is not a sustainable way to design an app. A similar method of encouraging addiction is seen in some computer games, where you have to log in daily to get a reward. Sometimes, the feature is added as a group bonus, so if your entire clan or team is online every day, they get a group bonus.

If you want to sell your house, your real estate agent might take photos and put them online. Some countries have a website with all homes for sale in a single portal. This is also sharing.

One of the convenient things with artificial intelligence is image recognition. It is quite easy to search a large number of images and identify particular objects, such as expensive TV sets. The real estate agent is not only helping those who

are looking for a new house, but also helping internet-savvy burglars. Level-up for thieves: combine image recognition with public data from the fitness app.

You might think that the concept of merging data from two sources is of far-fetched. Some countries merge data about citizens on a national level already. A citizen injured in a traffic accident can be tracked while sick. Tracking can include Facebook posts, other social media posts, usage of fitness apps, public surveillance cameras, etc.

Sharing has gone too far, and the ethical designer must consider how to limit sharing to the appropriate level.

User testing is an excellent method to establish the right level. If you are uncertain whether a feature should make it to release or not, the answer is no. Take your time, user test the functionality later, and verify your idea. Not shipping a feature is more comfortable than removing it later. You can always wait.

Audio and video ethics

Are you reading this book alone, or are you accompanied by Alexa, Siri, or another voice assistant?

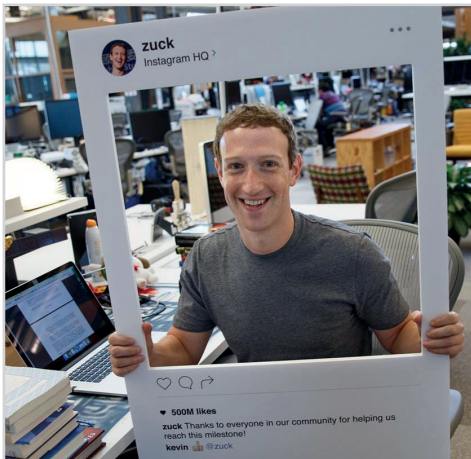
Voice recognition is used everywhere, and microphones can be installed everywhere. You could visit a friend's house, and

everything you say could end up on a server somewhere. You wouldn't know, and your friend might not be aware of it either.

When an application is listening to events, the recording will include sounds from the background. Speech recognition can identify what is being said and sometimes also who is saying it.

Recording audio is more straightforward and takes less bandwidth than video, but the two technologies are quite similar, as are the ethical implications. Users must show caution.

One of the brains behind an extensive social network protects his laptop by putting tape over the laptop's camera.⁷³ Oh, the irony.



It takes one to know one. Mark Zuckerberg covers his laptop camera with tape to prevent apps from spying on him. Hmm.

73 <https://smashed.by/zuckerberg>

If you capture audio and video in your application, consider how to store the data, for how long, in what format, and how others should be allowed to access the data.

It would take a long list of outstanding arguments to justify why audio and video data should be stored unencrypted and forever.

End of life

Your platform will not last forever. It will shut down, or someone will acquire your company or product, or it will be replaced by the next-generation platform.

It will happen — so plan for it from the very beginning. What will happen with the data you have collected over the years — the small data about every single little action, and the aggregated data and business intelligence?

Your users will be happy to know that their data has been deleted, and that the shutdown has been verified by an outside agent, such as an IT auditing company.

It's kind of funny with software that killing an old version of a platform feels so hard. As software developers and designers, we have a relationship with our platform as if it were a baby. We want to see it grow up. Planning for a shutdown

can be painful, but it is a part of a professional and responsible governance model.

No matter how hard it is, plan for the destruction of your software baby from the very beginning. It should be a part of your blueprint.

But...

You might be thinking, “Wow, these are great ideas, but we built our product five years ago, and now it is too late to do anything.”

Great software is built over a long time, and it is never too late to improve. You may be in a less than perfect position, but think of it as a poker game. You have to play with the cards you have. Try to get the most out of it.

The redesign

Consider what your business and your users will see as success criteria as you slowly redesign your app or service.

Keep the focus on data. What is the specific purpose of user data that you harvest? What do you already have that you don't need? Can you discard a part of the existing platform and not lose anything?

A good blueprint is an excellent start, whether the product is new or old. Make a draft of the ethical design blueprint, and discuss the most sensible way ahead.

There is no reason to wait for the “next big version” to start improving.

Chapter takeaways

A major aspect of designing with ethics first is about the handling of data. Data has become such a valuable, tempting resource, which means we must take an active stand to treat it with care and due diligence, all of which can be done while maintaining a sound business when internal processes and procedures are reconsidered.

This includes making sure that there’s a standard for collecting, deleting, and handling data. It also requires taking a critical look at cookie usage, terms of service descriptions, and the tools used for analytics and research. It is, in fact, possible to avoid the large surveillance capitalists when picking these tools.

Design patterns are used by many a developer and designer to make sure that a problem is solved effectively. We've introduced a set of ethical design patterns and blueprints that can be used by anyone who wants to improve on their ethical design. There are way too many to mention in a summary, so we encourage you to go back and review them whenever you are involved in a new or old project.

The recurring theme of this book is that ethical design does not require reinvention of the wheel. What it requires is to rethink existing processes and methods. So, there really is no excuse not to get started. The next, and final, chapter shows you how, if you're still not entirely sure how to do that.

References and further reading

- “Privacy UX: Better Notifications And Permission Requests” by Vitaly Friedman, Smashing Magazine, 18 April 2019 <https://smashed.by/permissionrequests>

DuckDuckGo’s “ethical by design” business model

Some would claim that a search engine like Google is, in fact, more an advertising company, and that advertising and granular user data is an unhealthy marriage if the goal is ethical design. Others would argue that it’s simply not possible to create a search engine with ethical design, but that’s what DuckDuckGo set out to do. It is a good example of what positive powers can be unleashed when ethical design is considered from the get-go. On the following pages is its story.

*Written by **Holly Habstritt Gaal**, Design Director, DuckDuckGo*

What is DuckDuckGo?

We’re setting the new standard of trust online, empowering people to take control of their information. We believe that getting the privacy you want online should be as simple as closing the blinds.



We operate a search engine that allows you to search the web without being tracked. We also offer additional apps and extensions to protect you from trackers, wherever you go on the internet, so that you can browse with peace of mind.

How do you work with ethics in your organization?

At DuckDuckGo, ethical design is simply... design. We don't work with ethics; every act is an ethical demonstration. A high ethical standard is inherent in every action and is the foundation on which every consideration is made. This leaves us with one clear path. Therefore, everything we build isn't a coincidentally ethical byproduct; it's a result of intention in how we operate. By default, even the most basic interactions are designed with user privacy and control in mind.

How is this possible? For us, this is possible because our teams work together towards one overarching, ethically focused mission: we're setting the new standard of trust online, empowering people to take control of their information. The responsibility of making ethical decisions isn't delegated to one or two roles or a quarterly goal to hit; it's in the fabric of how we work across all roles, all of the time. Within the company, this establishes a common direction and trust, so there's no question of who we're building for and why. In practice, we explicitly empower all team members to question assumptions and challenge one another to work best toward our mission. In fact, our core internal values are to build trust, question assumptions, and validate direction.

As you can see, to make this possible, we put significant effort into the design of our organization, not just the design of our products. Therefore, these values are built into all of our company processes, from employee onboarding to transparent career growth to leadership opportunities.

This structure allows us to stay focused and work efficiently. Time and energy otherwise spent convincing leadership and colleagues to make ethical decisions can instead be dedicated to the things important to our mission.

Here are some tips for making ethical decisions possible:

1. An ethically focused mission is the foundation and common path forward.
2. A set of core values establishes trust and empowers everyone to challenge direction.
3. The products you build exemplify what is possible and set a standard for others.
4. A strong organization allows time and energy to be focused on your users.

How have you succeeded in building your business model around ethics?

These days, it's not difficult to find examples of companies making questionable product decisions, especially when it comes to consumers' data and privacy. There can be many reasons why the ethical design path is not chosen, but there is one common factor: there are people, such as managers, engineers, or designers, behind each choice. These roles often find themselves at a fork in the road between ethical design and design that's good for business.

Our stance is that delivering an ethically designed experience is good for business.

In the instance of privacy, it's a myth that in order to be profitable, search engines need to track users' personal data. Search advertisers primarily buy search ads by bidding on keywords, not people. This is known as contextual advertising. This has nothing to do with users as individuals, not even their search history. By leveraging contextual advertising, search engines can still serve ads and make a profit without tracking users across the internet and without storing or sharing information. This is what we do at DuckDuckGo.

But there's another kind of advertising known as behavioral advertising, which does track and leverage user data. We've all had this happen before, where you search for a pair of shoes, only to find that pair of shoes following you to every website you go to. This happens when search companies become advertising companies. Your searches are tracked, mined, and packaged up into a data profile so that advertisers can follow you around via massive ad networks, embedded across millions of websites and apps — the ones you use every day. This is an explicit choice, at the expense of your privacy and your control.

We've also made an explicit choice. DuckDuckGo wants you to find what you need, quickly, while respecting for your privacy — that is, without tracking you when you least expect it. We are a privacy business that began as “the search engine that doesn't track you”, and we have expanded to protect users no matter where they go on the internet. This is possible and profitable, especially when the whole company is empowered to maintain an ethically focused mission.

In what ways does your focus on ethics affect the decision-making process in your teams?

At DuckDuckGo, an ethical standard is inherent in every decision we make. It's weaved into the way we work. Every

problem faced by the user in the UI can be answered with an ethical product decision. Here are a few examples:

Topic	Problem	Product decision
Clarity of control	You don't know you're being tracked until it's too late.	We set clear expectations so you're always in control of your data.
Differentiating on brand	Privacy features can be hard to find.	We showcase features that demonstrate our privacy-focused mission.
Actively defending you	Your favorite websites might have poor privacy practices.	We block trackers on your behalf, enforcing transparency and honesty from other websites, so you can still visit them with peace of mind.
Protecting your location	Your location is personal, but sometimes important for getting results.	We let you decide how and when to provide your location, then we throw it away after use.
Education	Internet privacy is a complex and overwhelming topic.	We make learning easy and accessible.

Modified from our feature in John Maeda's 2019 "Design in Tech" report.⁷⁴

⁷⁴ <https://smashed.by/notrack>

As designers, developers, managers, and users, we believe it's not only possible to hold ourselves accountable for the decisions we make, the experiences we design, and the products we use — at DuckDuckGo, we believe it's our responsibility.



CHAPTER 6

Getting started



CHANGE IS DIFFICULT.

even a change for the better will raise questions. Start by accepting that this is normal and that there's nothing wrong with it.

Summarizing the need for ethics in design

A change in your team or organization towards ethical design will take time, because it's a major transformation. But it will be worth every hour.

Look at the facts. Switching from gray-hat methods to better design patterns will not make anyone rich overnight. The gains are long-term. You can build trust with new customers. You can make your audience loyal by taking care of their data and privacy. But it will never be like a bank robbery where you steal a fortune in a minute.

That is not the purpose either. The purpose is to change the design strategy for the better, lower the risk level for failure or mistrust, make stronger ties with your customers, and gain a long-term profit (if you run a business) or a long-term trust (if you are in the public sector or an NGO).

The long-term financial gain that follows from the lower operational risk would likely outweigh the potential short-term win from dubious design decisions. You'll move away from the dark side, you'll get away from a financial risk, and, unless you're running a dark-side business today, the move will be without a significant cost.

For most of us, the choice is not that difficult, but you have to convince the people around you to share your viewpoint. They might not understand the process and will consider a change towards ethical design as a big and risky project. It is not, but you have to come up with evidence to tell the story.

Let's step back for a moment. There is a big change happening in consumer behavior, and it's unstoppable at the moment. Supermarkets are in competition to offer more sustainable products because consumers want them. The increase in online shopping means consumers can compare prices, check specifications between comparable products, and take control of the purchasing process.

This is a global megatrend, and there is nothing a single app or website can do to reverse the trend. Some of us see this as a positive trend and great for society as a whole, but that's not the point.

The need for ethics in software design is fueled by that trend. The change is turbocharged by rude business models invented by large tech companies covered in arrogance, a lack of common sense, and a grain of greed.

It will not last.

There will always be business for shady companies, but the trend is moving towards sustainability. This goes for the selections in supermarkets as well as for the websites, apps, and digital services we implement as software designers. Let's talk about how much extra it will cost to switch to ethical design. The answer is: not much.

Proving your business case

Proving a valid business case for a switch takes at least one pilot project. If you're a project manager, a project owner, or a product manager, you can simply pick one of your existing projects as a starting point.

Find a project where ethical design can be applied from the ground up, a project where there is a great probability of success.

Sometimes it's easier to go undercover on the ethical details and to simply deliver the project on time and on budget, then present the positive results to management.

Is it that simple? "Deliver on time and on budget" — how is that possible?

Ethical design does not have to add extra work to a project. It is about doing things in a different manner. Some tasks, such as collecting and storing less data, will shorten the project backlog. Sending data over a secure connection doesn't take extra time or add costs to a project.

It rarely happens that production quality in a factory can increase at no extra cost. See it as a fortunate situation that it works for the type of product design we do in our industry.

Remember to define the success criteria for your project prior to starting. You'll need this guidance during the process, and it's important for your team to be able to celebrate the result on completion. The success criteria are also a cornerstone of your business case. Expect them to be challenged, but stay confident.

You are likely to get buy-in to follow the same process in future projects once you've proved that you can stay on time and on budget, while also conforming to the ethical design manual.

Communicate what you've just done. If you show your results, it could increase sensitivity to and the visibility of ethical decisions for the entire organization. Share the change.

It is not easy

In some cases, you will come up short. If you work for a company with dubious business practices, you might be reading this book because you're considering getting another job. If the core of the company is based on tricking people into buying things they don't really want or need, then it's not likely the right company to introduce ethical design to.

In other cases, it might be difficult to change a company's practices because of a dissonance between what is being said and what is being done. Your company might not be 100% ready, but as long as there is some indication of hope, don't give up.

Time works in favor of ethical design.

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